

UK submission to the UNESCO review of the Recommendation on the Status of Scientific Researchers: key issues for inclusion

1/ Introduction

UNESCO's Recommendation on the Status of Scientific Researchers was introduced at the 18th Session of the UNESCO General Conference in November 1974. It was intended to help Member States to formulate and execute adequate policy frameworks for science research and development aiming, inter alia, to support researchers and encourage new entrants.

In November 2013, the 37th Session of the UNESCO General Conference decided to begin a consultation process that may result in revision of the original text of the Recommendation on the Status of Scientific Researchers. The UK National Commission for UNESCO (UKNC) supports the call for a revision of the Recommendation.

In November 2014, the UKNC shared with UNESCO its preliminary ideas for a revision to the Recommendation¹. In order to provide a more comprehensive UK response, the UKNC convened an expert task group of leading UK experts from both social and natural sciences² to consider the relevance of such a Recommendation, how the scientific landscape has moved on from the 1970s and how any such Recommendation should be developed to meet contemporary need.

2/ Does the UNESCO Recommendation add value and how important is it to have a UNESCO Recommendation in this area?

The UK National Commission for UNESCO's policy brief of October 2014, *'The 'S' in UNESCO'*³, concluded that UNESCO could have a greater impact within its limited financial resources by focussing on supporting science, technology and innovation in Member States through policy, governance and capacity building rather than directly delivering science programmes. The brief urged UNESCO to focus in particular on establishing frameworks and guidance for governance and the science-policy-society interface, and for institutional capacity building. A UNESCO *Recommendation on the Status of Scientific Researchers* fits squarely within that remit.

Many individual Member States have developed their own guidance since the 1974 Recommendation was first issued (for example, the UK's *Concordat on Research Integrity*⁴), and other frameworks have been published by regional or international organisations (for example the *Declaration on Science & the Use of Scientific Knowledge*⁵ 1999 and *Universal Declaration on Bioethics and Human Rights*⁶, 2005). However, these are not applicable or observed for all aspects of research in all of UNESCO's Member States.

¹ [Initial contribution to the Consultation on the Revision of the UNESCO Recommendation on the Status of Scientific Researchers](#)

² See Acknowledgements for full list of task group

³ *The 'S' in UNESCO*, UK National Commission for UNESCO Policy Brief Series

⁴ <http://www.universitiesuk.ac.uk/highereducation/Documents/2012/TheConcordatToSupportResearchIntegrity.pdf>

⁵ http://www.unesco.org/science/wcs/eng/declaration_e.htm

⁶ <http://www.unesco.org/new/en/social-and-human-sciences/themes/bioethics/bioethics-and-human-rights/>

The UK believes that a single, clear Recommendation, that incorporates the best elements of existing guidance, and is supported by the credibility and respect associated with the UNESCO name, has the potential to provide a globally applicable, ethical framework for scientific research.

3/ Does the 1974 Recommendation require revision?

The 37th UNESCO General Conference resolution that supported a review of the Recommendation in its current form noted that the revised Recommendation should reflect “*contemporary ethical and regulatory challenges relating to the governance of science and science-society relationship*”.

While the view that scientists’ responsibilities and freedoms should be treated as two sides of the same coin is still valid, some concerns that informed the 1974 Recommendation have moved on significantly in the past 40 years.

A summary of contemporary challenges is provided below:

- **International diffusion of talent**

In 1974, concern about an international “brain drain” was focused on the way in which generous funding and excellent facilities in the USA were increasingly attracting researchers from other geographic areas, in particular Europe. Today, a primary source of concern is the need to retain scientific talent in the developing world, to ensure that less developed countries can fully share the benefits of research.

- **Increased potential for dual use of research results**

The 1974 Recommendation was written just as concerns about dual use – the use of research results for hostile as well as peaceful purposes – were about to emerge, particularly with regards to biological systems. Indeed, 1974 almost coincides with the Asilomar Conference on Recombinant DNA⁷ (1975), which explored concerns about how genetic or biological knowledge might be applied. Dual use has become an increasing concern for scientific research since 1974 due to developments in, for example, biology, chemistry, information technology and communications, robotics and data analysis. However, designing and implementing effective controls to address dual use is a complex issue, as governance measures need to constrain illegal use without imposing significant costs on legitimate scientific research.

- **Changing security concerns**

The Cold War environment of the 1970s has given way to today’s disaggregated security threats. While security concerns remain, they are quite different to those outlined in the 1974 Recommendation and scientists are operating in a different geopolitical environment to their counterparts who were working when the Recommendation came into being. Concern for the misuse of science is no longer just in traditional State-to-State military conflicts, but also in smaller scale conflicts, civil wars and terrorism. This creates a need for emphasis on aligning the Recommendations with wider human rights and obligations under international law.

- **Increasing environmental concerns**

⁷ <http://www.pnas.org/content/72/6/1981.full.pdf>

Environmental challenges increasingly dominate the research agenda, and addressing them will be key to delivering the post-2015 Sustainable Development Goals. The Recommendation is conspicuously missing references to environmental challenges, in particular climate change, biodiversity, water quality and access, food security and sustainable energy.

- **Increasing role of private sector funding**

There has been a marked shift since the 1970s towards more private sector funding of science. The Recommendation text should be very clear that the responsibilities and freedoms of scientists apply in both public and private sector settings. It should provide clear responsibilities for all scientists and work to ensure science is undertaken for societal as well as commercial benefits. Researchers in the private sector now are highly mobile and often work for multinational research organisations. While the Recommendation provides a framework of principles to guide Member States, it also provides guidance for individuals and corporations, both public and private, who carry out or commission research.

- **Interdisciplinary nature of science and the role of social and human sciences**

The interdisciplinary nature of science has become more pronounced since the 1970s meaning that the Recommendation should refer to the entire scientific landscape. In particular, the growth of the social and human sciences and computer sciences and their role in informing public policy decisions suggests that they should be subject to the same ethical principles as their natural science colleagues.

- **Widening scope of perceived responsibilities**

Since 1974 there has been an increased recognition that scientific researchers' responsibilities go beyond ethical concerns relating to their research and should also consider the social consequences of their work and how it could be used and communicated.

For example, there are concerns around clinical trials on human or animal subjects where failure to publish results may lead to unnecessary repetition of research on living beings. Prior to commencing clinical trials, researchers should be required to consider:

- What expectations did the human participants in the trials have when they went into the research?
- What are the consequences of not publishing, for example the unnecessary repetition of trials, and how can this be mitigated?

This requires greater education and capacity building among scientific researchers, as well as more effective engagement and communication with the public and more openness and transparency to ensure legitimacy. Scientists have important roles to play as 'guardians of science'.

In the light of these developments, the UK supports the reasons for revision of the Recommendation as outlined by COMEST:

"In spite of its [the Recommendation's] enduring value, [it] suffers in certain important respects from outdated language and from an excessively narrow framing that excludes or underplays important issues of contemporary concern. [...] Revision would be desirable, with a view to elaborating a

powerful and relevant statement of science ethics as the basis for science policies that would favour the creation of an institutional order conducive to the realization of Article 27(1) of the Universal Declaration of Human Rights”⁸.

4/ Recommendations for revision

The UK recommends the following specific revisions to the 1974 text for consideration by UNESCO.

1. Title

Referring to the ‘status’ of scientific researchers is misleading. In modern usage, it reads as if the Recommendation is aimed at trying to improve their social status or standing. The UK believes that the Recommendation should be focused primarily on defining the principles which underpin an ethical framework for research, as well as on improving the working environment of scientific researchers and protecting their freedoms. It is about how science relates to society and how scientists relate to one another with scientific freedoms and responsibilities two sides of the same coin.

Some reference to the working environment of scientists should be retained in the Recommendation as ‘good’ science requires work to be carried out in an environment that allows scientists to question, challenge and whistle blow without fear of reprisal. However, this should not be the focus of the Recommendation. Instead, it should be on the ethical framework that underpins scientific research in all its guises.

Revision recommendation: consider refining the title of the Recommendation to

‘Recommendation on an ethical framework for research’

2. Preamble

UNESCO should consider how to structure the Recommendation so that it communicates its objectives, and their importance, to the reader from the start. Much of the current preamble seems, at first glance, to be about Human Resource issues. UNESCO should clarify the purpose of the Recommendation by opening with a clear statement of the ethical principles that should underpin research, drawing on the 1999 *Declaration on Science and the Use of Scientific Knowledge*⁹ and on the 2005 *Universal Declaration on Bioethics and Human Rights*¹⁰ as appropriate.

Revision recommendation: consider opening the Recommendation with a statement of principle along the following lines:

“Believing that research should be at the service of humanity as a whole, and should contribute to providing everyone with a deeper understanding of nature and society, a better quality of life and a sustainable and healthy environment for present and future generations, this Recommendation provides a universal framework of principles and procedures to guide UNESCO Member States in the formulation of their legislation, policies or other instruments in the field of research ethics; and to

⁸ COMEST in 2012 on adopting a Recommendation on the desirability of reviewing and updating 1974 Recommendation

⁹ http://www.unesco.org/science/wcs/eng/declaration_e.htm

¹⁰ <http://www.unesco.org/new/en/social-and-human-sciences/themes/bioethics/bioethics-and-human-rights/>

guide the actions of individuals, groups, communities, institutions and corporations, public and private, who are involved in scientific research.”

3. Section 1: Scope of application

The Recommendation should not apply only to scientific researchers but also to the research ecosystem as a whole. In the past, funders and institutions have sometimes abdicated responsibility for societal impact and passed it onto researchers, where it has been inadequately covered by research ethics requirements. The principles defined in this Recommendation should apply to all organisations or individuals with responsibility for different aspects of research, including educators, academics, funders, publishers, editors, peer reviewers, professional bodies, national academies, industry bodies and international organisations, as well as the researchers themselves. All such organisations and individuals should commit to supporting socially responsible science, including the principles of good governance and capacity building.

Revision recommendation: Broaden the scope to include all those involved in scientific research, rather than just researchers themselves.

Although the current wording recognises that, *“the expression ‘the sciences’ signifies a complex of fact and hypothesis, in which the theoretical element is normally capable of being validated, and to that extent includes the sciences concerned with social facts and phenomena”*, it would be better to clarify that these principles apply across the natural, applied, social, human and computer sciences – and to education in all these disciplines – without exception.

Revision recommendation: Further broaden the scope to refer to social and human sciences, computer sciences and science education in the same terms as natural and applied sciences.

4. Section 2: Guidelines on the role of science and researchers in national policy making

There is currently an outmoded focus on public sector funding of scientific research, which does not reflect the contemporary shift towards private sector funding.

Revision recommendation: Reflect the shift that has occurred since 1974 towards increased private sector funding and affirm that this does not invalidate the requirement for responsible science that is produced for public good.

There is no reference to environmental challenges

Revision recommendation: Reflect the increasing importance of environmental challenges and their relevance to meeting the Sustainable Development Goals.

5. Section 3: The initial education and training of scientific researchers

The 1974 text includes a recommendation that science and technology courses should include elements of social and environmental sciences, and should if possible foster awareness of ethical considerations. There is a concern in the UK that such training is often not provided, and even when it is, it is presented in separate, optional modules or indeed separate degree courses. Consequently, most researchers do not benefit. It would be helpful if the Recommendation could emphasise the benefit of ‘mainstreaming’ such training, so that it forms an integral part of university courses in all the sciences (human, social and computing as well as natural and applied).

Revision recommendation: Reflect the benefits of mainstreaming ethical principles as an integral part of capacity development for all the sciences.

The UK strongly endorses the continued inclusion within the Recommendation of a reminder to Member State governments of their responsibility for capacity building in their own country and in the developing world in science education, promoting access to scientific professions, particularly among under-represented groups (whether defined by gender, ethnicity, disability, sexuality or other factors). In this regard, all references to researchers should be gender neutral.

Revision recommendation: Amend all references to “he” or “his” in respect of scientific researchers to be gender neutral.

6. Section 4: The vocation of the scientific researcher

The revised Recommendation should not dilute the importance of intellectual freedom to pursue, expound and defend scientific truth. This is a fundamental right of the scientific researcher. The ethical framework of the Recommendation is intended to empower the scientific researcher and other individuals/organisations involved in research to pursue their science freely in the interest of benefiting humankind.

Revision recommendation: Extend this to refer to the whole science ecosystem, and not just scientific researchers.

7. Section 5: Conditions for success on the part of scientific researchers

This section is the longest in the 1974 text. It focuses mainly on Human Resources issues and appears to offer special privileges to scientific researchers over and above those granted to all employees. As such, it is at variance with the new focus of the Recommendation proposed above, on establishing a global ethical framework for research. The UK recommends deleting the majority of this section, stating only that researchers should benefit from all regular employment rights. The Recommendation should retain only those principles which are unique to researchers and enable them to carry out their work, for example the right to participate in international meetings, the right to publish their results, the right to join a professional body or learned society and the right to ‘whistle blow’ without fear of reprisals.

Since the original document in 1974 there has been an increasing recognition that Doctoral Candidates are and should be treated as professional researchers. The strongest references to this are in the European Charter and Code. However treating Doctoral Candidates as professionals does not equate to them actually being employees even though this is the case in some countries and situations. The Recommendation should ensure that any final wording cannot be read to imply that Doctoral Candidates should be employees.

Revision recommendation: Abbreviate this section to state only that researchers should benefit from the same rights as all employees, specifying only a small number of unique essential entitlements.

8. Section 6: Utilisation and exploitation of the present Recommendation

As noted above, the Recommendation has the potential to provide a globally applicable, ethical and social framework for scientific research, setting out principles to guide all those involved in decision-making on the focus, direction and use of research, and empowering researchers to consider the potential impact of their work and produce science for the benefit of humankind rather than for private or commercial gain. However, it will only be able to fulfil that potential if it is widely recognised by Member States, and communicated to all individuals and organisations within the research ecosystem.

Revision recommendation: Include a request to Member States to disseminate the revised Recommendation widely among all individuals and organisations engaged in scientific research and education. Member States should be encouraged to implement these principles and introduce monitoring mechanisms.

9. Annex

The reference documents listed in the Annex were compiled in 1974, and are now very out of date.

Revision recommendation: Update Annex with all relevant documents, including:

- **Declaration on Science and the Use of Scientific Knowledge**
- **Universal Declaration on Bioethics and Human Rights**
- **Singapore Statement on Research Integrity**
- **European Code of Conduct on Research Integrity**
- **UK Concordat on Research Integrity**

5/ Acknowledgements

This policy brief was produced by an expert task group convened by the UK National Commission for UNESCO and Chaired by its Vice-Chair and Natural Sciences Director, Dr Beth Taylor. The task group included Tracey Brown, (Managing Director, Sense About Science); Professor John Finney, (Emeritus Professor of Physics, Department of Physics & Astronomy, University College London); Professor Sheila McLean, (Professor Emerita of Law and Ethics in Medicine, University of Glasgow); Professor Colin McInnes, (UKNC Social and Human Sciences Director); Katriona Methven, (Director of Scientific and Regulatory Affairs for L'Oréal UK & Ireland); Professor Paul Nightingale, (Professor of Strategy, Science Policy Research Unit, Sussex University) and Dr Jack Stilgoe, (Lecturer in Social Studies of Science, UCL Department of Science and Technology Studies, University College London). The staff lead for the UKNC was Policy and Communications Officer, Sophie Leedham.

The views contained in this policy brief are those of the UK National Commission for UNESCO and do not necessarily reflect those of the UK Government or the individuals or organisations who have contributed to this report.

6/ Appendix

The following reference documents were used in preparation of this document

- [‘The ‘S’ in UNESCO’, UK National Commission for UNESCO Policy Brief Series, Policy Brief 15](#), October 2014
- [The concordat to support research integrity, Universities UK](#), July 2012
- [Declaration on science and the use of scientific knowledge](#), Text adopted by the UNESCO World Conference on Science
1 July 1999
- [Universal Declaration on Bioethics and Human Rights](#), adopted by UNESCO's General Conference on 19 October 2005
- [Summary Statement of the Asilomar Conference on Recombinant DNA Molecules](#), Paul Bergt, David Baltimore, Sydney Brenner, Richard Roblin and Maxine F. Singer
- [Summary Report on Decisions Adopted at the 2012 Extraordinary Session](#), World Commission on the Ethics of Scientific Knowledge and Technology, July 2012