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UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

WORLD HERITAGE COMMITTEE

Thirty second Session

Quebec City, Canada
2 – 10 July 2008

Item 10 of the Provisional Agenda: Global Strategy for a representative, balanced and credible World Heritage List

Science and technology, an expert workshop within the framework of the global strategy for the global, balanced and representative World Heritage List

SUMMARY

This document has been prepared to facilitate the World Heritage Committee's debate on issues linked to scientific and technological heritage within the framework of the *World Heritage Convention* and its Global strategy, following the international expert workshop held in London, 21-23 January 2008

Further information (including the agenda, the list of participants) is available on internet http://www.unesco.org.uk/Science_Heritage_Meeting.htm and http://whc.unesco.org/en/activities/

United Nations Educational, Scientific and Cultural Organization

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WORLD HERITAGE: SCIENCE AND TECHNOLOGY
AN EXPERT WORKSHOP WITHIN THE FRAMEWORK OF THE GLOBAL STRATEGY FOR A BALANCED AND REPRESENTATIVE WORLD HERITAGE LIST

IV. Monday 21 to Wednesday 23 January 2008

Wellcome Collection Conference Centre, 183 Euston Road, London NW1 2BE, UK

Co-hosted by
The Department for Culture, Media and Sport
and
The UK National Commission for UNESCO

RECOMMENDATIONS

Contents

'Cultural heritage [for the purposes of the *World Heritage Convention*] may consist of monuments, groups of buildings and/or sites which are of 'outstanding universal value from the point of view of history, art or science'.[1]

'Very few World Heritage sites represent heritage of science'.[2]

[1] Article 1 of the *World Heritage Convention* (1972).
[2] Rt Hon Margaret Hodge MBE MP, Minister for Culture. Opening speech of the Expert Working Group.

Background

1. The Expert Working Group (EWG) on Science and Technology met in London between 21st and 23rd January 2008. The offer of hosting the EWG was accepted by the World Heritage Committee at its 31st Session in 2007 in Christchurch (New-Zealand), in Decision **31 COM 9**.

2. The EWG consisted of 45 participants from 15 countries. In addition, the World Heritage Centre was represented, as well as the World Heritage Committee's three Advisory Bodies[3].

3. The EWG was held at the invitation of the Government of the United Kingdom on behalf of the World Heritage Committee. It was hosted jointly by the UK Government's Department for Culture, Media and Sport and the UK National Commission for UNESCO with support from the World Heritage Centre. The Wellcome Trust generously provided the venue for the three-day meeting.

4. The work of EWG was informed by the presentation of a series of keynote speeches and background papers. These papers and presentations are available for consultation at www.unesco.org.uk.

5. The EWG was divided into three Working Groups; each dealt with a series of specific questions. After the Working Groups concluded their work, the participants reassembled, and the findings of each Group were presented and debated. At the final plenary session, the EWG agreed the following conclusions.

The Context

6. The EWG was of the view that science and technology are defining characteristics of human culture, and their existence, in historical and contemporary terms, is of fundamental importance to humanity in the past, present, and the future.

7. While there is some representation of sites regarding technology on the World Heritage List, the EWG was strongly of the view that the heritage of science is insufficiently recognised on the List.

8. This situation exists despite clear recognition by the international community in 1972 (in Article 1 of the *World Heritage Convention*[4]) that cultural heritage may consist of monuments, groups of buildings and/or sites which are of *'outstanding universal value from the point of view of history, art or science'*.

Definition of Science

9. The EWG understood science to include systems of knowledge which may be historical, traditional, indigenous and/or contemporary. These typically include predictive ideas, and modes of explanation based on observations of nature or deductive discoveries that are logical and rational in their own terms, can be validated, and are open to change and refutation through further observations.

Thresholds

10. For heritage to merit inclusion on the World Heritage List, it must (as required by the *World Heritage Convention*) possess outstanding universal value (OUV). In the context of scientific and/or technological heritage, the EWG was of the view that only a small proportion of sites display tangible evidence and

[3] International Council on Monuments and Sites (ICOMOS), the World Conservation Union (IUCN), and the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) are the three official Advisory Bodies of UNESCO in the implementation of the *World Heritage Convention*.

[4] UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage (1972)

are likely to meet the threshold of outstanding universal value and therefore only a small number are suitable for nomination for inclusion on the World Heritage List.

11. The scientific heritage and/or its technological manifestation that may merit designation due to its possession of outstanding universal value will be that which has been associated with the most important fundamental developments, of universal significance.

12. Recognising that not all scientific and/or technological heritage may possess outstanding universal value and therefore be inscribed under the *World Heritage Convention*, the EWG recommended that all States Parties seek to identify other international, regional and/or national mechanisms, which recognise the importance of scientific and/or technological heritage.

The Physical Heritage

13. The EWG was of the opinion that there is often a strong link between the tangible and intangible heritage of scientific and/or technological sites of possible Outstanding universal value. This is particularly so with scientific heritage, where the link to the intangible nature of 'great ideas' may be particularly strong.

14. Nevertheless, for the *World Heritage Convention*, the focus should be upon the physical sites, which are the tangible heritage, where great achievements of universal value were manifested, and to an extent, remain. Tangible evidence needs to survive and this can be in the form of landscape and natural features, buildings and objects.

15. The tangible context for the original scientific insight is also important.

16. The EWG noted that the World Heritage List is not primarily a means to commemorate famous individuals, and alternative means should be considered for recognition in most cases.

17. Although each nomination should be examined on a case-by-case basis, the focus should be upon the place, or a collection of places, where the most important fundamental developments, of universal significance, occurred.

18. The EWG recognised that the principles of authenticity and integrity are fundamental to the *World Heritage Convention*. In the case of scientific and technological heritage, the EWG suggested that it is possible to have elements of faithful reconstruction on a site, in exceptional circumstances[5].

Nominations and Assistance

19. The EWG recognised that there is an overall need to increase the expertise available on science and technology to the World Heritage Committee and States Parties in general. In addition, they recognised the need further to increase the expertise utilised by the Advisory Bodies in relation to the heritage of science and technology.

20. When the evaluation of whether a site of scientific or technological heritage has outstanding universal value is evaluated by the Advisory Bodies, the Advisory Bodies should be requested to seek expert advice[6]. It was noted that additional resources would have to be provided.

[5] *Operational Guidelines* paragraphs 79-86.

[6] Examples of existing collaboration between Advisory Bodies and specialised experts on specific areas include the technical arrangement between ICOMOS and TICCIH; and between IUCN and IUGS. Other expert bodies that might be approached include, *inter alia*, the International Council for Science (ICSU) and the International Union for History and Philosophy of

21. This additional expertise will help States Parties form their Tentative Lists and present nominations, and encourage States Parties to consider scientific nominations. The additional expertise will also allow the World Heritage Committee to evaluate critically the possible scientific and/or technological values of possible sites.

22. To assist the nomination process the EWG recommended,

i. The World Heritage Committee should give clear guidance on the priority areas with regard to filling the overall gaps (that is, not just the gaps with regard to scientific and technological heritage) in the World Heritage List. In this regard, the EWG recommended that the World Heritage Committee direct that fixing the gaps associated with scientific and technological heritage be given priority status;

ii. There is a need for an international framework study of science and technical heritage. This study should identify where the gaps in the World Heritage List are, and in particular, what other areas of scientific and technological heritage would benefit from further, specific, thematic studies;[7]

iii. All future thematic studies in these areas should be global and reach across cultural and geographical borders. They should include comparative analysis and provide clear guidance and examples of best practice for both States Parties and the World Heritage Committee to develop benchmarks against which they can evaluate nominations;

iv. The terms of reference for the Compendium of World Heritage properties (and 'case law') that the Advisory Bodies are currently compiling for the World Heritage Committee should be expanded to examine the history of scientific and/or technological heritage. In addition, the Advisory Bodies should be requested to provide more guidance on the question of authenticity and integrity in the nomination and management of sites for science and/or technology heritage;

v. This process should be adequately resourced and the level of funding for the Advisory Bodies for such thematic advice should be increased.

23. The EWG spent a considerable amount of time examining the possible criteria in the *Operational Guidelines* under which sites of scientific and/or technological heritage may be justified. It was suggested that the applicability of all the criteria for the heritage of science and technology should be reviewed and explanatory guidance, with examples, be issued to demonstrate their use to recognizing science and technology.

The EWG noted that the existing criteria provided the basis for recognising scientific heritage although the applicability of the criteria could be enhanced.

24. With regard to possible inscriptions of science and/or technology sites under Criterion (vi)[8], the EWG made five findings.

i. Criterion (vi) can be interpreted to cover scientific heritage;

Science (IUHPS). The EWG also note that there was a memorandum of understanding between the International Astronomical Union and UNESCO.

[7] In this regard, the EWG recognised the value of the Astronomy and World Heritage initiative.

[8] Criterion (vi): Be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of OUV.

ii. Although Criterion (vi) has clear merit in this area, the EWG noted that the World Heritage Committee had sought to place restrictions on the utilisation of this criterion, as a sole justification, with regard to all forms of heritage. The EWG noted that Criterion (vi) should usually, and preferably, be used in conjunction with one or more other criteria;

iii. Nominations under Criterion (vi) should refer to strong links to tangible features of sites. For all sites, the emphasis should be upon the ideas in the heritage that are reflected in the features of the site, not simply on the person who developed them;

iv. Criterion (vi) may be used in connection to natural sites, so as to reflect the value of the site for science;

v. The EWG noted that there might be some exceptional instances where Criterion (vi) has the potential to be used on its own for recognising the heritage of science and/or technology.

25. Specific guidance for sites of scientific and/or technological heritage should be incorporated into Annex 3 of the *Operational Guidelines*.

Existing World Heritage properties

26. The EWG was of the view that there was merit in the World Heritage Committee recommending that States Parties consider re-examination of sites already inscribed on the World Heritage List which may possess scientific and/or technological heritage of outstanding universal value. The re-examination process could be undertaken as part of the Periodic Reporting.

27. The EWG recommended the World Heritage Committee to simplify the process by which existing sites inscribed under other criteria are re-examined for additional criteria and/or to require their statements of outstanding universal value be modified to reflect their scientific and/or technological heritage.

Beyond Nominations

28. The EWG noted the importance of education and interpretation of World Heritage properties for scientific and/or technological heritage.

29. Awareness raising on this topic should be used as a tool to communicate, *inter alia*, the scientific heritage of individual sites, the management and conservation of such sites, the importance of scientific heritage, and more generic concerns such as sustainable development.

30. Awareness raising on this topic should, as appropriate, be linked to other international programmes and initiatives which seek to raise the overall profile of science.

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