

The UNESCO Thematic Initiative “Astronomy and World Heritage”

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Abstract. My presentation is divided into two parts: the first part retraces chronologically all the main achievements accomplished within the framework of this Thematic Initiative; the second provides key information regarding the nomination process.

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Dear colleagues,

It is a great pleasure for me to take part in this Focus Meeting dedicated to astronomical heritage. I would like to extend my sincere gratitude to the International Astronomical Union for having organized this important meeting in close coordination with the World Heritage Centre.

1. Development and achievements of the Initiative

At the present time, outstanding properties related to astronomy are still under-represented on the World Heritage List.

Created in 2003 within the framework of the Global Strategy for a balanced, representative and credible World Heritage List, the Thematic Initiative on Astronomy and World Heritage aims to establish a link between Science and Culture towards recognition of monuments and sites connected with astronomical observations.

The Initiative is being implemented on the basis of the following orientations:

- Definition of major issues in the identification and nomination of sites relating to astronomy;
- Definition of the priorities for the safeguarding and promotion of these sites in order to open new pathways for cooperation and to mobilize extra-budgetary funds and new partner support;
- Development of pilot projects at selected sites;
- Development of cooperation agreements between the States Parties aiming to promote these sites, through the elaboration of serial nominations, as well as to develop conservation and research activities focusing on heritage of science and technology;
- Creation of partnerships between scientists and other stakeholders involved in the process of identification, conservation and management of this specific category of properties.

This Initiative is implemented in conformity with the decisions of the World Heritage Committee chronologically presented in this presentation. Information is also available on the web page of the Initiative: <http://whc.unesco.org/en/astronomy>.

Over the years, UNESCO has developed very close collaboration and partnership with numerous States Parties and International Organizations aiming to promote astronomical sites.

In October 2008, UNESCO signed a Memorandum of Understanding with the International Astronomical Union as a result of which the IAU has become integrally involved in the process of advancing the initiative. One of the first actions of the IAU was to set up a Working Group on Astronomy and World Heritage.

In order to facilitate the identification and nomination process of astronomical sites, a cycle of activities “Astronomy and World Heritage: across time and continents” was launched by the Director-General of UNESCO in 2009 during the opening ceremony of the International Year of Astronomy, “The Universe, Yours to Discover”.

Among the most important references, I would like to mention the Kazan Resolution adopted by the participants during an International Conference organized in 2009 with support of the Russian Federation.

A proposal regarding the definition of categories of Space Technological sites was included in this Resolution. As proposed by the participants, groups of Space Technological Sites could fall into the following categories:

1. Launch Pads, such as the human-engineered Gagarin Launch Pad in Baikonur Space Centre, together with related auxiliary facilities and roads;
2. Clearly defined landscapes designed and created intentionally by people and intrinsically associated with a given Launch Pad and the development of related structures, e.g. the Baikonur area;
3. Prominent parts of space networks specially designed and constructed to support manned flights, such as Gagarin Star City in the Moscow region with its facilities for cosmonauts’ pre-flight training, education, and the verification of space operations using spacecraft mock-ups;
4. Historical sites where the pioneering concepts of space flight and the design of original space vehicles were tested, such as Kaluga town and the K.E. Tsiolkovsky Museum of Cosmonautics, with their related natural landscapes.

More recently, in 2014, the participants of an Associated Event on technological heritage connected with space exploration organised during the 40th COSPAR Scientific Assembly (Moscow, Russian Federation, 6 August 2014) agreed that the main issues that should be raised in conjunction with the identification of potential technological sites connected with space exploration are:

- Recognition of technological sites connected with space exploration at the national level as cultural heritage sites and adoption of appropriate legislative, regulatory and contractual measures for their protection;
- Specificities of the legal status of use of the technological installations recognized as cultural heritage sites;
- Obligations related to the protection, management and sustainable use of such sites and the rules of application of these obligations;
- Conservation Master Plan, including requirements and deadlines for completion of restoration, renovation and others works;
- Definition of requirements regarding the conditions of visitor access to the site;
- Other requirements necessary for the protection of the site within the framework of the World Heritage Convention (UNESCO 1972) and the Operational Guidelines for its implementation (UNESCO 2015).

The participants launched an appeal to the international community to actively contribute to the development and implementation of studies and research on space technological heritage towards recognition of the most representative sites by their inscription on the World Heritage List.

During the “Starlight Initiative”’s meeting in 2009 the Working Group “Starlight Reserves and World Heritage” developed the concept of a “Starlight Reserve”. The ICOMOS–International Astronomical Union Global Thematic Study on Astronomical Heritage (Ruggles & Cotte 2010) includes a study on a “Starlight Reserve” proposal.

In 2009, during an International Workshop “Starlight Reserves and World Heritage”, it was agreed to cooperate towards a potential serial nomination to cover outstanding examples of astronomical heritage and observation sites.

However, neither Starlight Reserves, nor Dark Sky Parks can be recognized by the World Heritage Committee as specific types or categories of World Heritage cultural and natural properties since no criteria exist for considering them under the World Heritage Convention.

Moreover, taking into account the growing number of requests to UNESCO concerning the recognition of the value of the dark night sky and celestial objects, the World Heritage Centre made its official statement underlining that the sky or the dark night sky or celestial objects or starlight as such cannot be nominated to the World Heritage List within the framework of the Convention concerning the Protection of the World Cultural and Natural Heritage.

In 2011, at its 35th session, the World Heritage Committee (Decision 35 COM 9C, UNESCO, Paris) encouraged States Parties to take into account the recommendations provided by the Science and Technology Expert Working Group in the context of World Heritage Nominations (London, 2008), as well as recommendations developed within the framework of the Thematic Initiative “Astronomy and World Heritage” while preparing nominations to the World Heritage List.

At its 36th Session (St. Petersburg, 2012), the World Heritage Committee welcomed financial and technical support provided by States Parties and the International Astronomical Union for the Thematic Initiative “Astronomy and World Heritage” since 2003 and also encouraged cooperation between the UNESCO World Heritage Centre, specialized agencies and relevant interdisciplinary scientific initiatives towards the elaboration of a Global Thematic Study on Heritage of Science and Technology, including studies and research on technological heritage connected with space exploration.

The World Heritage Centre has informed all States Parties that one of the activities of this Initiative will be the development of an upstream project proposal for the nomination of serial properties composed of astronomical sites.

In 2013, UNESCO and the IAU signed a new Memorandum of Understanding and reconfirmed their commitment to promote astronomical sites, as well as to provide States Parties to the World Heritage Convention with expertise, in preparing nominations for inscription on the World Heritage List of exceptional sites that bear witness to major breakthroughs in the development of scientific knowledge.

Identification of potential sites could be based on the ICOMOS–IAU Thematic Study on Astronomical Heritage endorsed by the World Heritage Committee. It provides clear guidance to State Parties on sites that have the best potential for inscription but also facilitate serial and/or transnational nominations which might better reflect the different values and periods. This study constitutes the background for a comparative analysis

that could be carried out to assess the Outstanding Universal Value of a specific site of the same type proposed for World Heritage listing.

It identifies the main characteristics and astronomical values of the generic type of heritage site from a World Heritage perspective, examines a select number of representative examples included or not included in the World Heritage List, determines possible gaps in the latter and, with reference to the Operational Guidelines (UNESCO 2015), indicates the criteria under which such sites might be nominated for inscription on the World Heritage List.

The role of experts and specialists in the development of serial nomination projects is crucial in making progress in safeguarding this specific heritage.

I would like to inform you that Austria, Brazil, Canada, Côte d'Ivoire, Ecuador, Arab Republic of Egypt, French Republic, Germany, Republic of Mauritius, Mexico, Russian Federation, Kingdom of Thailand, Ukraine, and United States of America have provided updated information regarding the institutions and focal points in charge of this initiative at the national level.

The National Focal Points are expected to organize and participate in national workshops/seminars in order to prepare, in collaboration with the World Heritage Centre, the Advisory Bodies, the AWH Working Groups and the relevant national authorities, a national strategy aimed at protecting and promoting scientific and technological heritage and to contribute to the upstream process seeking to identify sites relating to astronomy of potential Outstanding Universal Value, to the establishment of collaboration with Specialized Agencies (Space Agencies, Institutes etc), as well as to the development of a Global Thematic Study on Heritage of Science and Technology, including heritage connected with space exploration, as requested by the World Heritage Committee at its 36th session (St. Petersburg, 2012).

2. Questionnaires

The World Heritage Centre has developed a Questionnaire for National Focal Points in charge of the implementation of the UNESCO Thematic Initiative "Astronomy and World Heritage", in order to obtain a clearer view on the impact of the Initiative on astronomical heritage conservation and identification in the participating States Parties. Hence, the States Parties of Germany, Egypt, the Russian Federation and the United States of America have provided the World Heritage Centre with concrete information about the implementation of the Initiative, and more specifically on awareness raising, nomination procedures of astronomical heritage sites, and the difficulties and challenges that arise around the preservation of these sites. Furthermore, the States Parties provided suggestions on how to better enhance the Thematic Initiative. These include the creation of a newsletter to keep Focal Points and interested parties updated on activities and discussions, the organization of multinational workshops, the initiation of a similar thematic study on space heritage, and the establishment of a Board for scientific and technological heritage.

The expected outputs are:

1. Provide participants with current status of the implementation of the Thematic Initiative "Astronomy and World Heritage";
2. Review status of national strategies aimed at protecting and promoting scientific and technological heritage in the States Parties by the Focal Points;
3. Outline of a strategic plan, including a time table and definition of responsibilities,

for development of an upstream project proposal for the nomination of serial transnational property composed of sites of potential Outstanding Universal Value which demonstrate the transition from classical astronomy to modern astrophysics;

4. Discuss framework and funding for development of a Global Thematic Study on Heritage of Science and Technology, including studies and research on technological heritage connected with space exploration;

5. Discuss specific issues focusing on mobilization of voluntary contributions, extra-budgetary funds and partner support for the implementation of the Thematic Initiative.

Some proposed questions for discussion are:

- Do the existing national legal and regulatory frameworks correspond to the needs for protection and promotion of heritage of science and technology?

- Has your country developed a mechanism aimed at protecting and promoting scientific and technological heritage?

- What steps have been taken by your authorities to integrate the identification, protection and promotion of heritage of science and technology into these national programmes / annual work plan and budget provision / strategies?

- How to effectively ensure broader participation of the interested parties and raise awareness on identification, protection and promotion of heritage of science and technology?

- Which approach has been/could be developed to establish/enhance international collaboration and co-operation among the States Parties?

- How to best ensure transnational, regional and sub-regional cooperation and networks?

- What types of collaboration and cooperation could be developed with Space Agencies with a view of undertaking joint activities within the framework of this Initiative?

3. Nomination process

I would like to briefly present the main issues relevant to the nomination process, as well as an upstream approach developed to accompany States Parties and to provide assistance throughout the whole World Heritage nomination process.

The objective of the upstream process is to explore creative approaches and new forms of guidance that might be provided to State Parties in considering nominations before their preparation, as well as in relation to the nomination process.

A Power Point reference presentation which describes also the main stages of the nomination process will be available on the web site of the Initiative (<http://whc.unesco.org/en/astrophysics>).

The preparatory stages prior to launch the development of a potential draft nomination by the State(s) Party(ies) concerned could be:

- gathering of all the available information (legal/management/protection/use);
- creation of the expert team involving the representatives of all stakeholders concerned;

- identify the potential Outstanding Universal Value of the site;

- develop analysis and study of all elements exhibiting value, as well as their relationship to each other, which will determine the nature of the management and protection plan for the property;

- ensure that this is justified through a comparative analysis involving relevant facilities;

- make sure adequate protection, conservation and management is provided by the relevant authorities in conformity with the existing international normative instruments;
- develop a shared understanding of the nominated property and shared responsibility for its future.

It is desirable to carry out initial preparatory work to establish that a property has the potential to justify Outstanding Universal Value, including integrity or authenticity, before the development of a full nomination dossier which could be expensive and time-consuming. Such preparatory work might include collection of available information on the property, thematic studies, scoping studies of the potential for demonstrating Outstanding Universal Value, including integrity or authenticity, or an initial comparative study of the property in its wider global or regional context, including an analysis in the context of the Gap Studies produced by the Advisory Bodies. Such work will help to establish the feasibility of a possible nomination at an early stage and avoid use of resources on nominations that may be unlikely to succeed.

States Parties are invited to contact the World Heritage Centre and the Advisory Bodies at the earliest opportunity in considering nominations to seek information and guidance (UNESCO 2015, paragraph 122).

Inscribing a site on the World Heritage List is not the end of the story. Site managers and local authorities continuously work towards managing, monitoring and preserving the World Heritage properties. States Parties have an obligation to regularly prepare reports about the state of conservation and the various protection measures put in place at their sites.

4. Conclusion

This Focus Meeting contributes to the exchange of information and the establishment of new partnerships, with the goal of promoting and protecting technological heritage connected with space exploration and developing all necessary mechanisms to safeguard our common heritage.

Allow me to underline the importance to implement the decisions of the World Heritage Committee and to co-ordinate international activities aiming to promote and protect astronomical heritage. We count on your support and contribution for the success of the Thematic Initiative “Astronomy and World Heritage”.

I thank you for your attention.

References

- Ruggles, C. & Cotte, M. (eds.) 2010, *Heritage Sites of Astronomy and Archaeoastronomy in the context of the UNESCO World Heritage Convention* (Paris: ICOMOS –IAU)
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- UNESCO 2015, *The Operational Guidelines for the Implementation of the World Heritage Convention* (Paris: UNESCO) <http://whc.unesco.org/en/guidelines>