

UNESCO THEMATIC INITIATIVE “ASTRONOMY AND WORLD HERITAGE”

ANNA SIDORENKO-DULOM

Coordinator, Thematic Initiative “Astronomy and World Heritage”
UNESCO World Heritage Centre

Introduction

The Convention concerning the protection of cultural and natural World Heritage of 1972 provides a unique opportunity to preserve exceptional properties world-wide and to raise awareness about scientific concepts linked to these properties.

The mission of UNESCO regarding World Heritage consists of assisting the States Parties to this Convention to safeguard sites inscribed on the World Heritage List, to support activities led by States Parties in the preservation of World Heritage, and to encourage international cooperation in heritage conservation.

The World Heritage Committee adopted in 1994 the Global Strategy whose objective is to establish a representative and balanced World Heritage List, to fully reflect the cultural and natural diversity of heritage of outstanding universal value.

Considering that properties related to science are among the most under-represented on the World Heritage List and recognizing the absence of an integrated thematic approach for sites which have a symbolic or direct connection to astronomy, the UNESCO World Heritage Centre, in close consultation with States Parties, has elaborated the Thematic Initiative “Astronomy and World Heritage”.

Machu Picchu, Peru. © UNESCO/ Georges Malempré





San Agustín, Colombia. ©UNESCO.

Astronomy and World Heritage

The main objective of this initiative is to establish a link between Science and Culture towards the recognition of scientific values of cultural sites linked to astronomy. The identification, preservation and the promotion of these properties are fields of action in the implementation of this programme. It provides an opportunity not only to identify the properties but also to keep their memory alive and preserve them

from progressive deterioration, through the recognition and the promotion of their scientific values and through nomination and inscription on the World Heritage List of the most representative properties.

Why “Astronomy” and “World Heritage”

The cosmos have captivated the imagination of civilizations throughout the ages. The efforts of those cultures to understand or interpret what they see in the sky are often reflected in their architecture, petroglyphs, and other cultural representations.

Properties relating to astronomy stand as a tribute to the complexity and diversity of ways in which people rationalized the cosmos and framed their actions in accordance with that understanding. This includes, but is by no means restricted to, the development of modern scientific astronomy. This close and perpetual interaction between astronomical knowledge and its role within human culture is a vital element of the outstanding universal value of these properties. These material testimonies of astronomy, found in all geographical regions, span all periods from prehistory to today.

Understanding the role of these properties connected with astronomy, as well as promoting them through public awareness-raising campaigns, are crucial and vital steps in our common efforts to safeguard them for future generations.

At its 29th session of the World Heritage Committee requested the World Heritage Centre to further explore the thematic initiative “Astronomy and World Heritage” as a means to promote, in particular, nominations which recognize and celebrate achievements in science.

Implementation strategy

The proposal of the Thematic Initiative on Astronomy and World Heritage was finalized during the first meeting of the representatives of the scientific community of twelve States Parties, ICOMOS and NASA (Venice, Italy, March 2004,) and presented during the 29th session of the World Heritage Committee (Durban, South-Africa, July 2005).

The implementation strategy of the Initiative elaborated during this meeting could be applied through the following three broad phases:

- Phase I aims at (a) acquiring an in-depth knowledge of the outstanding properties connected with astronomy in all geographic regions through their identification, study and including the most representative of these properties on the national

tentative lists; (b) creating networks of cooperation between scientific communities, governmental bodies and site managers ; (c) promoting the most outstanding of these properties which recognize and celebrate achievements in science through their inscription on the World Heritage List.

- Phase II aims at (a) promoting international cooperation in order to safeguard and promote these properties; (b) providing a platform for capacity building; (c) raising public-awareness.
- Phase III aims at (a) fine-tuning the results of the research and capacity building activities; (b) ensuring the sustainability of results; (c) monitoring the ongoing development of pilot projects.

The Database

In order to implement the aforementioned activities, the World Heritage Centre requested all States Parties to the World Heritage Convention to identify the institution (scientific or cultural) which will be officially in charge of the implementation of this Initiative at national level in each country.

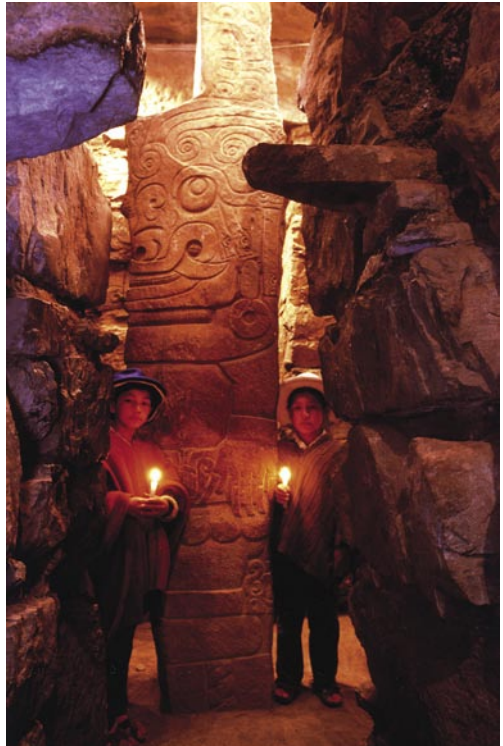
In order to facilitate the collaboration between different national and international experts, the World Heritage Centre created, thanks to financial support of the Royal Astronomical Society of the United Kingdom, the structure of the first visual and documentary Data Base of sites related to astronomy on the Web site of the World Heritage Centre.¹

This data base could be used as a tool for the inventory, research, management and pooling of information as well as provides a network to share knowledge for all international, national cultural and scientific institutions, as well as NGO's, involved in the development and implementation of the Initiative.

A public web page was also created in order to increase the visibility of the cultural World Heritage sites which have a link to astronomical observations.²

Nomination of properties to the World Heritage List

The World Heritage Centre wishes to assist the State Parties in the elaboration of the nomination document of properties linked to astronomy in view of its inscription on the World Heritage List.



Chavin arqueological site, Peru. ©UNESCO/André Laurenti



Angkor Vat, Cambodia. © UNESCO/B. Bruguier

“The nomination document is the primary basis on which the World Heritage Committee considers the inscription of the properties on the World Heritage List.”³

The average time required from submission of the complete nomination file of property to the decision of the World Heritage Committee concerning this property is about two years.

“States Parties are encouraged to prepare nominations with the participation of a wide variety of stakeholders, including site managers, local and regional governments, local communities, NGOs and other interested parties.”⁴

“The Committee considers a property as having outstanding universal value if the property meets one or more of the following criteria⁵. Nominated properties shall therefore:

- (i) represent a masterpiece of human creative genius;
- (ii) exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
- (iii) bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
- (iv) be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
- (v) be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
- (vi) be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);
- (vii) contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
- (viii) be outstanding examples representing major stages of earth’s history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
- (ix) be outstanding examples representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;
- (x) contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.”

“To be deemed of outstanding universal value, a property must also meet the conditions of integrity and/or authenticity and must have an adequate protection and management system to ensure its safeguarding.”⁶

The first milestone for the identification of the properties within a framework of the Thematic Initiative “Astronomy and World Heritage” was the development of a methodological approach aimed at the consideration of properties associated to astronomy on the base of the aforementioned World Heritage criteria. These were set forth during the March 2004 conference. The properties that can be associated with astronomy have initially been defined by the expert group in the following manner :

1. Properties which by their concept and/or the environmental situation have significance in relation to celestial objects or events;
2. Representations of the sky and/or celestial objects or events;
3. Observatories and instruments;
4. Properties with an important link to the history of astronomy.

The first definition includes properties such as temples, pyramids, megalithic sites and other monuments, for example Stonehenge in England that are aligned to celestial events such as the midwinter sunrise or the annual first appearance of a bright star like Antares in the night sky. The second covers the humanistic expression of the sky, such as mural paintings, murals, rock art. The third definition focuses on observatory buildings with its instruments like telescopes, but also includes places and/or landscapes that have been used repeatedly to observe the night sky which may not be in buildings. The fourth definition focuses on properties important to the development of astronomy that would not be included in the previous definitions. This would include locations where celestial events such as the transit of Venus across the face of the Sun were observed as well as the important monuments such as the houses of the greatest astronomers.

From astronomical cultural sites to “Starlight Reserves”

As the objectives of the “Starlight” Initiative which are in line with the Thematic Initiative “Astronomy and World Heritage”, the World Heritage Centre wishes to participate in the development of a common approach for the safeguarding of natural properties which can contribute by their exceptional night landscape to the astronomical researches worldwide.

An agreement could be established between the above-mentioned Initiatives aiming at the definition of a concept of “Starlight Reserve” in order to nominate these properties for inscription on the World Heritage List.

Taking into account the Global Strategy for a credible, balanced and representative World Heritage List adopted by the World Heritage Committee in 1994, and the broadening concept of World Heritage, resulting in the inscription of new categories of properties to the World Heritage List, the United Nations Educational, Scientific and Cultural Organization’s (UNESCO) thematic initiative “Astronomy & World Heritage” aims to



Stonehenge, United Kingdom. ©UNESCO/ Franck Dunouau

assist the State Parties to nominate more properties related to science. It is not easy for States Parties to evaluate the importance of astronomical heritage, nor their benefits in terms of enrichment of the history and science of humanity, the promotion of cultural diversity and the development of exchanges.

The UNESCO Initiative offers to the States Parties a possibility to recognize this particular heritage dispersed throughout all the geographical regions of the world, span all eras, from prehistory to the present day.



Teotihuacan, Mexico. ©UNESCO/Isabelle Le Fournis

As noted by the UNESCO General Conference at its 33rd session, this thematic initiative “Astronomy & World Heritage” contributes to the preparation of the International Year of Astronomy for 2009 and provides an opportunity to raise public awareness, especially with young people about scientific heritage and to enhance the links between science, education, culture and communication.

Notes and References

1. http://whc.unesco.org/pg.cfm?cid=281&id_group=21
2. http://whc.unesco.org/pg.cfm?cid=281&id_group=21&s=home
<http://whc.unesco.org/en/activities/19/>
3. Paragraph 120 “Operational Guidelines for the Implementation of the World Heritage Convention”
4. Paragraph 123 “Operational Guidelines for the Implementation of the World Heritage Convention”
5. Paragraph 77 “Operational Guidelines for the Implementation of the World Heritage Convention”
6. Paragraph 78 “Operational Guidelines for the Implementation of the World Heritage Convention”