

# How can UNESCO World Heritage Criteria be applied to the “Windows to the Universe” Sites?

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**Abstract.** This communication proposes a methodical approach trying to link the concept of “Windows to the Universe” to the uses of the Criteria defined by the World Heritage Convention (UNESCO 1972). The first issue is well advanced today after more than 10 years of active studies and preservation projects such as “Starlight Reserves” by specialists of astronomy, archaeoastronomy and environmental sciences. The second issue is related to a UNESCO Convention ruled by the WH Committee that has led to the recognition of around 1000 World Heritage sites over 40 years. The official booklet *Operational Guidelines for the Implementation of the World Heritage Convention* (latest edition 2015) (UNESCO 2015) summarizes conceptual ideas and methodological recommendations for WH nominations. In practice the WH Committee's decisions rely on the scientific and professional evaluation of each site by UNESCO's advisory bodies: ICOMOS for cultural heritage and IUCN for natural heritage.

The first goal of this presentation is to establish appropriate understanding of a very specific conceptual approach (Windows to the Universe) in the context of a very large UN Convention (the World Heritage List) related both to cultural and natural heritage in general. The second goal is to give a readable understanding of the WH requirements coming from the strict evaluation of the “Outstanding Universal Value” (OUV) of a given place, including the choice of WH Criteria expressing OUV with respect to the format of the *Guidelines*. Furthermore, and due to concepts coming from two very different fields, the communication aims to present a practical methodology in the case of a possible WH nomination: how to understand relationships between different classes of value and how to demonstrate OUV and justify the choice of Criteria for the place. Beyond potential WH projects, obviously limited in number, the communication tries to propose an efficient and general methodology for assessing the value and creating understanding of places having a “Windows to the Universe” facet.

**Keywords.** Astronomical heritage, Outstanding Universal Value (OUV), Windows to the Universe

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## 1. Introduction

Within the terms of reference issued from the UNESCO World Heritage Convention (UNESCO 2015), the key sentence for WH recognition is the “Justification of Outstanding Universal Value” (OUV) of a given place, which means a “place” or a “site” within the international convention. The OUV of the site is expressed by the WH criteria, 6 of which express possible cultural value and 4 express possible natural value.

The six WH cultural criteria are:

I. represent a masterpiece of human creative genius;

- II. exhibit an important interchange of human values;
- III. bear a unique or at least exceptional testimony to a cultural tradition;
- 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;
- 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 four WH natural criteria are:

- 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;
- IX. be outstanding examples representing significant ongoing ecological and biological processes in the evolution of plants and animals;
- X. *in-situ* conservation of biological diversity.

There are also other important associated issues for the demonstration of OUV in WH, in particular the integrity and authenticity of the place, and the comparative analysis with similar sites.

## 2. The “Windows to the Universe” concept in the heritage view

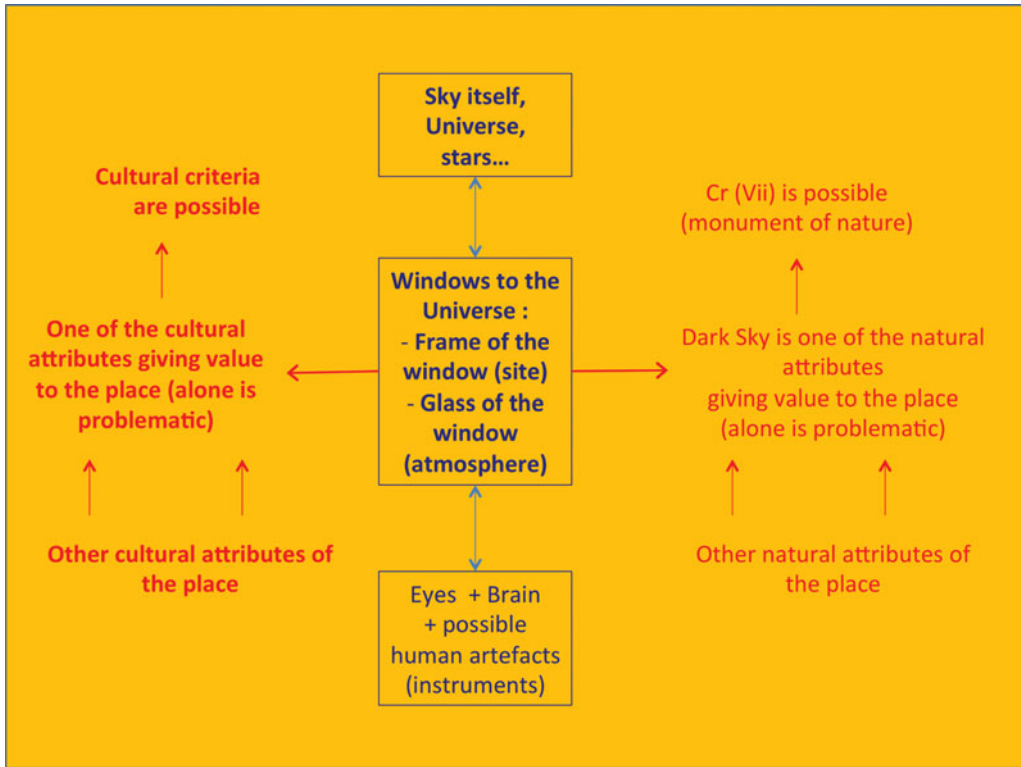
The question now is: how can the UNESCO World Heritage Criteria be applied to the “Windows to the Universe” sites? The basic features shaping the “Windows to the Universe” concept are:

- The sky itself (object of the observation);
- The site as a property in local permanent context (geography, atmosphere, architecture, landscape, nature . . . ); and
- Humankind using the observation place, eventually with artifacts/instruments.

Of course, these three basic issues of the sky observation are intimately related together. But they do not have the same sense in the WH view and difficulties arise as a result. The sky itself can not be seen as a “property” in the same human/juridical sense as for all the other WH sites (since this would imply anthropocentrism). It follows that the “Dark Sky” cannot be taken alone in consideration for a WH nomination. The thing most spontaneously adapted to the goals of the WH Convention is the place itself, as a local tangible property. The human presence of the observers and astronomers gives meaning and life to the place, supporting important additional intangible value by the history of knowledge and human representations.

On the other hand, dark sky quality can be considered as a local environmental attribute. Studying a place in the WH perspective starts with an inventory of its tangible attributes: generally speaking, a given place has a series of natural attributes and cultural attributes supporting and expressing its value. Clearly, intrinsic dark sky quality is a natural attribute of the place among others. Assessing its importance will involve an analysis of its properties (purity as minimum of physical constraints) and consideration of the visible relationships between attributes that give a landscape value.

Dark Sky quality is one among a cluster of natural attributes. It contributes to the global natural context of a given place, and it belongs to a larger group of natural attributes of the site, forming its natural environment components. One of the best ways to use Dark Sky value is among a set of other remarkable attributes that characterize a



**Figure 1.** Basic features shaping the “Windows to the Universe” concept and ways to use Dark Sky value among other natural and/or cultural attributes. Diagram by the author

generally remarkable landscape both by night and by day. Potential OUV results from the combination of a set of remarkable attributes that contribute to the significance and beauty of the whole.

Dark skies can also be recognized among a cluster of cultural attributes or mixed attributes. Dark sky quality could be considered as a cultural attribute in the context of the history of the place as an observatory: thus, the remarkable atmospheric quality of a given place explains its identification as a “Window to the Universe” and its choice for a High-Mountain Observatory. The other good way to use “dark sky” value is to link it to a set of remarkable cultural attributes or—equally often—a mixture of cultural and natural features.

These considerations are summarized in Fig. 1.

A related issue is Dark Sky management, both for scientific efficiency and for heritage preservation. The international success and importance of Dark Sky Reserve initiatives has presented a strong challenge to control human light pollution. The maintenance of dark sky quality could certainly, in itself, be a strong management goal for an astronomical site and region. This has implications relating to the WH Buffer Zone concept.

**References**

UNESCO 2015, *The Operational Guidelines for the Implementation of the World Heritage Convention* (Paris: UNESCO) <http://whc.unesco.org/en/guidelines>