

Seminar on the Initiative

“Windows to the Universe: astronomical sites and protection of the skies of astronomical observation”

UNESCO Thematic Initiative

Astronomy and World Heritage

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**World
Heritage
and Astronomy**

2003

Preliminary Study : Pilot-Project Proposal

The properties connected to science or having an important component directly or symbolically linked with, for example, astronomical observations, are under-represented on the World Heritage List



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**World Heritage
Convention**

**Convention du
patrimoine mondiale**

**Convención del
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**World
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and Astronomy**

2003

Why Astronomy and World Heritage ?

- ***Astronomy*** is present in all periods, from ancient to modern, and in all geographical regions
- ***Astronomical knowledge*** is reflected in the structure of historical monuments and in urban planning
- ***Astronomical applications*** of cultural properties are often interlinked with the different traditions and practices



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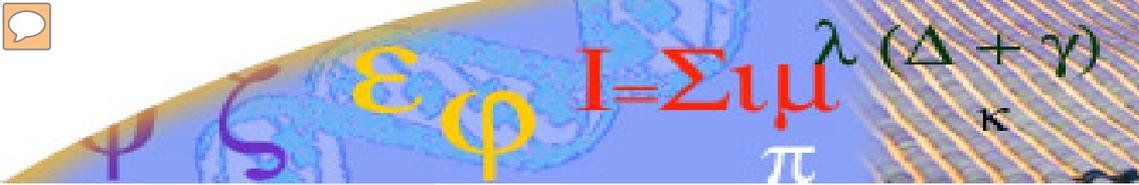
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UNESCO Thematic Initiative "Astronomy & World Heritage"

Astronomy & World Heritage (AWH) aims to enhance links between Science and Culture on the basis of research aiming at the acknowledgement of the cultural and scientific values of properties connected with astronomy.

The identification, safeguarding and promotion of these properties are the three lines of action for the implementation of this programme.



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World
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AWH OBJECTIVES

- ***To assist States Parties to identify and to nominate*** the properties related to astronomy
- ***To enhance*** cooperation between States Parties through the preparation of nominations of serial transnational properties which recognize and celebrate achievements in science and technology
- ***To assist States Parties to safeguard and to promote*** the properties related to astronomy
- ***To develop the partnerships*** between scientists and other stakeholders involved in the process of identification, conservation and management of this specific category of heritage
- ***To build*** the capacity of site managers
- ***To raise public awareness***



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28th session of the World Heritage Committee (Suzhou, China)

The World Heritage Committee requested the World Heritage Centre to submit, for its consideration at its 29th session (2005), the thematic initiative of the World Heritage Centre on "Astronomy and World Heritage"

- 2004 - First International expert meeting on scientific and astronomical heritage (WHC & UNESCO office in Venice)



32nd session of the World Heritage Committee (Quebec City, Canada)

The World Heritage Committee examined an Integrated Implementation Strategy of the Thematic Initiative "Astronomy and World Heritage"

This strategy, prepared in coordination with the National Focal Points in charge of the implementation of the Initiative, Advisory Bodies and the International Astronomical Union (IAU), aims to improve the identification, conservation and management of the specific types of properties connected with astronomical observations and traditional astronomical knowledge.

2008 - Science and Technology Expert Working Group in the context of World Heritage Nominations (London, 2008)



29th session of the World Heritage Committee (Durban, South Africa)

The World Heritage Committee requested the Director of 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.

- 2005 - sub-regional round table (Institute of Astronomy, Moscow)



34th session of the World Heritage Committee (Brasília, Brazil)

The World Heritage Committee took note of the activities organized by the States Parties within the framework of the Thematic Initiative "Astronomy and World Heritage", and requested the World Heritage Centre to disseminate the Thematic Study on Astronomical Heritage jointly prepared by ICOMOS and the IAU Working Group among the States Parties.

- Jantar Mantar, Jaipur (India), inscribed on the World Heritage List as an astronomical observation site built in the early 18th century comprising 19 large instruments for naked-eye observation;
- The 13th-century Dengfeng Observatory (China), inscribed on the World Heritage List as one of the components of the Historic Monuments of Dengfeng in "The Centre of Heaven and Earth" (China)

- First International Seminar on Serial Nomination of properties connected with Astronomy held in Cairo (Egypt)





2011

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World Heritage Convention

35th session of the World Heritage Committee (UNESCO, Paris)

The World Heritage Committee :

- noted the completion of the thematic study on "Heritage Sites of Astronomy and Archaeoastronomy";
- 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.



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World Heritage Convention

2012

36th session of the World Heritage Committee (St, Petersburg)

The World Heritage Committee :

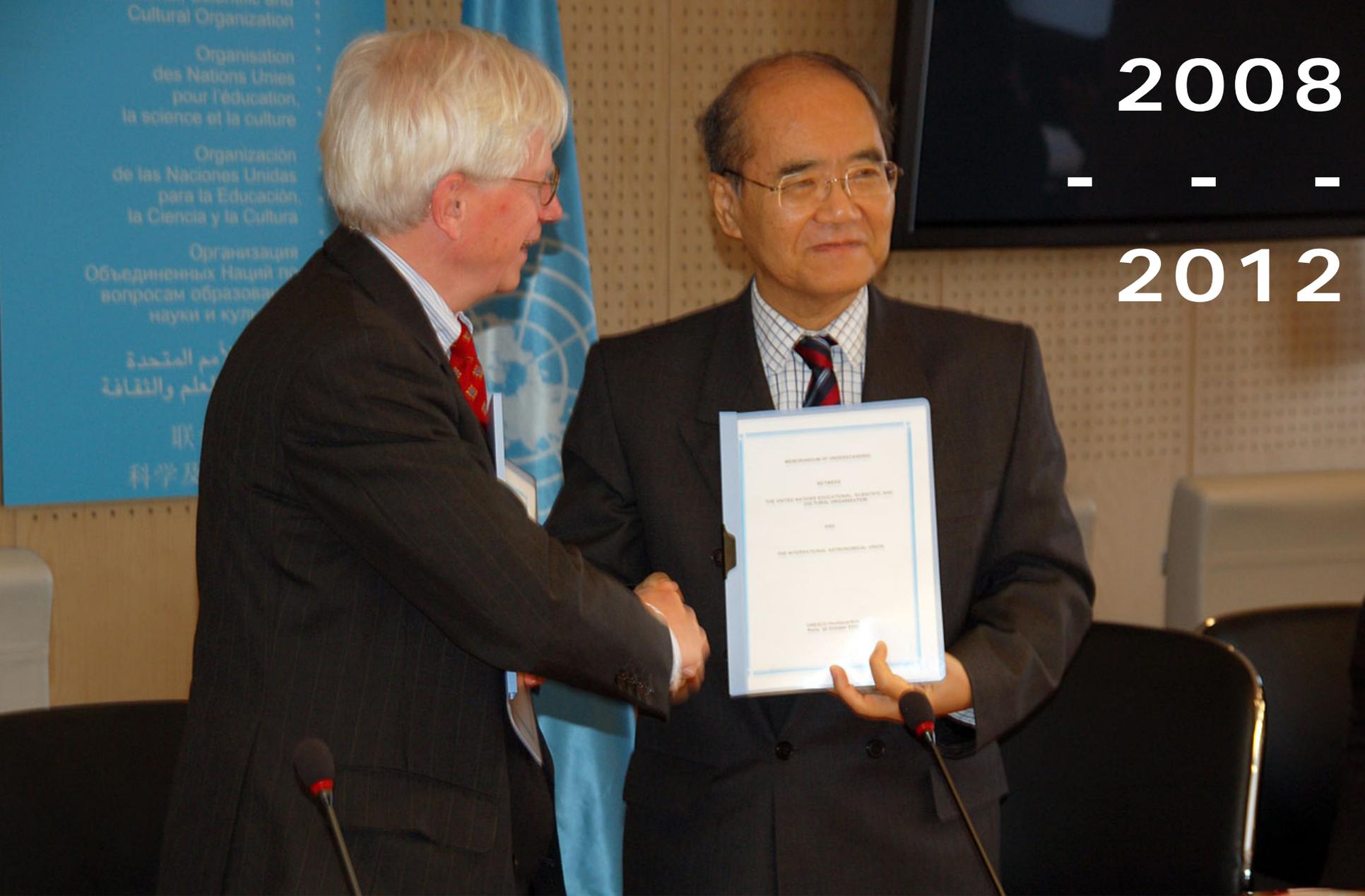
- encouraged cooperation between the UNESCO World Heritage Centre, specialized agencies and relevant interdisciplinary scientific initiatives towards the elaboration of a Global Thematic Study on Heritage of Science and Technology, including studies and research on technological heritage connected with space exploration;
- encouraged States Parties, international organizations and other donors to contribute to the thematic programmes and initiative.



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Comité de
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2008

- - -

2012

First Memorandum of Understanding between UNESCO and IAU on Astronomy and World Heritage

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International Year of Astronomy Cycle of activities

2009



“Astronomy and World Heritage : across time and continents”

- *The year 2009 marks the 400th anniversary of the first use of the telescope for astronomical observation by Italian scientist Galileo Galilei.*

2009 KAZAN RESOLUTION

Principal Categories of Tangible Astronomical Heritage

- **Observatories as “scientific monuments”**
- **Material representations of the results of astronomical observations and contextual understanding: constructions, architecture and urbanism related to applied astronomy and/or bearing astronomical information**
- **Properties whose design and/or landscape setting have significance in relation to celestial objects or events**
- **Monuments, sites and cultural landscapes related to the history of astronomy and/or human cultural practices related to astronomy**
- **Technological sites related to space exploration**
 - *2009 - International Conference “Astronomy and World Heritage: across time and continents”, Kazan, Russian Federation*

International Workshop and Expert Meeting "Starlight Reserves and World Heritage – scientific cultural and environmental values"

2009

Recommendations

- to develop a dark sky protection classification system;
- to welcome the establishment of a "dark sky advisory group" within the IUCN WCPA;
- to encourage States Parties to develop appropriate frameworks for the protection of dark skies;
- To adopt and implement the requirements and orientations contained in the "Starlight Reserve Concept" document;
- **to cooperate towards a potential serial nomination to cover outstanding examples of astronomical heritage and observation sites;**
- The meeting recommended using the context of climate change to link the Starlight initiative to promote energy efficient and intelligent lighting opportunities in urban, rural and remote areas.



- <http://whc.unesco.org/en/news/507>
- <http://whc.unesco.org/en/astronomy>
- <http://www.astronomicalheritage.org>

**Starlight Reserves and World Heritage
scientific, cultural and environmental values**

International Workshop and Expert Meeting Fuerteventura, Canary Islands, Spain,
10-11 March 2009



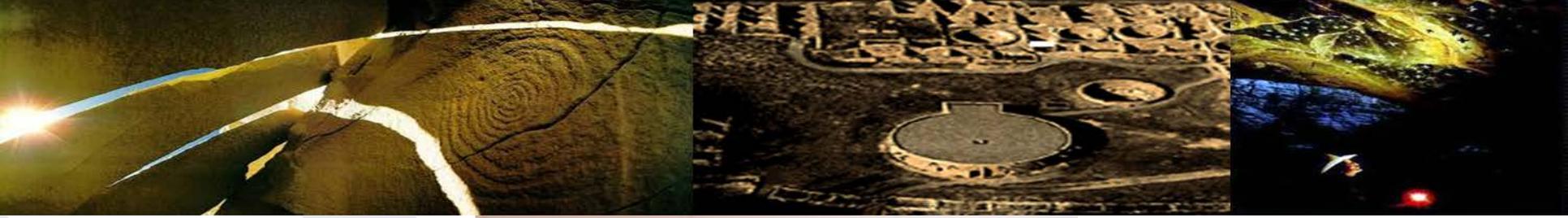
Organized by the UNESCO World Heritage Centre, International Astronomical Union (IAU) and Instituto de Astrofísica de Canarias (IAC), with the support of the Fuerteventura Island Government.



WHC Statement concerning dark skies and celestial objects

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 first statement in 2007 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.

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.



***New Memorandum of Understanding between
UNESCO and IAU***

2013



2016

on Astronomy and World Heritage





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World Heritage Activities

By the Memorandum of Understanding signed on 30 April 2013, the Parties confirm their commitment to promote astronomical sites and 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.

This is a step towards the recognition of the importance of the astronomical heritage worldwide, in terms of its enrichment of the history of humanity and the enhancement of international exchange.



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Action Plan - Credibility

Target Audience: States Parties

Action 1 – STUDIES & RESEARCH

- ›IAU/ICOMOS Thematic Study on Astronomical Heritage (**accomplished**)
- ›Global Study on Heritage of Science and Technology, requested by the WH Committee
- ›Study & Research on Space Technological Heritage, requested by the WH Committee

Action 2 - UPSTREAM PROCESS – POTENTIAL WH TRANSNATIONAL SITES

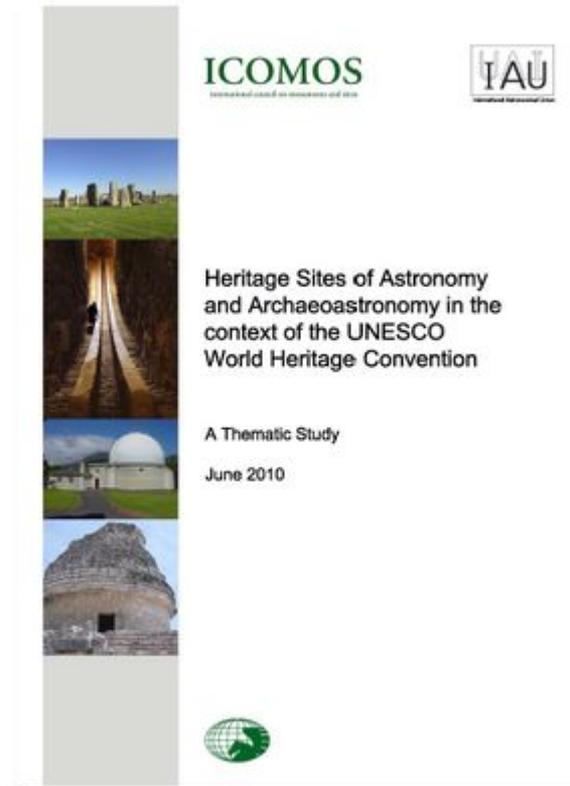
- ›Transnational collaboration – International Committees for the coordination of serial nominations :
 - **Carte du Ciel - Astronomical Heritage of XIX c. (under development)**
 - **Windows to the Universe (under development)**



The Thematic 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

This Thematic Study :

- 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,
- indicates the criteria under which such sites might be nominated for inscription on the World Heritage List.



ICOMOS – IAU

Thematic Study on Astronomical Heritage



Windows to the Universe : Where the Earth meets the universe

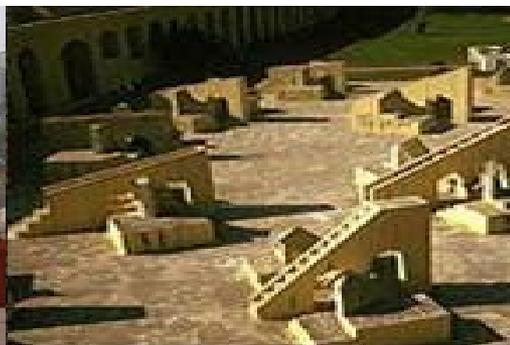
- Chapter 16. 'Windows to the universe'— starlight, dark-sky areas and observatory sites
- Case Study 16.1. Lake Tekapo - Aoraki - Mount Cook Starlight Reserve, New Zealand
- Case Study 16.2. Eastern Alpine Starlight Reserve and Grossmugl Starlight Oasis, Austria
- Case Study 16.3. AURA observatory, Chile
- Case Study 16.4. Mauna Kea observatory, Hawaii, USA
- Case Study 16.5. Canarian observatories, Spain

Staging the preparation of a nomination

First stage is to:

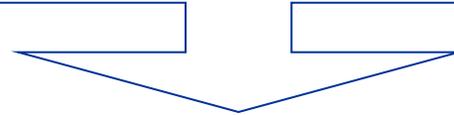
- gathering of all the available information
- creation of the nomination team
- identify the potential outstanding universal value of the property;
- ensure that this is justified through a comparative analysis;
- make sure adequate protection, conservation and management is provided
- ensure the participation in the nomination process of property owners, site managers, local and regional governments, local communities, NGOs, ect.
- inform inhabitants of the site and its surroundings
- develop a shared understanding of the nominated property and shared responsibility for its future

Second stage: the writing of the nomination dossier can be started



The Nomination Process

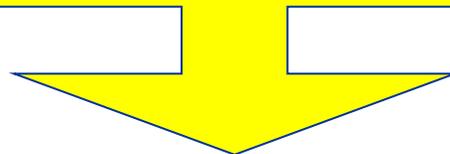
The **State Party** makes an inventory of its heritage



Between the properties of this national inventory the **State Party** chooses those that considers of *Outstanding Universal Value* and includes them on its **Tentative List**



The **State Party** picks up one property from its Tentative List to nominate it for World Heritage listing



The Nomination Process

UPSTREAM PROCESS

To enable the Advisory Bodies, World Heritage Centre, relevant technical experts, other States Parties, to accompany States Parties and provide assistance **throughout** the whole World Heritage nomination process



The Nomination Process

The **State Party** prepares the nomination file and, if it wishes, submits a draft copy by **30 September** to **WHC** for comments

WHC reviews the draft nomination and sends its comments to the **State Party** in view of the finalization of the document (**October-December**)

The **State Party** makes corrections, completes the nomination and submits it by **1 February** to the **WHC**



The Nomination Process

WHC analyses all nomination files received
and checks their **completeness** (month of February)

WHC transmits the nomination files that are considered
complete and meet the requirements set by the
Operational Guidelines to the **Advisory Bodies**
(March)

In case it is requested, the **State Party** should submit
any additional information needed by **28 February** of
the following year



The Nomination Process

The **Advisory Bodies** study the nomination files and send their experts on mission to the proposed properties in order to prepare their evaluations
(June-December)

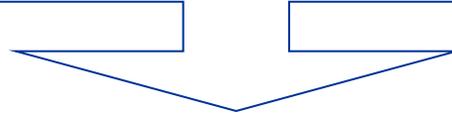
Advisory Bodies Panel Meetings decide recommendations on the basis of their discussion and the evaluations (January)

Advisory Bodies evaluations and recommendations are transmitted to the **World Heritage Committee** (May)



The Nomination Process

The **World Heritage Committee** takes decisions



The nominated property may be:

- **inscribed** on the World Heritage List
- **referred** or **deferred** back to the State Party
- or **not inscribed**





Upstream Processes to Nominations: Creative approaches in the nomination process

The objective of the pilot projects 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.

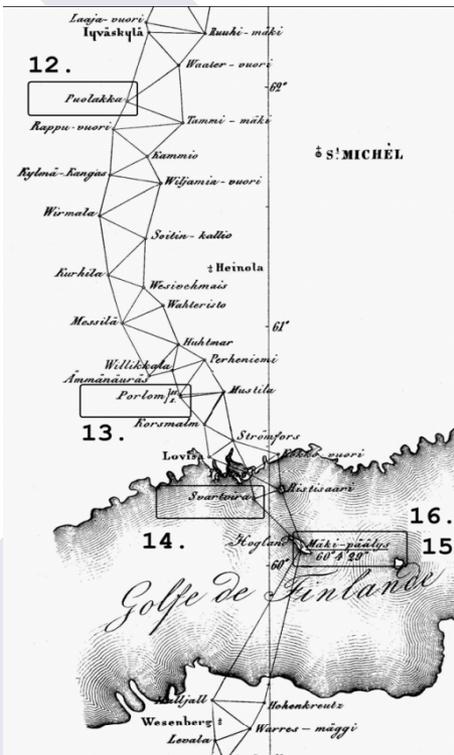
REQUIREMENTS

for the nomination of serial properties

Operational Guidelines for the Implementation of the World Heritage Convention

Serial properties will include component parts related because they belong to:

- the same historico – cultural group;*
- the same type of property which is characteristic of the geographical zone;*
- the same geological, geomorphological formation, the same biogeographic province, or the same ecosystem type;*



Example : **Geodetic Struve Arc** (transnational), inscribed in 2005, has been recognized for its specific value linked to astronomical research



REQUIREMENTS

for the nomination of serial properties

*Operational Guidelines for the Implementation of
the World Heritage Convention*

A serial nominated property may occur :

- a) on the territory of a single State Party
(serial national property); or***
- b) within the territory of different States
Parties, which need not be contiguous
and is nominated with the consent of all
States Parties concerned
(serial transnational property).***



REQUIREMENTS ***for the nomination of serial properties***

*Operational Guidelines for the Implementation of
the World Heritage Convention*

Serial nominations, whether from one State Party or multiple States Parties, may be submitted for evaluation over several nomination cycles, provided that the first property nominated is of outstanding universal value in its own right.

States Parties planning serial nominations phased over several nomination cycles are encouraged to inform the WH Committee of their intention in order to ensure better planning.



**We count on your support and
contribution for the success of this
Initiative**

**We invite you to designate your AWH
Focal Points and to join our network
on Astronomy and World Heritage**

Thank you very much for you interest





THANK YOU