

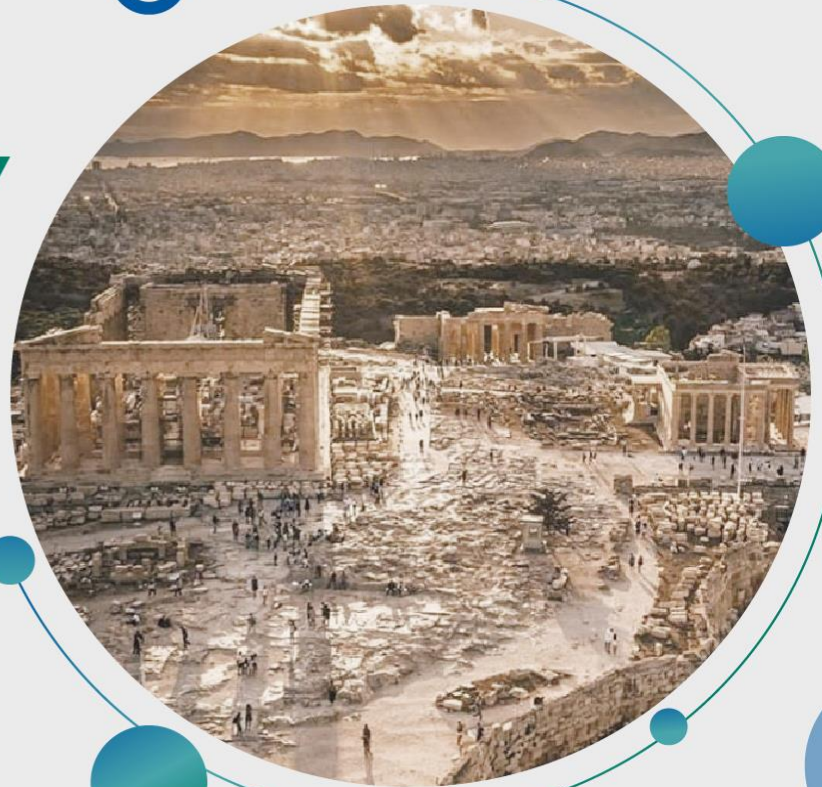


# Urban Heritage Climate Observatory

## a new GEO Community Activity

Dr. Evangelos Gerasopoulos  
National Observatory of Athens

Director of the Greek GEO Office  
Co-chair of GEO Programme Board  
UHCO co-lead



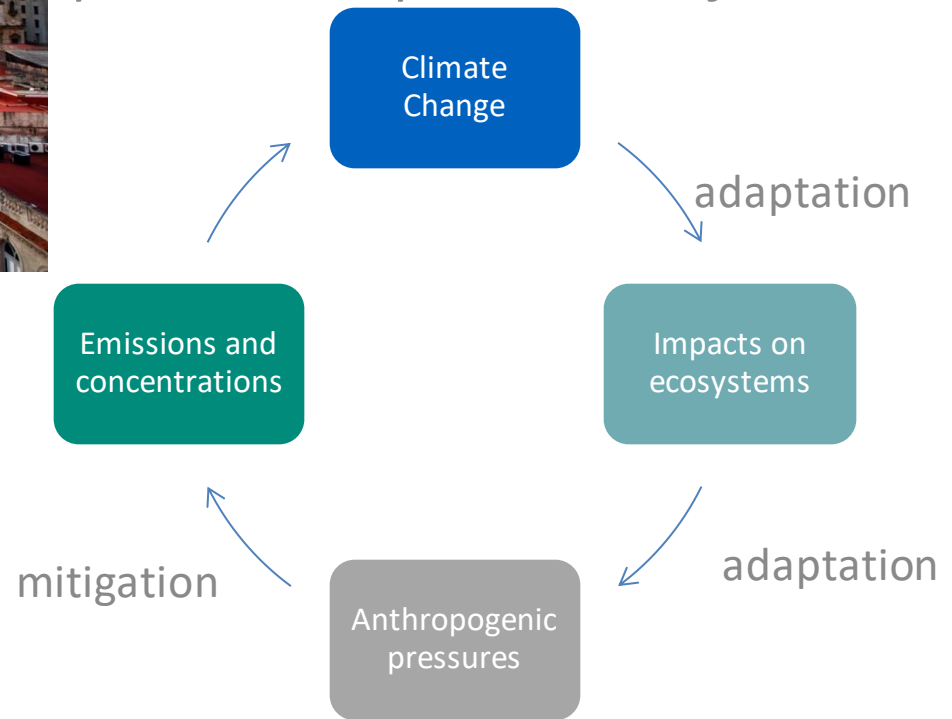
Workshop on Cultural & Natural Heritage  
& Climate Challenges  
1-2 July 2021



# Climate Change Adaptation



*Adapting to climate change means taking action to prepare for and adjust to both the current effects of climate change the predicted impacts in the future.*



*Integrate cultural heritage into the adaptation policies to be promoted at international climate change negotiations to increase resilience*  
[Committee of Ministers to member States]

# EO for WH adaptation

EO could contribute revealing the requirements for World Heritage Climate Change adaptation & facilitate their implementation and effectiveness



## Earth Observation

Pollution  
Monitoring

Urban  
Expansion  
Mapping

Disaster  
Risk  
Assessment

Urgency  
Strategies

Good  
Practices

Policy

Public  
Awareness



# Group on Earth Observations



PARIS2015  
UN CLIMATE CHANGE CONFERENCE  
COP21·CMP11

## GEO 2020-2022 WP

GEO  
Flagships

GEO  
Initiatives

GEO  
Community  
Activities

Regional GEOs

GEO Foundational Tasks



**SENDAI FRAMEWORK**  
FOR DISASTER RISK REDUCTION 2015-2030



01/07/2021

Session 2: Cultural and Natural  
Heritage Requirements for Climate  
Change Adaptation

Dr. Evangelos Gerasopoulos

# Greek GEO Office



- Participate towards meeting national priorities and GEO's regional vision
- Coordinate EO activities and capacities in the region
- Promote EO information for decision making and raise public
- Maximize synergies amongst key EO partners in Greece
- Play up the leadership of the Greek EO actors
- Identify and trigger exploitation of synergies
- Foster the exploitation of best practices between EO players at the national level



# History



UHCO kick off meeting  
2-day event

**April 2021**

Open call  
GEO Community Activity co-led by UNESCO & Greece

**June 2020**

Climate Action Summit  
Protection of the cultural and natural heritage from adverse climate change impacts

**September 2019**

GEO XVI Plenary  
EO role by the Head of the Greek Delegation Team

**November 2019**

Report on the 2019 Climate Action Summit and the way forward in 2020  
By UN Secretariat with the support of UNESCO & WMO

UNFCCC COP25  
Presented by the Minister of Environment and Energy of Greece, WMO, and UNESCO

**December 2019**



*Acropolis, Athens*

01/07/2021

Session 2: **Cultural and Natural Heritage Requirements for Climate Change Adaptation**

Dr. Evangelos Gerasopoulos

# UHCO

The urgency of  
climate change

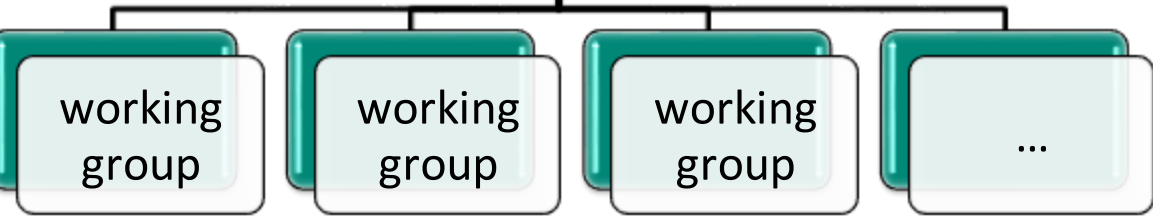


Connecting  
the dots ...



The untapped  
potential of EO

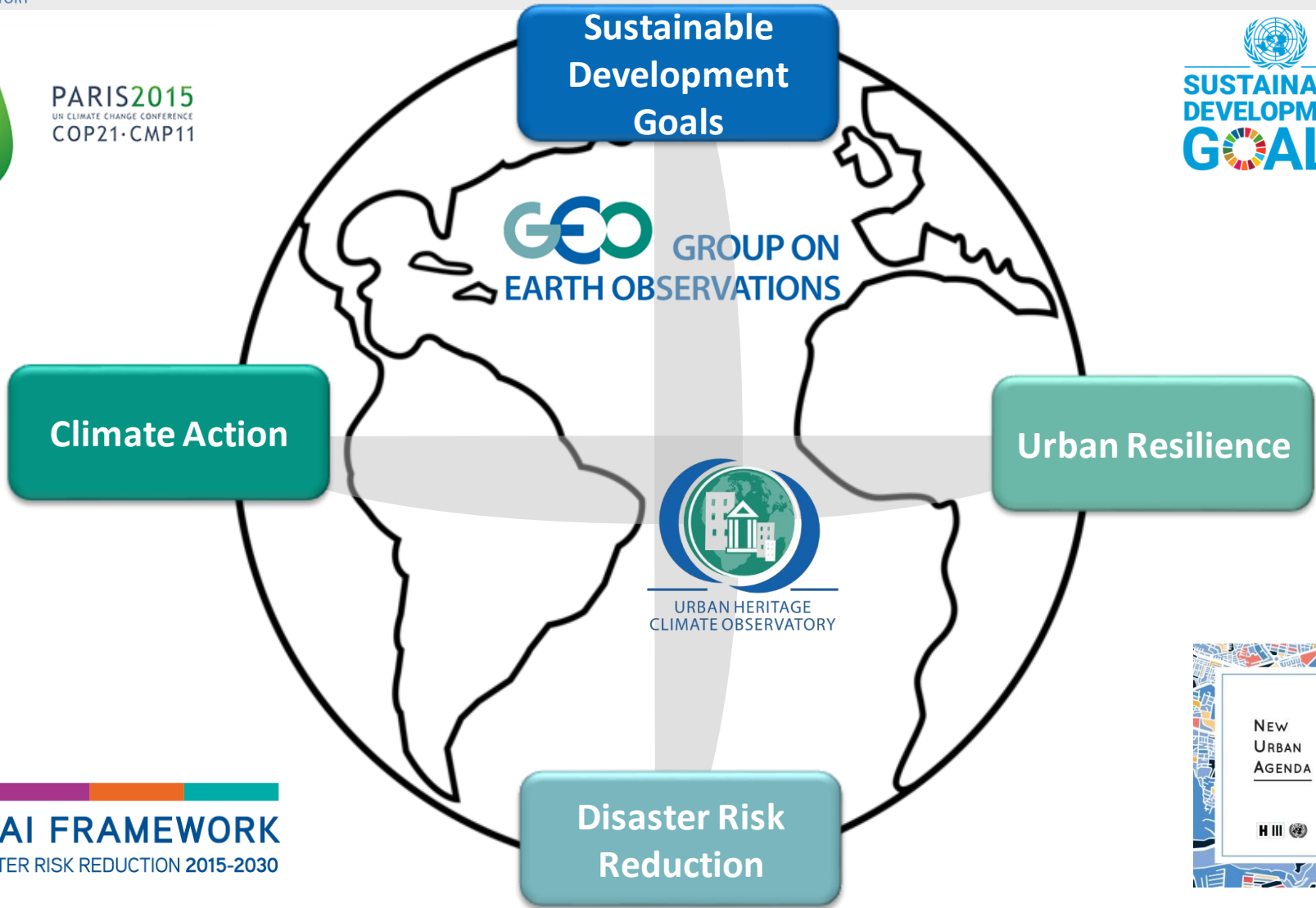
The importance  
& vulnerability of  
urban heritage



# UHCO as the vehicle



PARIS2015  
UN CLIMATE CHANGE CONFERENCE  
COP21·CMP11



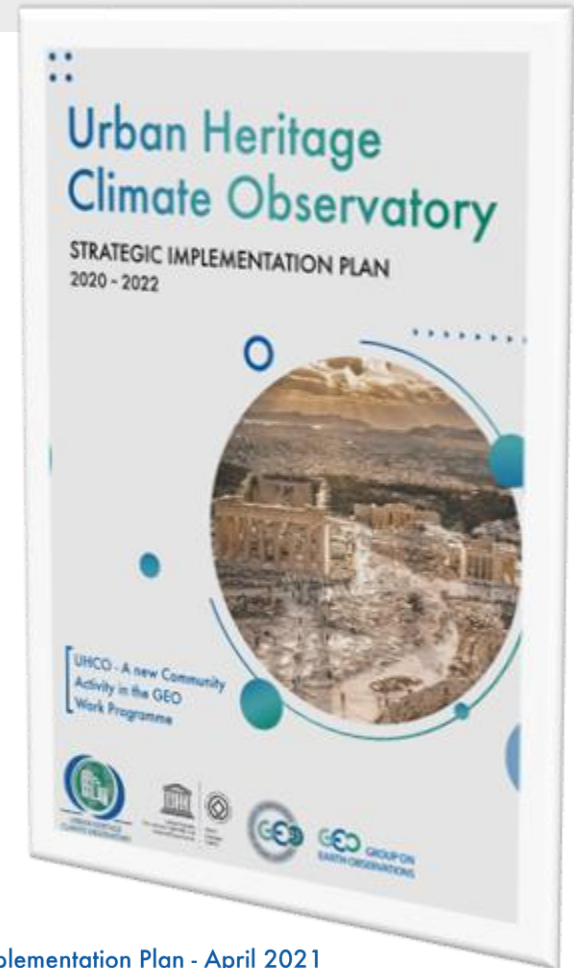
**SENDAI FRAMEWORK**  
FOR DISASTER RISK REDUCTION 2015-2030





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2	Purpose   4
3	Background & Previous Achievements   6
4	Key Activities   6
5	Relationship to GEO Engagement Priorities and to other Work Programme Priorities   8
6	Governance   9
7	Data Policy   9
	Partners   11



UHCO Implementation Plan - April 2021

We would like to acknowledge all that played a part in the conceptualization, synthesis and reviewing of the current implementation plan. Contributors: Jennifer Bailey & Nefta Votsi (editing), Fatimah Khan (formatting), Eleni Christia & team (graphics).

# Objectives

Floods in Venice (UNESCO)

Enrich & modernize processes for the preservation, monitoring, management of urban heritage exploiting EO

Use a bottom up approach to inform global decisions & develop a global service to assist local practitioners in tackling climate change impacts to urban heritage

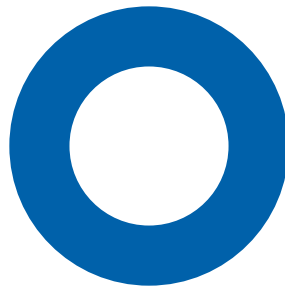
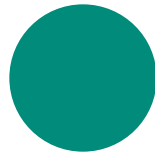
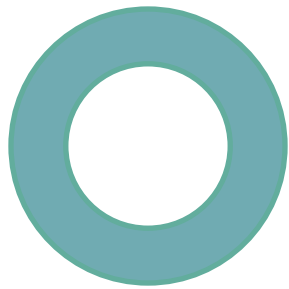
Communication & advocacy around climate action

# Planned activities

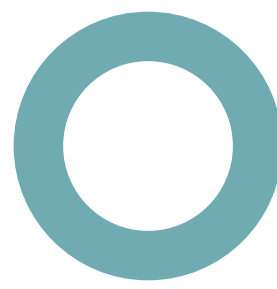
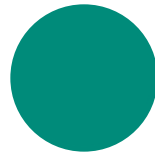
- ✓ Open invitation launched by GEO
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- ✓ Implementation Plan development

- Pull resources for global platform
- Pilot refinement
- Building awareness, training & education

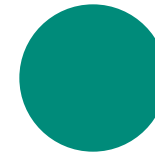
2020



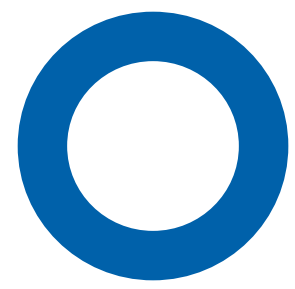
2021



2022



2023 & beyond



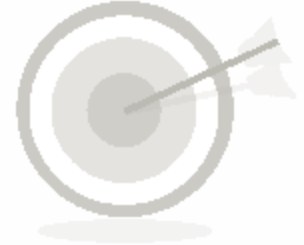
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- Define working groups & actions
- **Collection of needs, data & global good practices**
- Identify & select pilot sites

- Define frame of indicators
- Initiate pilot implementations
- Conceptualization of global platform

# Real needs & engagement



end 2021



data &  
information  
needs

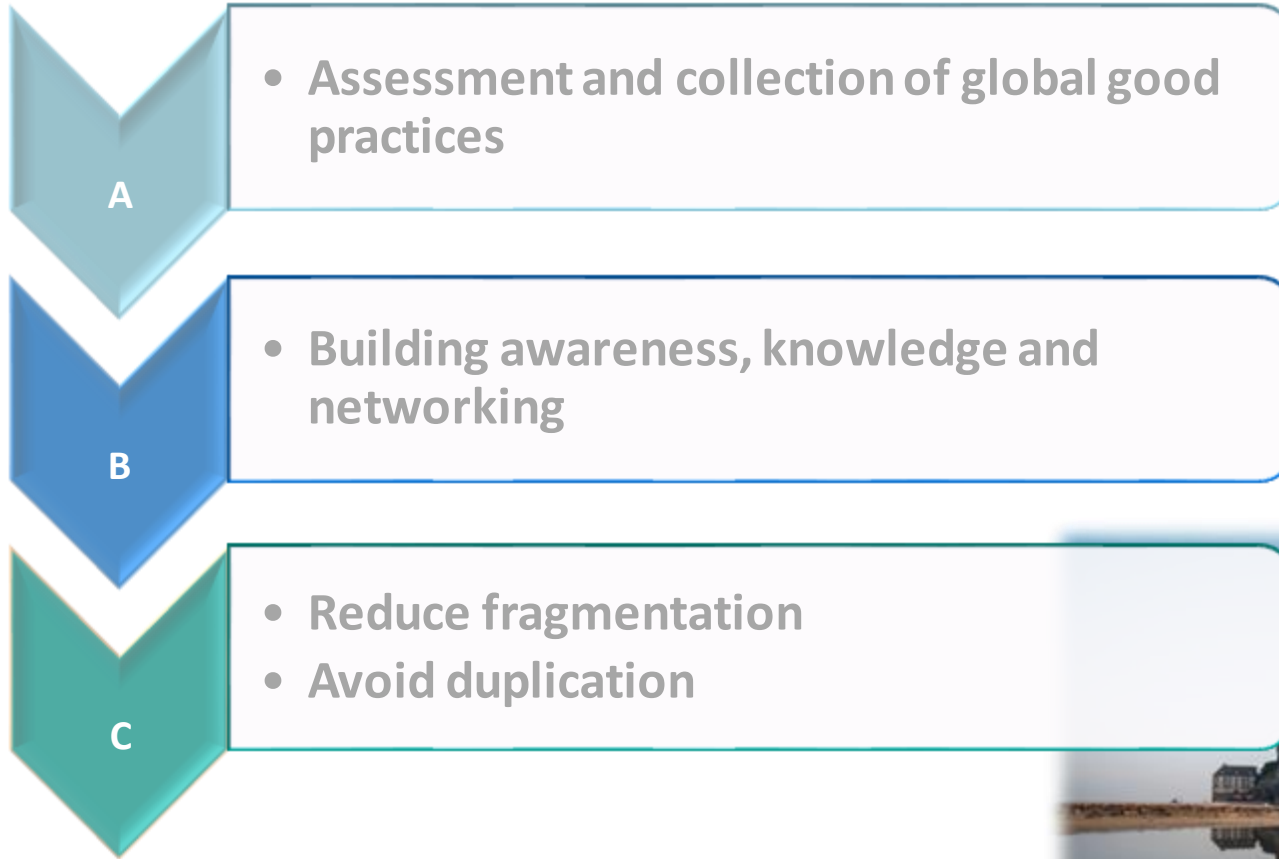
stakeholders

Matching of data and information needs with available EO assets and provision of a plethora of EO expertise to cultural heritage stakeholders and vice versa

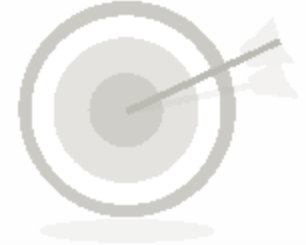


Jaisalmer Fort, Rajasthan, India

# Good practices across the board



end 2021

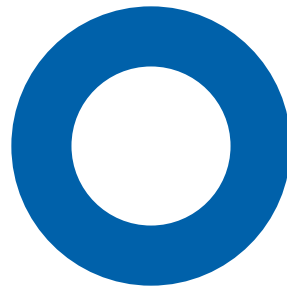
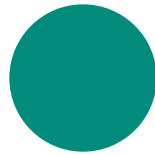
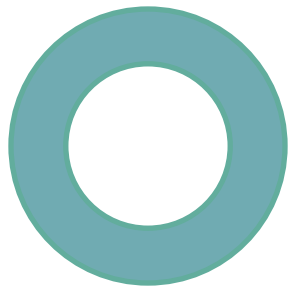


# Planned activities

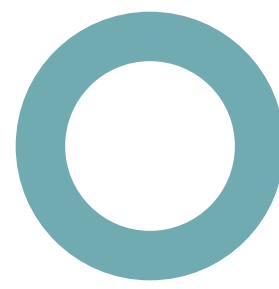
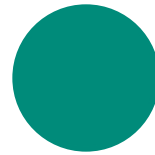
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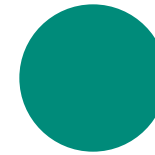
2020



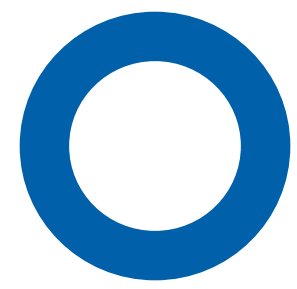
2021



2022



2023 & beyond



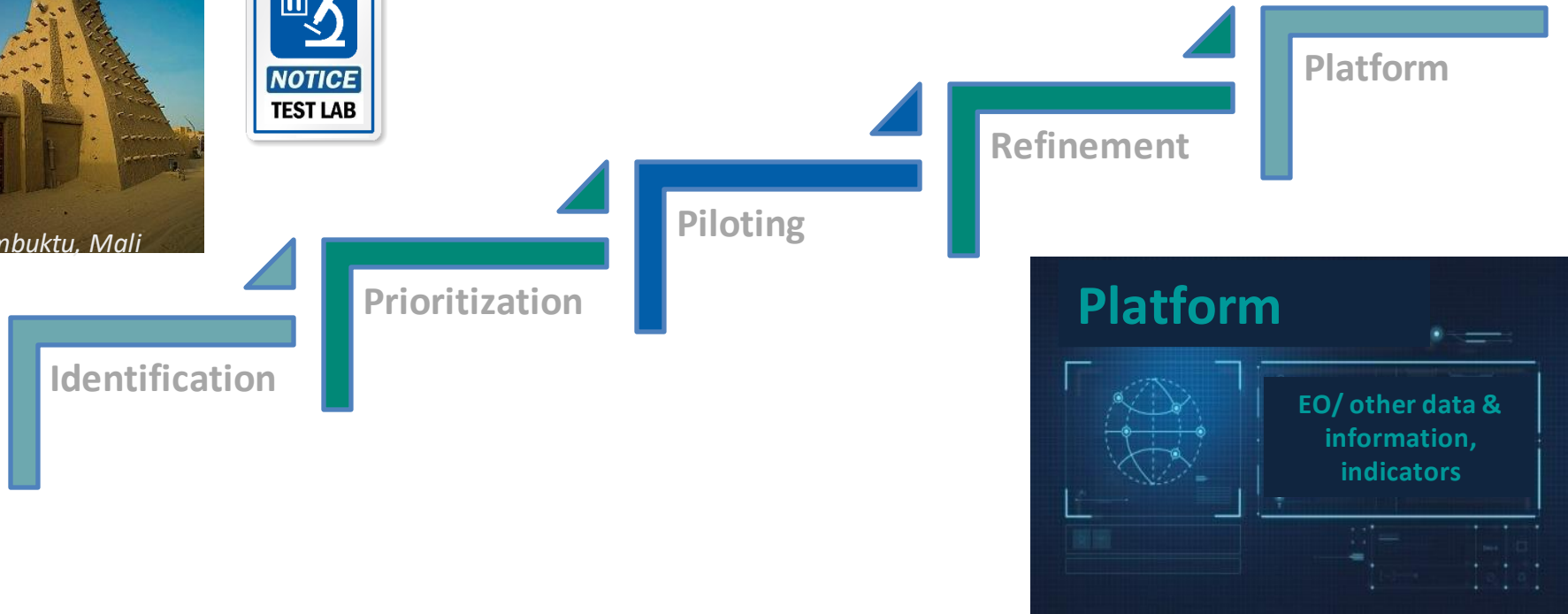
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- Conceptualization of global platform

# UHCO “laboratory” sites



Bridge geographical scales, integrating a global EO-based approach into local practices and conversely informing the global platform with local experiences.

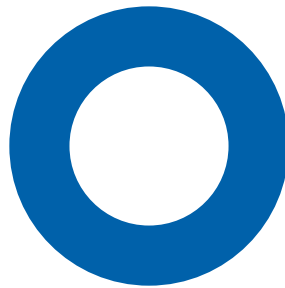
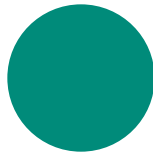
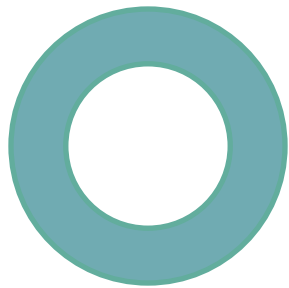


# Planned activities

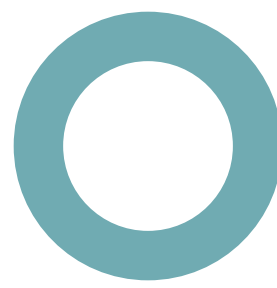
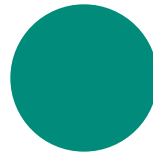
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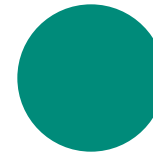
2020



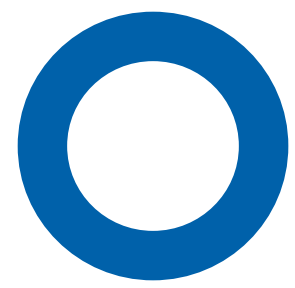
2021



2022



2023 & beyond



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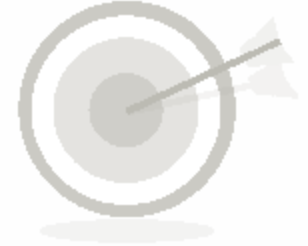
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# Training & education

Through training and educational efforts, UHCO will build capacities and facilitate the transfer of knowledge and sharing of good practices to enhance local, national and international efforts of using EO in relation to world and urban heritage.

end 2021



Capacity  
building and  
development

Educational  
activities



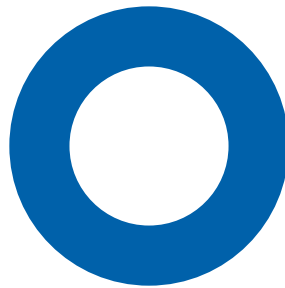
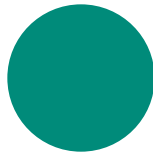
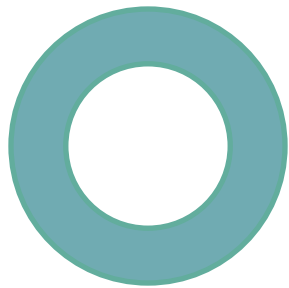
Pushkar town in Rajasthan, India

# Planned activities

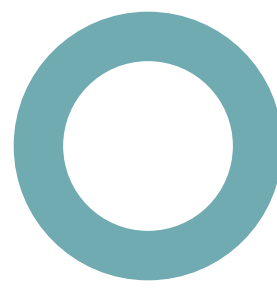
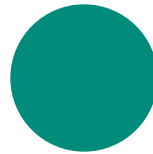
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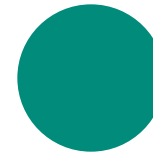
2020



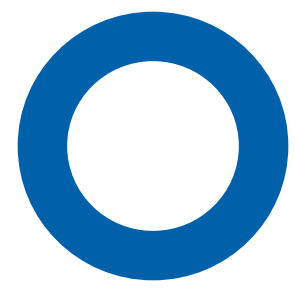
2021



2022



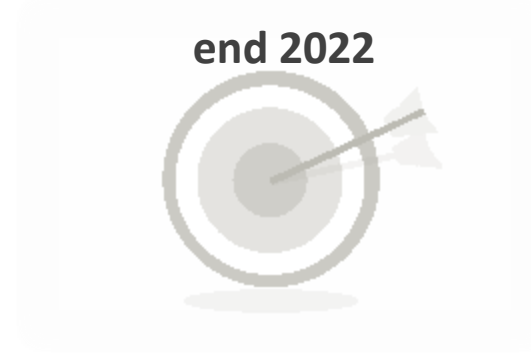
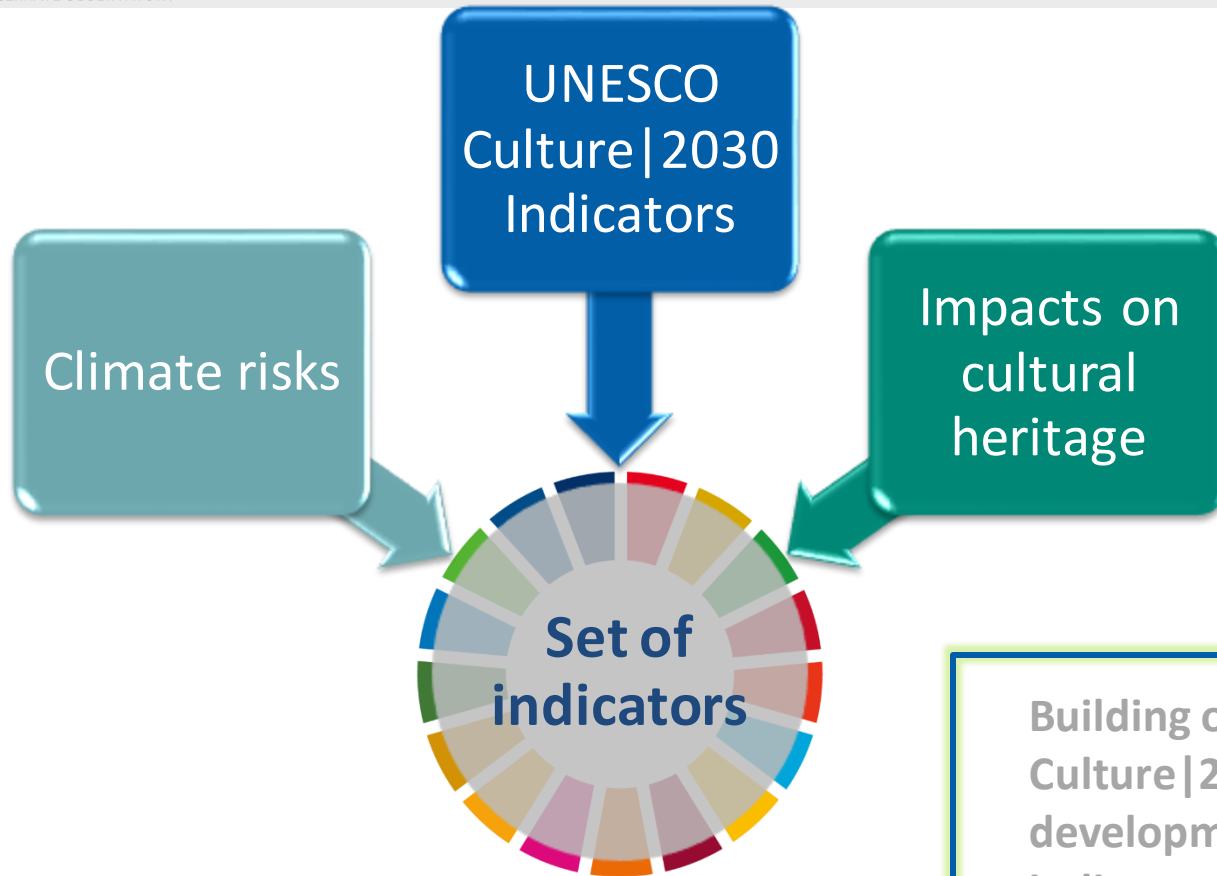
2023 & beyond



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# Indicators



Building on the UNESCO Culture | 2030 Indicators, development of dedicated indicators, and relevant workflows, to pinpoint climate change impacts on World Heritage Cities

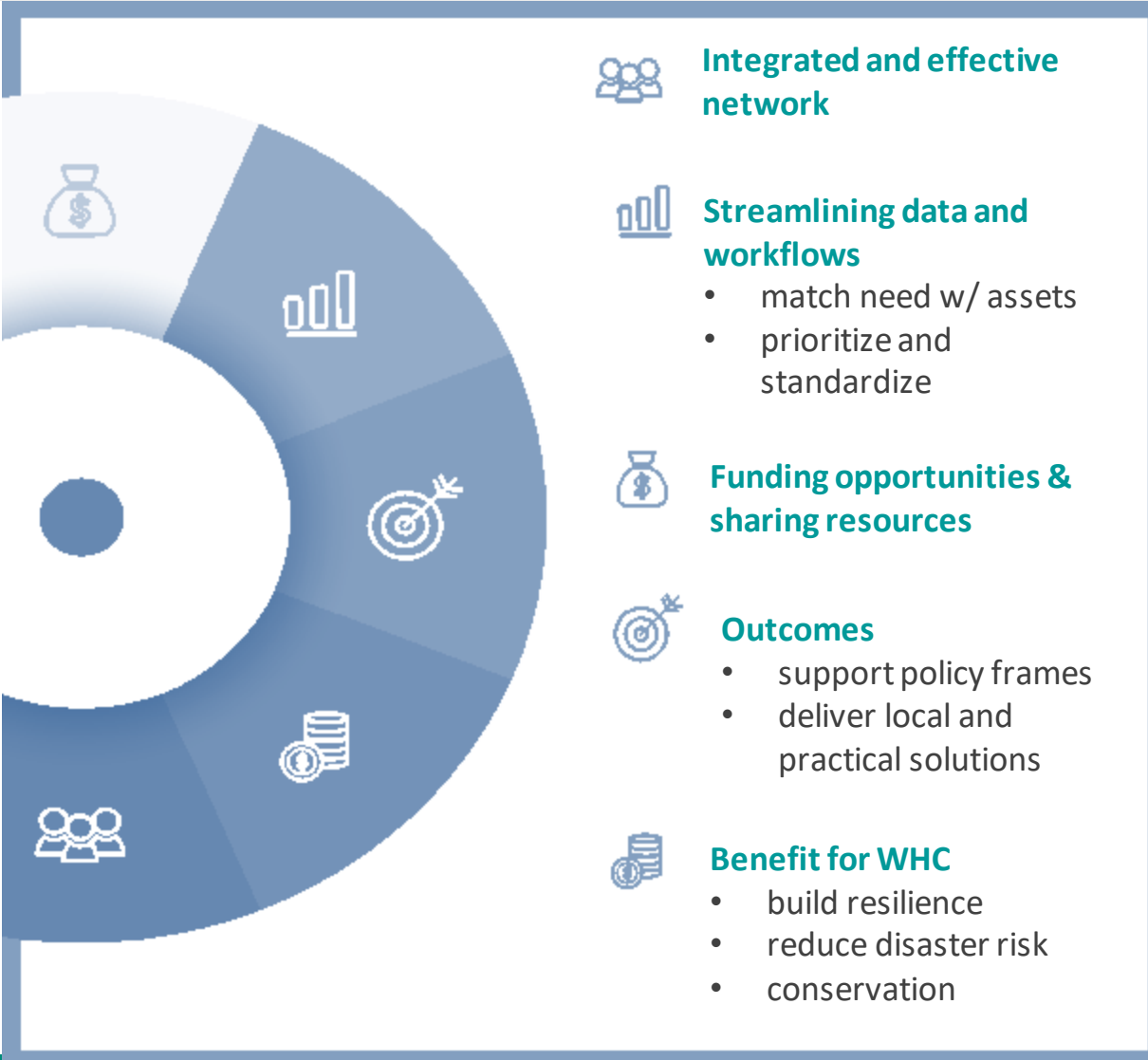
# From paper to concrete outcomes



end 2021



Concretizing synergies among partners,  
construction of a plan for funding attraction  
and strategic design of short- to long- term  
roadmap of activities



# VISION

# Consortium

## 2020-2022 GEO Work Programme

Starting in December 2018, the GEO Programme Board led an inclusive and iterative process to develop the 2020-2022 GEO Work Programme. This Work Programme was approved at the GEO-XVII Plenary, 6-7 November 2019 in C...

Download the [Summary Document \(version 4\)](#), which contains short descriptions of each of the GEO Flagships, Initiatives, Regional GEOs, Community Activities, and Foundational Tasks that comprise the GEO Work Programme. Comments and questions relating to individual GEO Work Programme activities and their implementation plans should be directed to the Points of Contact of the applicable activities as listed in the Summary Document.

Those wishing to propose a new Community Activity to be included in the GEO Work Programme are invited to contact the GEO Secretariat ([secretariat@geos.org](mailto:secretariat@geos.org)).

## Urban Heritage Climate Observatory

# UHCO

### Implementation Plans

GEO Flagships					
GEO Biodiversity Observation Network		GEO Global Agriculture Monitoring		Global Forest Observation Initiative	
GEO-001	GEO-002	GEO-003	GEO-004	GEO-005	GEO-006
GEO Initiatives					
Agreements		Data Science for Risk Management		Sea, Coastal and Inland Systems	
GEO-007	GEO-008	GEO-009	GEO-010	GEO-011	GEO-012
Earth Observation for the Sustainable Development Goals		GEO Capacity Building for Africa, Middle East, and South and South-East Asia		GEO Global Water Sustainability	
GEO-013	GEO-014	GEO-015	GEO-016	GEO-017	GEO-018
GEO Health		Infectious Diseases and Zoonotic zoonoses		Global Digital Information System	
GEO-019	GEO-020	GEO-021	GEO-022	GEO-023	GEO-024
Global Urban Observations Programme		Global Urban Observations Programme		Global Urban Observations Programme	
GEO-025	GEO-026	GEO-027	GEO-028	GEO-029	GEO-030
GEO Community Activities					
Atmospheric Composition, Air Quality and Services		Climate High Resolution Satellite Data Services		Climate Monitoring, Detection and Indices	
GEO-031	GEO-032	GEO-033	GEO-034	GEO-035	GEO-036
Earth Observation and Copernicus Support for Disaster Resilience		Earth Observation for Disaster Risk Management		Earth Observation for Emergency Relief and Sustainable Living Systems	
GEO-037	GEO-038	GEO-039	GEO-040	GEO-041	GEO-042
Enabling Data Access to Urban Agriculture Systems via the Support of Sustainable Living		Food Remote Sensing Systems from Satellite Data		GEO Health Services	
GEO-043	GEO-044	GEO-045	GEO-046	GEO-047	GEO-048
Global Agricultural Digital Monitoring		Global City and Urban Health Monitoring and Risk Assessment		Global Copiers and Urbanisation: Openness, Resilience and Innovation	
GEO-049	GEO-050	GEO-051	GEO-052	GEO-053	GEO-054
Global Observation of Urban Air Quality		Global Observation of Urban Air Quality		Global Observation of Urban Air Quality	
GEO-055	GEO-056	GEO-057	GEO-058	GEO-059	GEO-060
Health and Quality		Health and Quality		Health and Quality	
GEO-061	GEO-062	GEO-063	GEO-064	GEO-065	GEO-066
Urban Digital Urban Observatory		Urban Digital Urban Observatory		Urban Digital Urban Observatory	
GEO-067	GEO-068	GEO-069	GEO-070	GEO-071	GEO-072
Regional GEOs					
Africa Region GEO Observations		Americas Region GEO Observations		Europe Region GEO Observations	
GEO-073	GEO-074	GEO-075	GEO-076	GEO-077	GEO-078
Foundational Tasks					
GEO Reporting Frameworks		GEO Data, Metadata and Knowledge Services		GEO Observations Programme	
GEO-079	GEO-080	GEO-081	GEO-082	GEO-083	GEO-084



75 Org  
24 Par  
num

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- 2 - 4
- 5 - 9

[https://earthobservations.org/documents/gwp20\\_22/UHCO.pdf](https://earthobservations.org/documents/gwp20_22/UHCO.pdf)

01/07/2021

Session 2: Cultural and Natural Heritage Requirements for Climate Change Adaptation

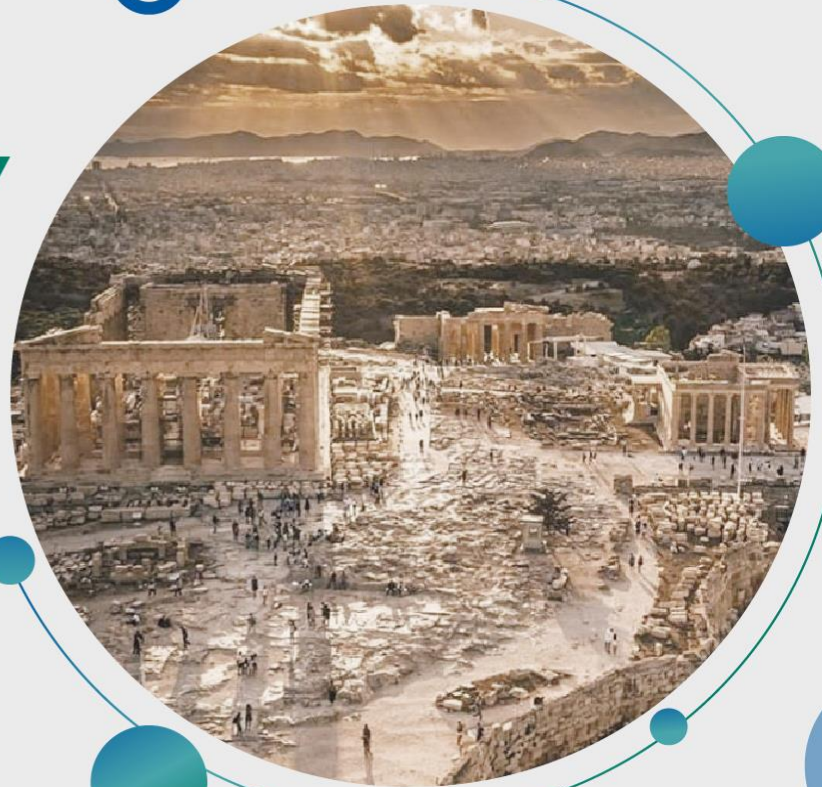
Dr. Evangelos Gerasopoulos



# Urban Heritage Climate Observatory

a new GEO Community  
Activity

# Thank you!



**Dr. Jyoti Hosagrahar**

Deputy Director, World Heritage Centre  
Culture Sector, UNESCO

**Dr. Evangelos Gerasopoulos**

Research Director, National Obs. of Athens  
Director of the Greek GEO Office

Workshop on Cultural & Natural Heritage  
& Climate Challenges  
1-2 July 2021

