

Beyond Stargazing: Astrotourism as a Science-Based Tool for Development

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SAAO
South African
Astronomical Observatory



Credit: ESO/José Francisco Salgado

What is Astrotourism?

An innovative form of sustainable tourism at the intersection of science engagement, environmental stewardship, and experiential learning. Often associated with stargazing — its broader value lies in translating scientific knowledge into accessible public experiences.

Beyond Stargazing: Science Meets Experience

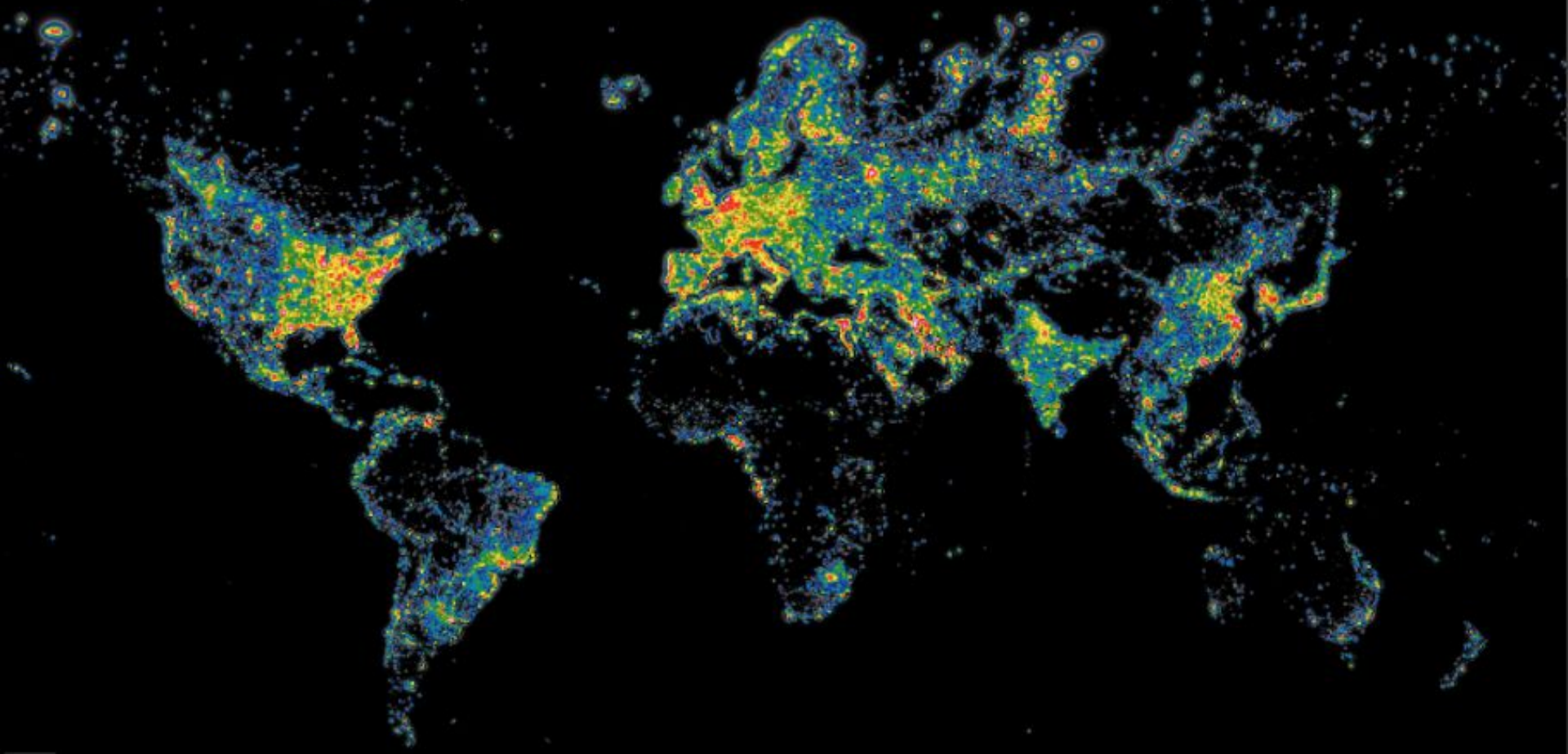
8 in 10

people worldwide live under light-polluted skies, with no direct view of the Milky Way - the gap astrotourism is designed to close.

- Translating complex astronomy into accessible, memorable public experiences
- Fostering appreciation for dark and quiet sky environments as places worth protecting
- Reframing the night sky itself - not just a telescope view - as the destination



African Skies



South African Skies



Photo Credit: SAAO



Photo Credit: SARAO

- **Anchored by frontier infrastructure: SALT, the largest optical telescope in the Southern Hemisphere, and the MeerKAT/SKA array in the Karoo**
- **Vast semi-arid plateaus - the Karoo and Kalahari - with minimal light pollution and very low humidity**
- **High-altitude, dry-air sites like Sutherland ($\sim 1,450\text{m}$) deliver exceptionally clear, stable night skies**



A Southern Hemisphere vantage point onto the brightest reaches of the Milky Way's galactic core

Photo Credit: SAAO

Astrotourism in South Africa



National Astro-Tourism Strategy & Implementation Plan

[2023-2033]



Africa's first national astro-tourism strategy - a joint initiative of the Department of Tourism and the Department of Science, Technology and Innovation, Cabinet-approved and launched on World Tourism Day, September 2024, in Carnarvon, Northern Cape.

Astrotourism Strategy – Implementation Plan

1

Indigenous celestial narratives & human capacity development



2

Infrastructure development incl. the SKA Science Tourism Visitor Centre



3

Inclusive tourism growth & cross-sector partnerships

The IAU Office of Astronomy for Development

A joint project of the International Astronomical Union (IAU) and South Africa's National Research Foundation (NRF), supported by the Department of Science Technology and Innovation (DSTI) and hosted at the South African Astronomical Observatory (SAAO)

"Astronomy for a better world."

254

Projects

113

Countries

2M

People Reached

€1.4M

In Grants

Overview of the IAU OAD - See Plenary (10 July, 08:30)

Three Flagship Projects

1

Astrotourism

Local socio-economic development through the night sky - *today's focus*

2

Astronomy for Mental Health

Celebrating our common humanity - *see talk by Joyful Mdhuli (07 July, 11:40)*

3

Astro4Skills

Astronomy knowledge & skills for development - *See talk by Charles Takalana (09 July, 11:20)*

OAD Astrotourism Flagship Project



Mission:

Leverage astronomy and tourism to drive economic growth, social inclusion, and cultural preservation.

OAD Astrotourism Flagship Project

Rooted in four key Pillars

4 QUALITY
EDUCATION



8 DECENT WORK AND
ECONOMIC GROWTH



11 SUSTAINABLE CITIES
AND COMMUNITIES



17 PARTNERSHIPS
FOR THE GOALS



1

Economic Development

Job creation and destination growth for communities near dark-sky and astronomical assets.

2

Cultural Preservation & Social Inclusion

Reviving and sharing Indigenous sky knowledge, with communities as leaders, not just beneficiaries.

3

Environmental Sustainability

Protecting dark-sky reserves and reducing light pollution alongside economic activity.

4

Bridging Inequality Divides

Using the night sky to connect communities across the global inequality gap.

The Flagship Ecosystem

Shared across all three OAD flagships, including Astrotourism

1

Resources

Open-access toolkits, guides, case studies and the growing evidence base - e.g. the Astronomy for Mental Health Guidelines

2

Training

Free online courses (hosted on OpenLearn), plus in-person workshops and mentorship

3

Community

A global Community of Practice on Discord connecting astronomers, tourism professionals, enthusiast, tourism operators, and educators

4

Implementation

The IAU OAD Annual Call for Proposals: seed funding, regional offices, monitoring and evaluation



Photo Credit: SAAO

Resources

English



Spanish



Persian



Practical Resources, Freely Available

Training



Course

Astrotourism for Development

 Free statement
of participation
on completion

You're on this course ✓

Astrotourism for a Better World



Course description

Course content

Course reviews

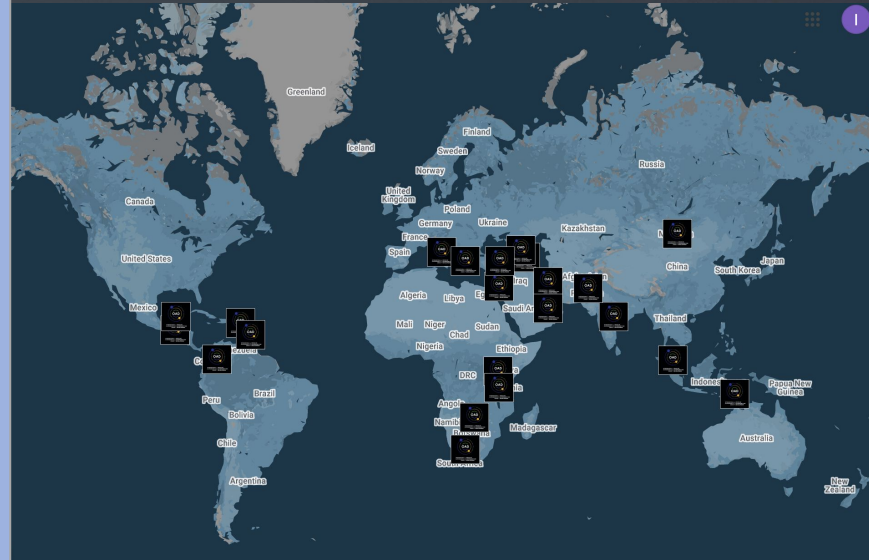
Welcome to the IAU Office of Astronomy for Development online course on Astrotourism. This course is designed for individuals/tour guides/business who wish to expand their knowledge of the night sky. The course provides a balance of foundational astronomy, cultural storytelling, sustainable practices, and hands-on guiding skills. No prior scientific background is needed. By the end of this course, guides/individuals will be able to interpret celestial phenomena, explain astronomical concepts in simple terms, and organise/facilitate engaging stargazing experiences.

Online course and in-person training implemented in collaboration with partners and astrotourism community

Implementation

The IAU has invested over **100,000** Euros in astrotourism projects across **22 countries** through the OAD annual call for proposals. Projects have conducted diverse actions including, but not limited to:

- Training – young people trained to become astronomy entrepreneurs, certified tour guides trained to add astronomy to their portfolio
- Integration with heritage tourism – foundational work to integrate astronomy in existing tourism initiatives
- Course development – creation of an astrotourism curriculum at a university
- Scientific tourism route – development of a multi-country science tourism route including various points of astronomical interest



In Summary

The background of the slide is a dark, silhouetted landscape. Two prominent domed structures, likely astronomical observatories, are visible on the horizon. The sky above is a gradient of dark blue and black, suggesting a clear night sky. The overall mood is serene and focused on the theme of astronomy and night sky protection.

Astrotourism positions science not only as a tool for discovery — but for inclusive development, environmental stewardship, and cultural preservation. Protecting the night sky protects a resource that is at once scientific, economic, and deeply human.

Thank You

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