Astronomy for a Better World!

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IAU-Office of Astronomy for Development
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science, technology & innovation
Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA

NRF National Research Foundation | SAAO South African Astronomical Observatory

IAU

OAD
INTERNATIONAL ASTRONOMICAL UNION | OFFICE OF ASTRONOMY FOR DEVELOPMENT

Credit: ESO/José Francisco Salgado

Over 100 years of scientific excellence

IAU

International Astronomical Union

To promote and safeguard the science of astronomy in all its aspects including research, communication, education and development through international cooperation

Background image credit: ESO/ ?';losé Francisco Salgado

IAU Strategic Plan 2020-2030

GOAL 1 The IAU leads the worldwide **coordination of astronomy and the fostering of communication and dissemination** of astronomical knowledge among professional astronomers

GOAL 2 The IAU promotes the **inclusive advancement** of the field of astronomy in every country

GOAL 3 The IAU promotes the use of **astronomy as a tool for development** in every country

GOAL 4 The IAU **engages the public** in astronomy through access to astronomical information and communication of the science of astronomy

GOAL 5 The IAU stimulates the use of **astronomy for teaching** and education at school level

International Astronomical Union (IAU)
est. 1919, Paris

Office for Young Astronomers (OYA)
est. 1967, Oslo

Centre for the Protection of the Dark and Quiet Sky from Satellite Constellation Interferences (CPS)
est. 2022, Paris

Office of Astronomy for Education (OAE)
est. 2019, Heidelberg

Office for Astronomy Outreach (OAO)
est. 2012, Tokyo

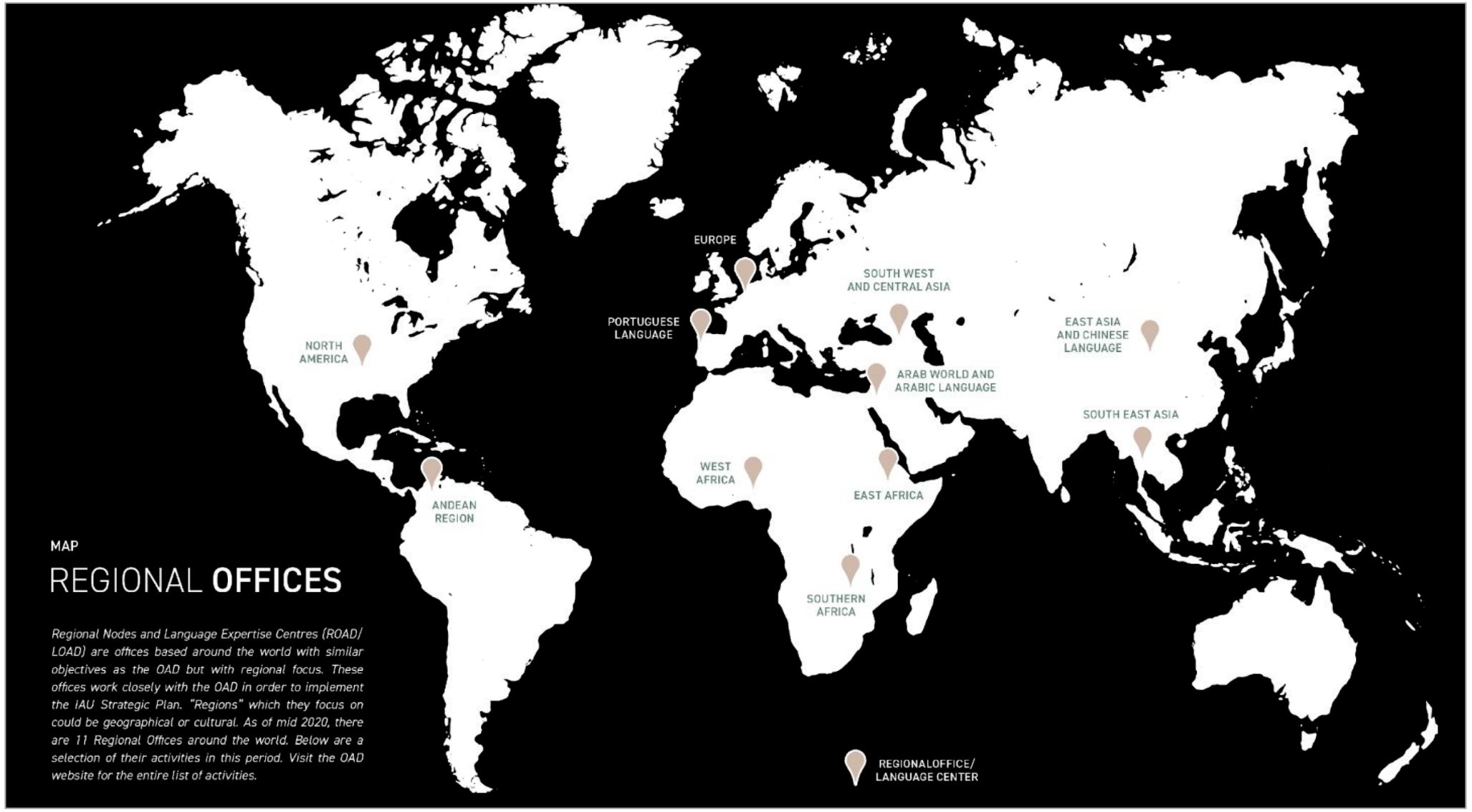
Office of Astronomy for Development (OAD)
est. 2011, Cape Town

Vision and Mission

Vision:
Astronomy for a better world!

Mission:
To help further the use of astronomy as a tool for development by mobilizing the human and financial resources necessary in order to realise the field's scientific, technological and cultural benefits to society.

Global Reach



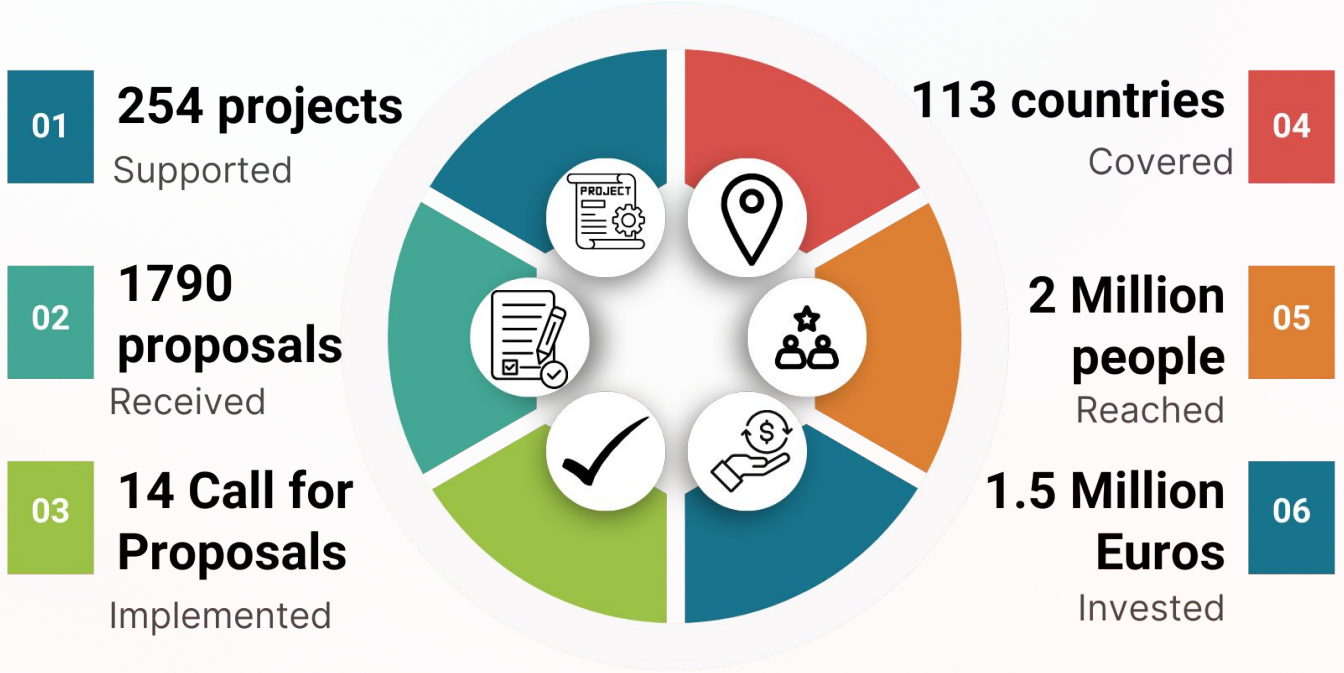
IAU-OAD Focus

Annual Call for Proposals	Theme 1: Socio-economic Development through Astronomy	Theme 2: Science Diplomacy through Astronomy	Theme 3: Astronomy Skills for Development
Flagship Projects →	Astrotourism	Astronomy for Mental Health	Astroskills for Development

Projects

Annual Call for Proposals

Every year, the OAD conducts a Call for Proposals, in which individuals and organisations anywhere in the world are invited to propose projects that use astronomy to address a problem or challenge related to development.




Finland
Iceland
Sweden
Norway
Russia
Canada
Poland
Ukraine
Kazakhstan
North Atlantic Ocean
Japan
South Korea
Iraq
Algeria
Libya
Egypt
Saudi Arabia
Chad
DRC
Indonesia
Madagascar
Indian Ocean
South Pacific Ocean
South Atlantic Ocean
Australia
Argentina
South Africa
Google My Maps
Map data ©2026
Terms
2,000 km
Keyboard shortcuts

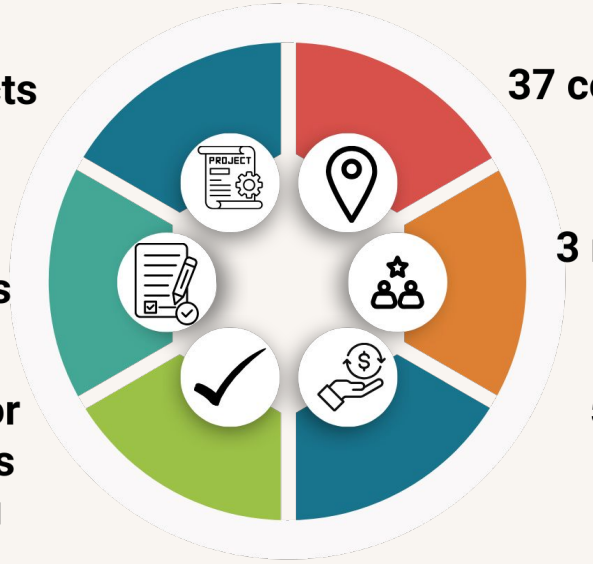
Projects

African Footprint

01 **87 projects**
Supported

02 **507 proposals**
Received

03 **13 Call for Proposals**
Implemented



04 **37 countries**
Covered

05 **3 regional offices**

06 **543 000 Euros**
Invested

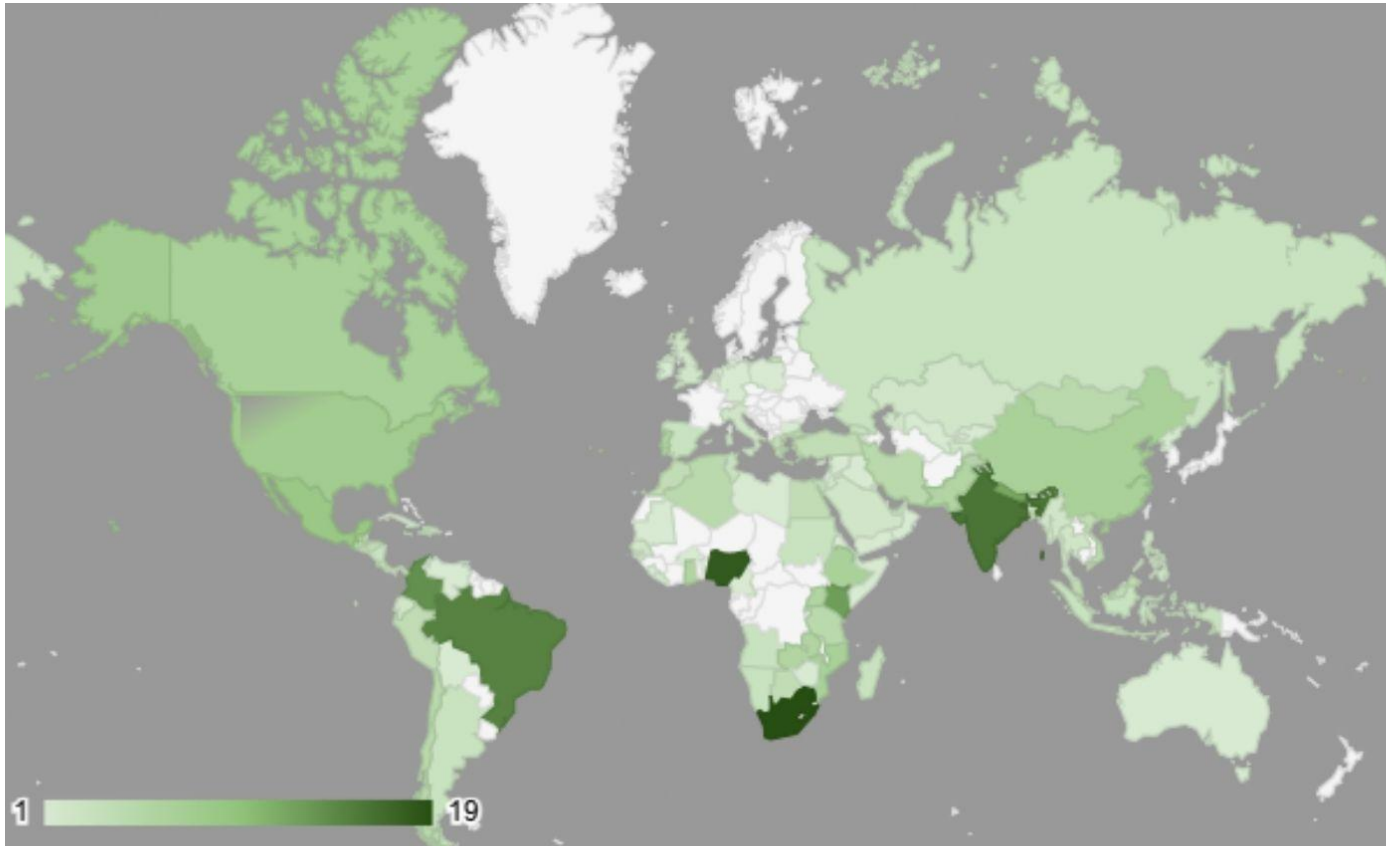
Projects

African Footprint

- Top 5 countries reached
  a. South Africa
  b. Nigeria
  c. India
  d. Brazil
  e. Colombia

2026 Funded projects:

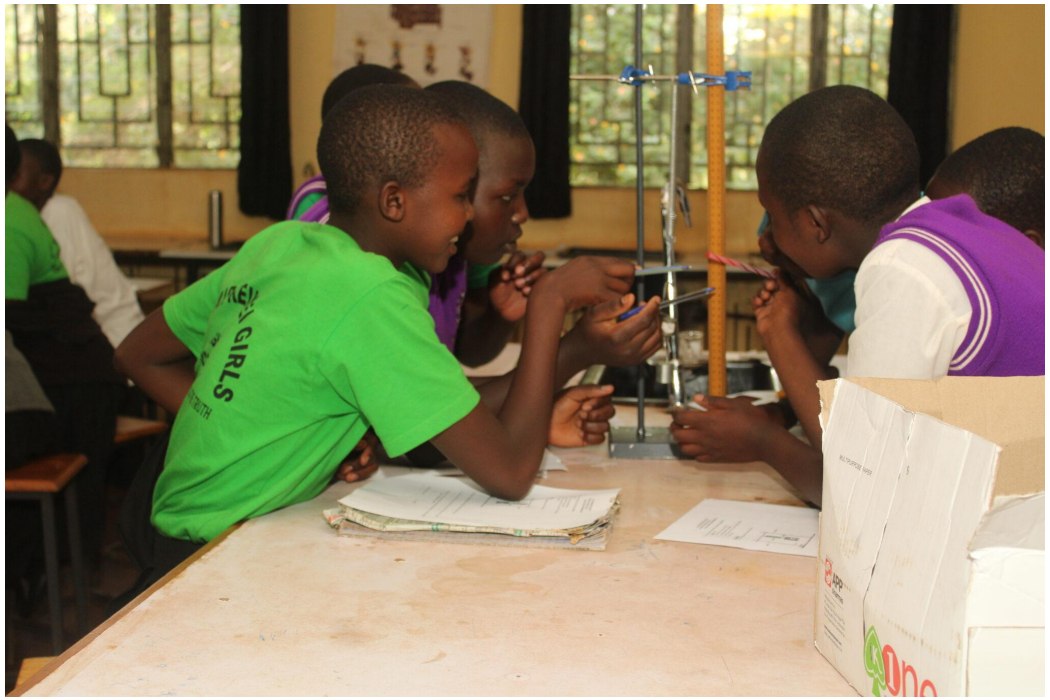
- 18 projects were selected
- 10 of the projects are on the African Continent
- 3 in South Africa



Projects

Access, Gender Equity, Inclusion

- Addressing dropout rates among girls, Kenya
- Training girls and women teachers to be STEM ambassadors, Ethiopia
- Hope, inspiration, and training for those in refugee camps, Algeria
- Astronomy in Prison, Nigeria



Projects

Astrotourism

- Astroguides, Botswana
- Anga Explorers for Development (AED), Kenya
- Astrotourism development, Tanzania

Projects

Skills Development

- Training the next generation of scientists
- Astronomy-based scientific training using remote telescopes
- Big data, Hack4dev

Flagship Projects

Flagship 1: Astrotourism

Flagship 2: Astronomy 4 Mental Health

Flagship 3: Astronomy 4 Skills

Flagship Ecosystem

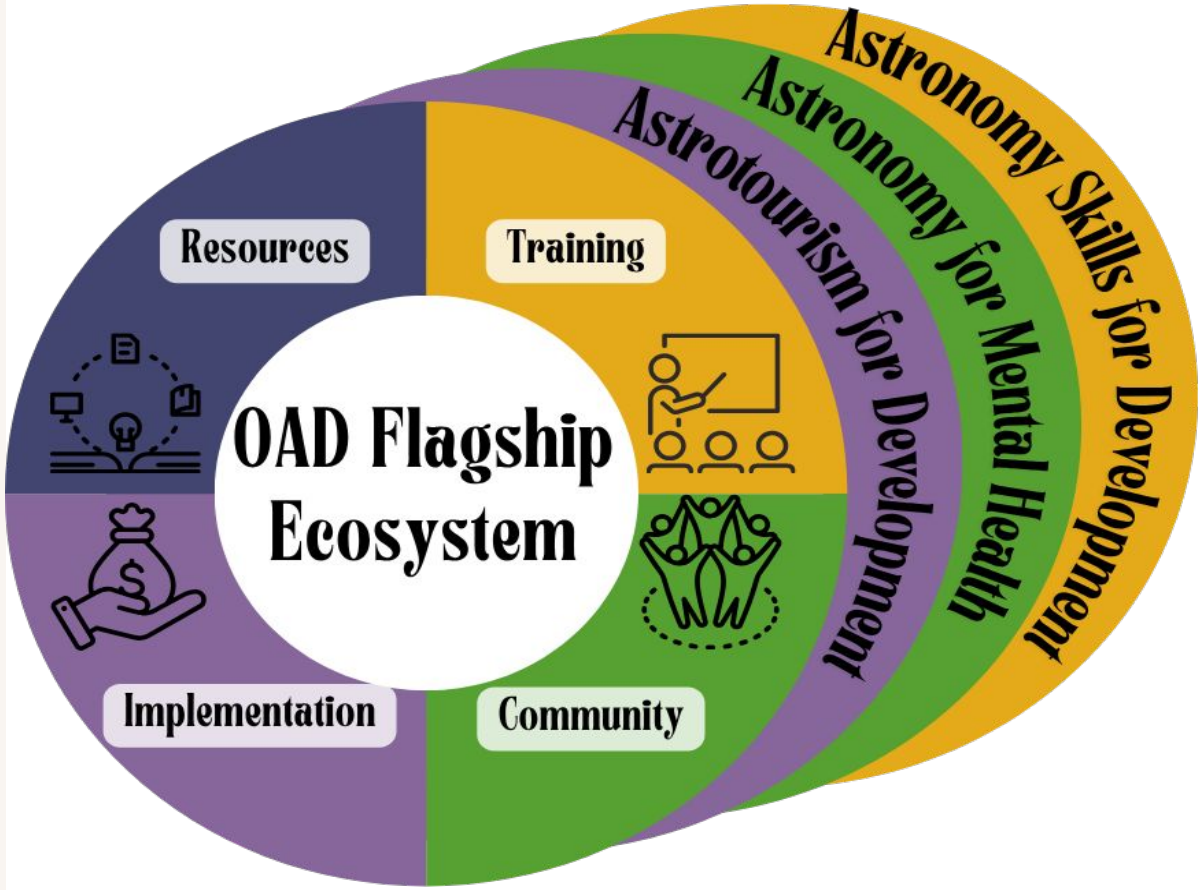
These pillars form part of a dynamic ecosystem that provides the tools, knowledge, and networks necessary to transform astronomy into a driver of positive change for individuals and communities across the globe.

Resources: Open-access toolkits, guidelines, case studies, and research.

Training: Free online courses and tailored in-person sessions.

Implementation: Proposal planning and support, seed grants, and Monitoring and Evaluation support.

Community: Community of Practice hosted on Discord: cross-sector collaboration and peer learning.



Astrotourism

Travel segment that focuses on celestial events, dark sky destinations, and sky-related activities.

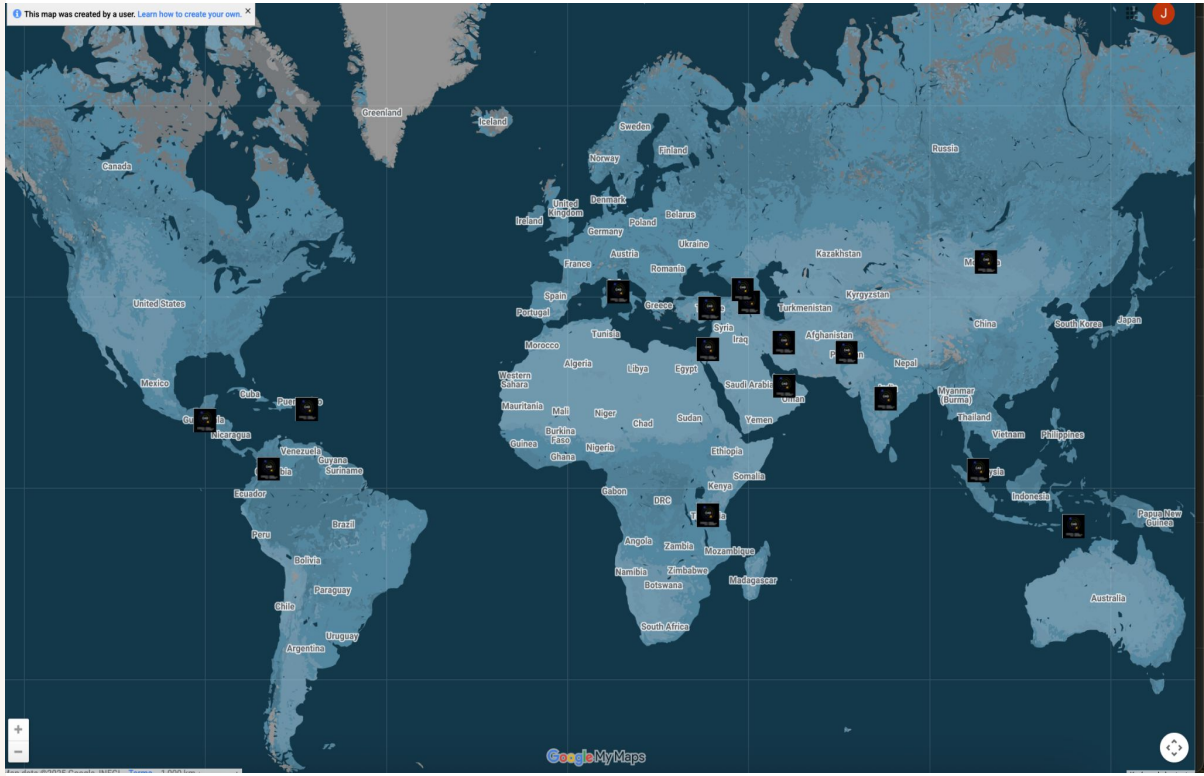
Mission:
Leverage astronomy and tourism to drive economic growth, social inclusion, and cultural preservation.

Photo credit: Dr Matipon Tangmatitham

Astrotourism

The IAU has invested around **111,000** Euros in astrotourism projects across **14 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



Note: This does not include the 2026 projects

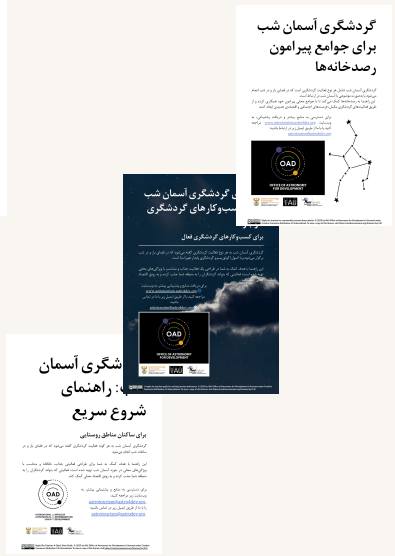
Astrotourism

Resources

English

Spanish

Persian



Training

Course

Astrotourism for Development

Free statement of participation on completion

You're on this course ✓

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.

Astrotourism

2026 OAD Funded Astrotourism Projects

- Starlight Bridges: Community Astrotourism through the ARTEMIS Space Observatory - **Greece**
- Astro Tourism for Development: Storytelling, Science, and Socio-Economic Growth in **South Africa**
- Starry Safaris: Astrotourism for Development Project in **Tanzania**

OAD PROJECTS

Astro Tourism for Development: Storytelling, Science, and Socio-Economic Growth in South Africa

South Africa is internationally recognised for its cutting-edge astronomical facilities – including the Square Kilometre Array (SKA), the MeerKAT array, and the Southern African Large Telescope (SALT). Yet the communities nearest these sites, particularly in the Karoo and Northern Cape, remain largely excluded from the opportunities such infrastructure could enable. These regions face high youth unemployment, limited access to STEM education, and minimal participation in tourism-driven economic activity.

The challenge is twofold: to bridge the gap between world-class astronomy and under-resourced rural communities, and to ensure the benefits of astronomy – educational, economic, and cultural – are more equitably distributed. Additionally, there is an urgent need to connect indigenous sky knowledge, such as San star lore, with modern astronomy to create more inclusive narratives that resonate with diverse South African audiences.

AstroDevSA proposes a development-focused solution: to harness the potential of astro-tourism by blending science, storytelling, and socioeconomic upliftment. Using creative media, community partnerships, and tourism planning, the project will deliver tangible outcomes in education, local enterprise, and public

Location

South Africa

Year

2026

Tags

astrotourism

Astronomy for Mental Health

Problem:

- Access to mental healthcare is severely limited
- Stigma is prevalent
- Resources are scarce

- By leveraging the inspirational power of astronomy and its ability to foster awe, perspective, and connection, we develop novel approaches that complement traditional mental health interventions and expand access to support worldwide.
- Using cost-effective and culturally relevant astronomy activities, the project seeks to create settings for self-exploration and reflection.
- Partnership with Stellenbosch University

Astronomy for Mental Health

Weekend Camps

How Stargazing is Shaping Mental Health Research

Overnight Camps

2025, ASTRONOMY FOR MENTAL HEALTH

Looking Up, Slowing Down: Astronomy for Mental Well-being

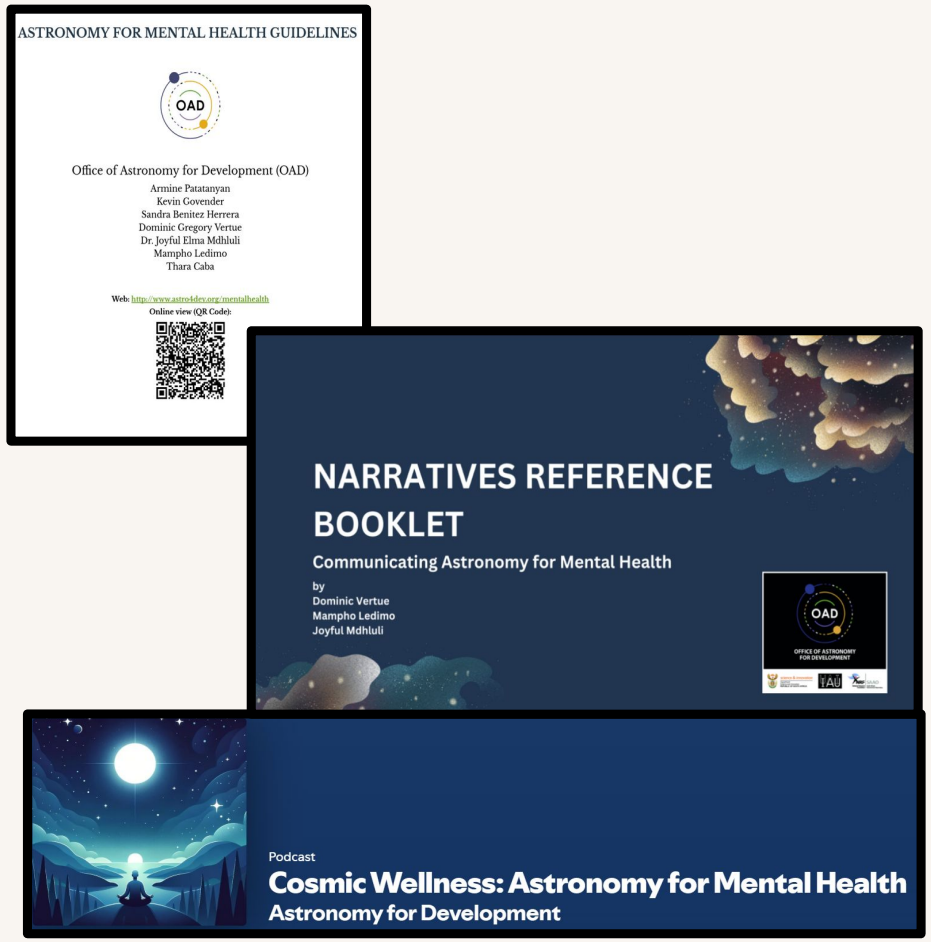
POSTED ON MAY 7, 2025 BY RAM VENUGOPAL

Looking Up, Slowing Down: How Stargazing and Nature Support Mental Well-being by IAU Office of Astronomy for Development IAU OAD

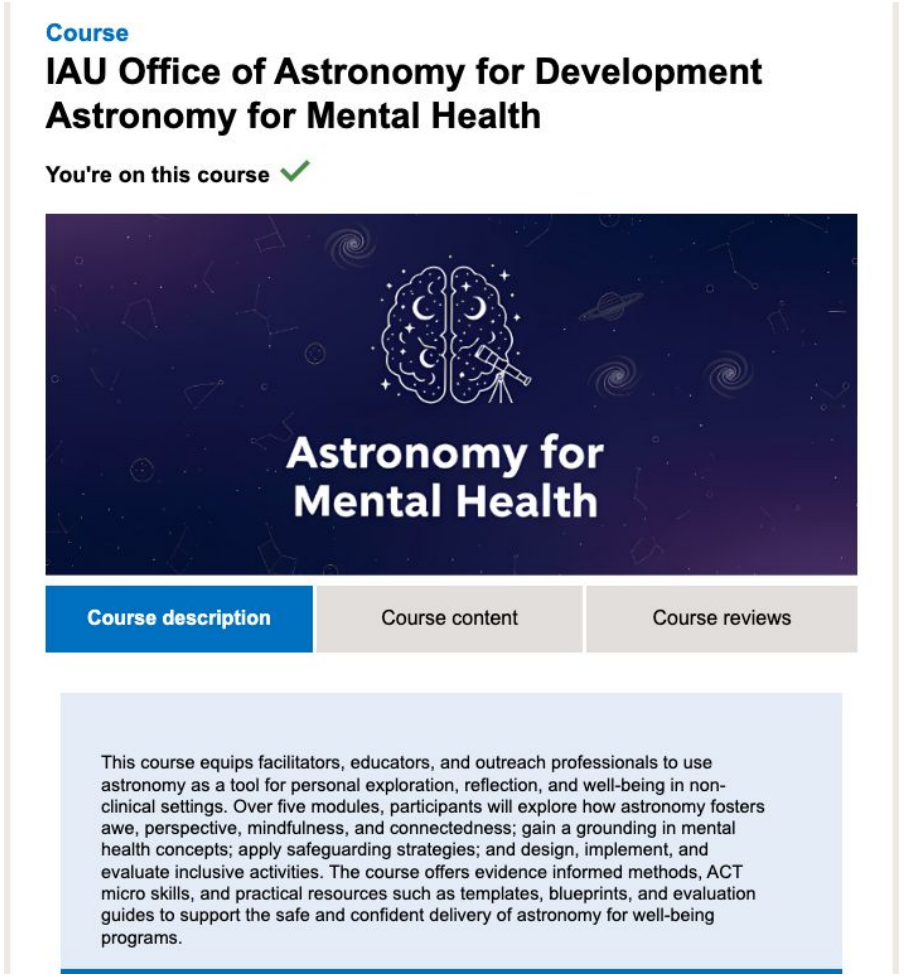
CONTINUE READING →

Astronomy for Mental Health

Resources



Training



Astronomy for Mental Health

2026 OAD Funded Astronomy for Mental Health Projects

- Stars Offering HOpe (SOHO): Using Astronomy to Support Mental Well-being in Uganda's Refugee Camps

Empowering Young Minds Through the Cosmos: Usiko Astronomy Club (2025)

Astronomy skills for Development

Skills Development

- Hackathons for Development (Hack4dev) was launched in May 2022 by Prof. Carolina Odman, with the participation of several partners, including the Inter-University Institute for Data Intensive Astronomy (IDIA), the Office of Astronomy for Development (OAD), the BRICS Intelligent Telescope and Data Network(BITDN), DARA Big Data, and the African Astronomical Society (AfAS).

- Since then, it has grown into a global initiative that connects research and development through hackathons. It serves as a shared backbone for hackathons, offering models, guidance, and support while welcoming contributions of tools, resources, and infrastructure from around the world.

Astronomy skills for Development

The primary objectives of Hack4dev are:

- Skills Development: Building data science, problem-solving, and technical capacity across communities.
- Innovation: Encouraging creative, data-driven solutions that address local and global development challenges.

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The primary objectives of Hack4dev are:

- Short timelines limit deployable outputs.
- Mostly early-stage ideas, not implementation.
- Weak follow-up → poor project continuity.
- Limited structure/research reduces long-term impact.

Astronomy skills for Development

Hack4dev: Data Science Hackathon Programme

Objective:
Use and Develop Data Science Skills to Address Global Data Science Challenges

- A data science challenge to solve
- Resource Creation
- Trainers hackathon
- Regional hackathons
- Data Collection

AfAS 2026 Hackathon

Astronomy skills for Development

Skills Development

- Hackathons for Development (Hack4dev) initiative equips post-graduate students with data science skills to solve real world problems
- First round completed in 2025 - 13 hackathons in 12 countries, 40 teams submitted solutions of which 50% were better than baseline; best solution 160x better
- Define problem and design hackathon challenge
- Develop learning materials, setup cloud infrastructure
- Two stages
  - Train the trainers (hackathon organisers)
  - Hackathons in different regions
- 2026 rollout underway with support from AfAS, RIIS and OAD (in addition to DARA)

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Join our community:
https://discord.gg/QTeSbEteCM

OFFICE OF ASTRONOMY FOR DEVELOPMENT

Credit: NASA, ESA, CSA, and STScI

Astro4Dev Projects

CALL FOR PROPOSALS PROCESS

- Proposal design: writing and translation support, matching with expert, online courses and resources
- Review process: two-stage process, co-development in stage 2
- Approval: two-level process
- Grant agreement, onboarding and training
- Project plan co-developed with grantees, KPIs defined
- M&E framework, monitoring and support
- Data collection, reporting, analysis
- Final presentations
- Comms and publicity

OAD Proposal Workshop

Challenge identification (4 Minutes)

- In groups
- Identify a few challenges in the community or nationally or globally
- Narrow down to those that can be impacted through astronomy
- Choose one challenge to focus on for the rest of the session

Objective: Select one meaningful challenge that can be addressed using astronomy.

OAD Proposal Workshop

Needs analysis (4 Minutes)

- Is it a problem that needs to be solved?
- What do people need?
- What are some other projects addressing this problem?
- What have they achieved? what can you learn from them?

Objective: Confirm the problem and identify the gap.

OAD Proposal Workshop

Solution Design: Role of Astronomy (6 minutes)

- How will astronomy be used?
- What activities will you implement?
- Why will this approach work?
- Could there be unintended consequences?

Objective: Define how astronomy will address the challenge.

OAD Proposal Workshop

Implementation Snapshot (6 Minutes)

- Who is the target audience?
- What are the main activities?
- Rough timeline (e.g., months).
- What resources or partners are needed?

Objective: Confirm the problem and identify the gap.

OAD Proposal Workshop

Group Presentations (10 minutes)

Presentations should cover:

- The challenge
- The astronomy-based solution
- Target audience
- Expected impact

Meet Our Team

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Azasiwe Mancwatela
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Zodwa Tiki
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BITDN Project Coordinator

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