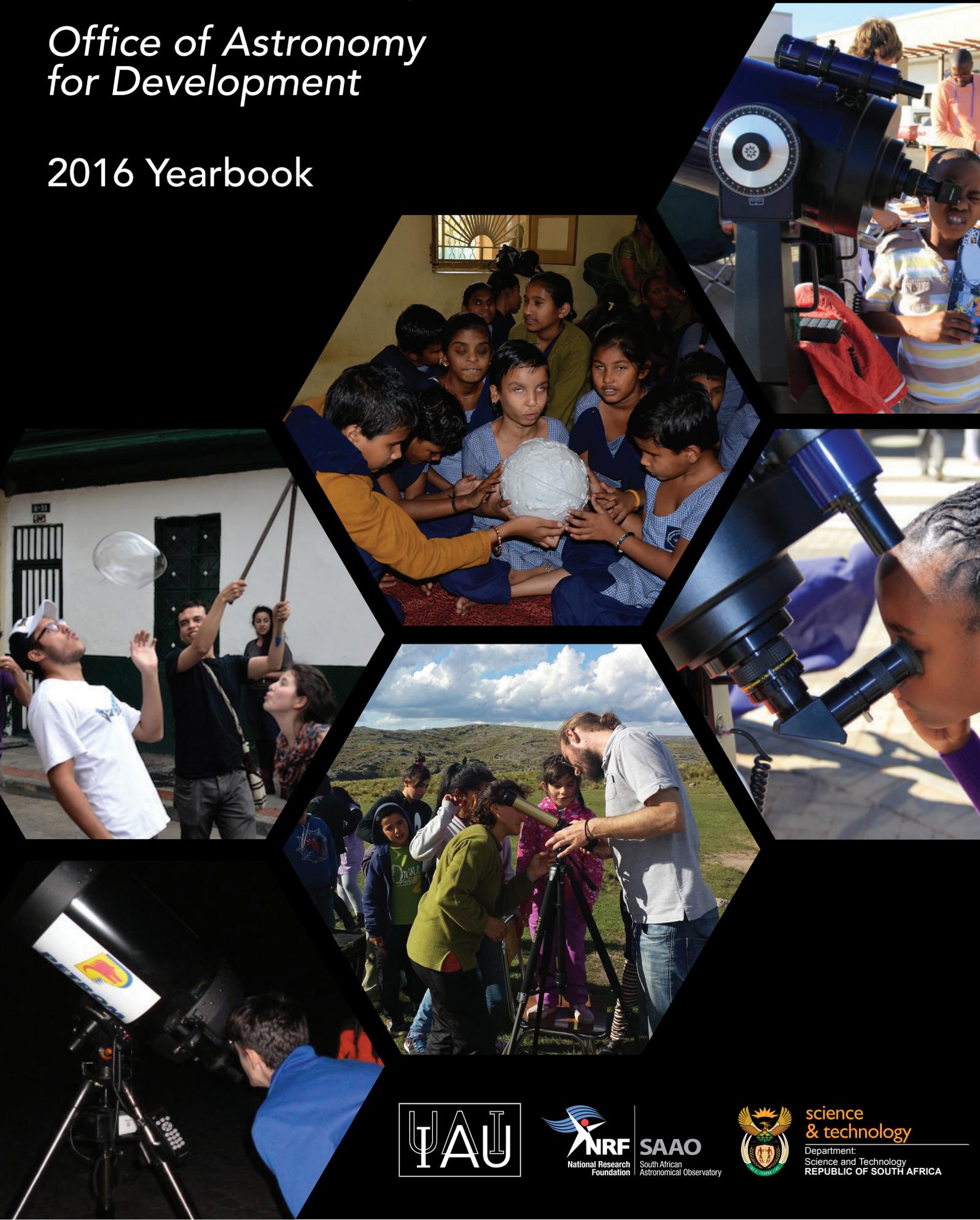
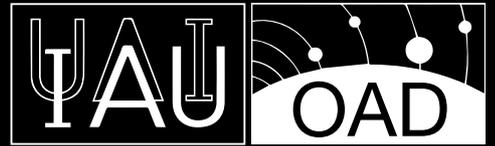
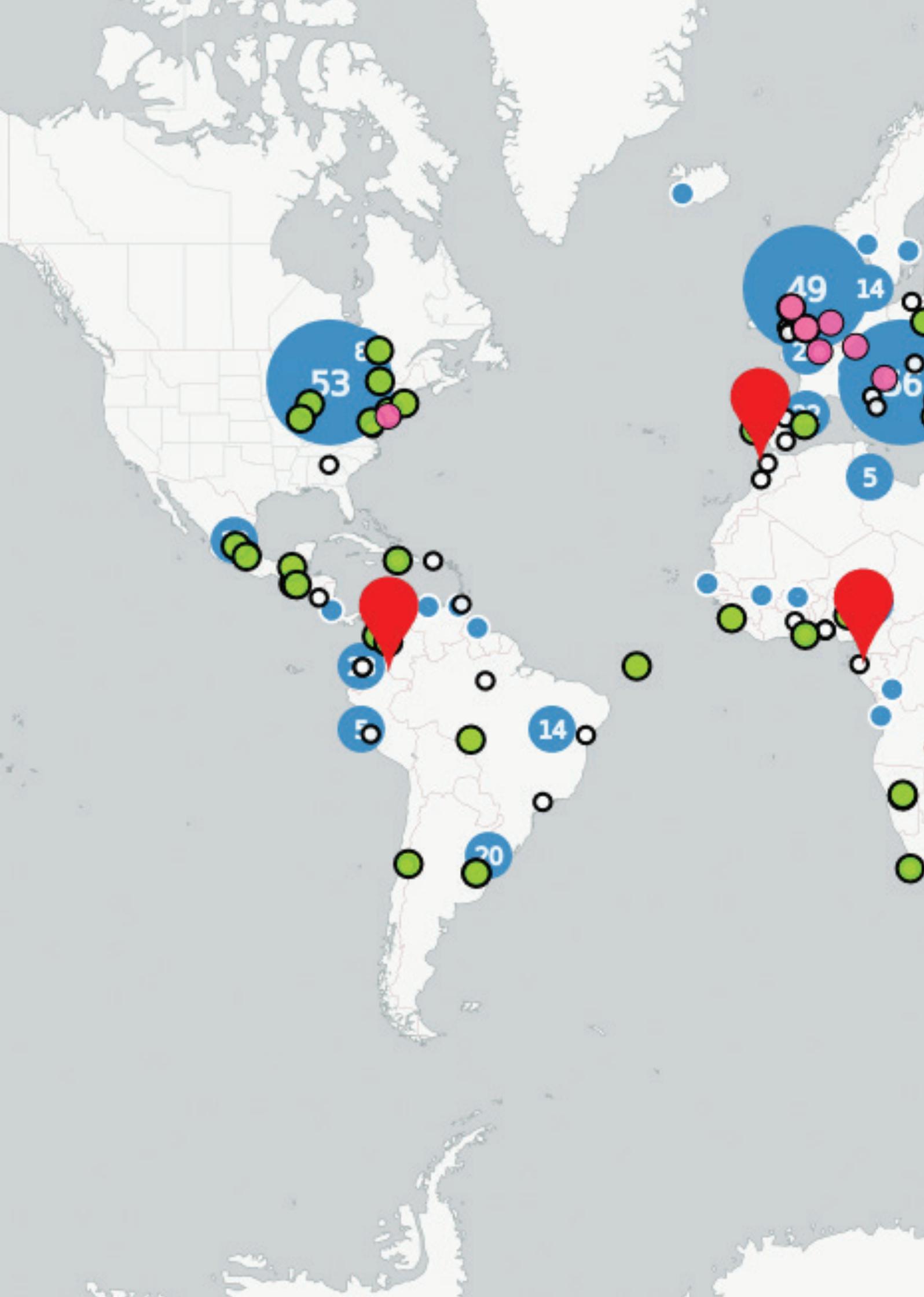


International Astronomical Union

*Office of Astronomy
for Development*

2016 Yearbook





FOREWORD

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This yearbook is the first of its kind and provides an opportunity to reflect on activities of the OAD on an annual basis. Therefore, we have decided that this first issue should reflect on activities since its inception and on the projects that the OAD is funding across the world. Furthermore, it highlights how the OAD plans to ensure impact and broaden its

horizons through engaging with a wide range of stakeholders across the globe.

The first five years of the OAD's life have been eventful and busy, and hopefully rewarding to all who have played a role in it. It was a time during which the vision captured at the 2009 IAU General Assembly, in the form of the IAU Strategic Plan, had to be translated into the activities of the OAD and its partners. With a small team at our headquarters in Cape Town, we took on the challenge with the passion of a global community keeping us airborne. Within the first year of the OAD, we had called together stakeholders from around the world to provide input and insights into this concept. By year 2, we had established three "Task Forces" and launched the first open call for proposals, which was so successful it quickly turned into an annual call.

During that second year, we also launched the first two of now nine regional offices (these nine are based in Armenia, China, Colombia, Ethiopia, Jordan, Nigeria, Portugal, Thailand and Zambia). These are self-sustaining, staffed offices hosted at institutions around the world who share the OAD vision. Together with these offices, the OAD now has the structural ability to scale up projects and activities that show promise for global impact. Regional offices provide input about each of their many target countries such that we are able to understand how appropriate any particular intervention may be in a region.

Subsequent years have seen further development of the call for proposals, the establishment of other regional offices, and the launching of a Monitoring and Evaluation framework (which evolved into the current Impact cycle). Following very positive external reviews and the renewal of partner's commitments to the OAD until 2021, the OAD was recognised through the award of the 2016 Edinburgh Medal. This award has placed the IAU and the work of the OAD (which I humbly represented at the awards ceremony) on the same list of awardees as Prof Peter Higgs and CERN (2013), Prof Jocelyn Bell Burnell (1999), Sir David Attenborough (1998) and Prof Abdus Salam (1989). The associated attention has been humbling and the recognition has been valuable for the huge global network that has developed around the OAD.

We hope to form more partnerships moving forward and we also hope to make further significant developmental contributions across the world, ultimately making the world a better place.

Kevin Govender

DIRECTOR, IAU-Office of Astronomy for Development

ABOUT US

Astronomy is a field that combines science and technology with inspiration and excitement. As such, it can play a pivotal role in facilitating education and human capital development. The skills related to the field of astronomy can also be used to further sustainable development throughout the world.

After the International Year of Astronomy (IYA) in 2009, the IAU was motivated to commit to more ambitious programmes of educating the world to the beauty of the universe and the sense of common humanity that derives from it. The International Year of Astronomy commemorated 400 years since Galileo first turned a telescope to the sky to make fundamental discoveries that changed people's perceptions of the universe.

The Office of Astronomy for Development (OAD) is a global office that is mandated to use astronomy to drive positive developmental change. This office was established through a joint partnership between the International Astronomical Union (IAU) and the South African National Research Foundation (NRF).

After four years of operation, in February 2015, the OAD was assessed by an externally appointed review panel. The appointed members for the review were Dame Jocelyn Bell Burnell, University of Oxford, United Kingdom, Professor Ron Ekers, CSIRO/Australia Telescope National Facility, Australia and Professor George Ellis, University of Cape Town, South Africa. The committee conducted a week-long evaluation of the OAD and its activities during its first four years of existence. The overall findings from the review were extremely positive and supportive of the OAD.

The panel strongly supported the continuation of the OAD as a joint project of the IAU and NRF until the IAU General Assembly in 2021. They recommended that the IAU make clear its intention to continue the OAD beyond the period of the 10 year plan currently set to end in 2020.

After a lengthy international selection process; the IAU chose South Africa as the host country for the OAD and the South African Astronomical Observatory (SAAO), a facility of the National Research Foundation (NRF) as the host institution. This arrangement was strongly supported by the South African Department of Science and Technology (DST). On the 16th of April 2011, the OAD was officially launched by the South African Minister of Science and Technology, Ms Naledi Pandor at its location in Cape Town, South Africa.

The purpose of the OAD is to implement the IAU's Strategic plan 2010-2020 "Astronomy for Development". This plan describes the potential of astronomy to contribute to sustainable development. The OAD was established to mobilise the necessary human and financial resources in order to realise the field's scientific, technological and cultural benefits to society.

The OAD is tasked with establishing and strategically coordinating Regional Offices and Language Expertise Centres across the world, as well as initiating, supporting and funding programmes in three core areas: Astronomy for Universities and Research, Astronomy for Children and Schools, and Astronomy for the Public.

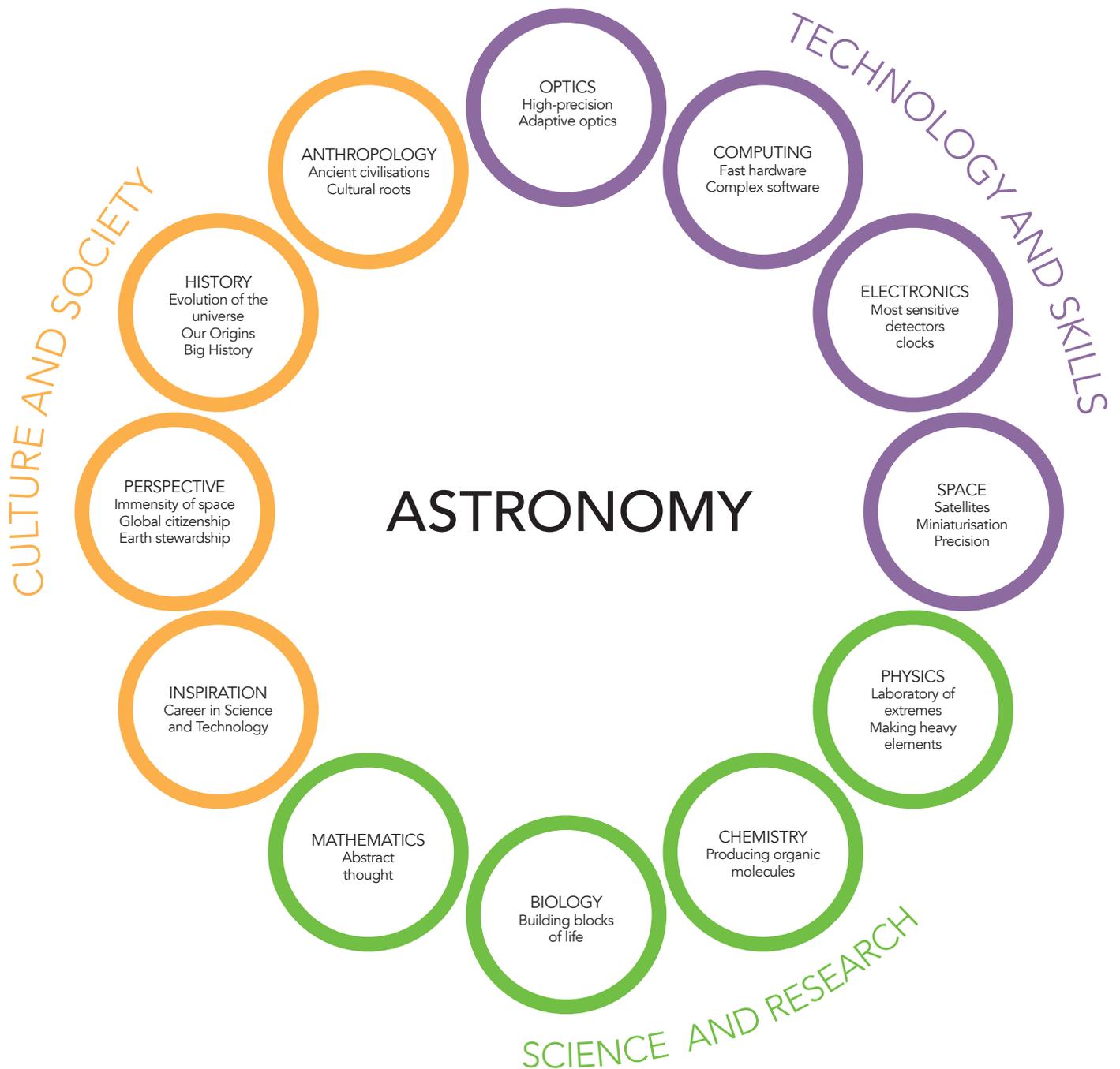


Fig. 1 The interdisciplinary nature of astronomy

The IAU Strategic Plan delineates the features of astronomy that can be used to address sustainable development challenges. The wheel above illustrates how astronomy training equips astronomers with interdisciplinary technological and scientific skills essential for the growth of knowledge economies. In addition, the wheel highlights astronomy's cultural and historical relevance to societies across the world. OAD programmes leverage these features of astronomy by connecting the astronomy community to development challenges where related skills are required, and by using astronomy to develop education and improve social outcomes

The IAU Strategic Plan emphasises the importance of furthering the Millennium Development Goals (MDGs) in all astronomy-for-development activities. In the global discussion led by the United Nations on development initiatives, the MDGs have been succeeded by the Sustainable Development Goals (SDGs), which represent the general consensus on key challenges faced by all countries around the world. Furthering the SDGs through astronomy is a key task of the OAD.

ANNUAL CALL FOR PROPOSALS

A key part of the implementation of the IAU Strategic Plan is performed via the OAD annual Call for Proposals, in which individuals and organisations anywhere in the world are invited to propose projects that relate to astronomy-for-development. The proposed project should address a problem or challenge related to development and should use astronomy as a tool to address this problem. Projects are encouraged to think about how astronomy could be used to further progress in relation to some UN Sustainable Development Goals. The OAD has identified gaps in the field of astronomy that projects are encouraged to address. For example, there is a lack of material and methods for teaching basic mathematics, statistics, engineering, programming using astronomy, material on cultural aspects of astronomy, and research reviews on what works in projects typically funded by the OAD.

The IAU earmarks approximately €110,000 per year for this open call for project proposals, with individual project grants generally ranging between €500 and €15,000. In the first four cycles of the Call, a total of € 6,386,206 was requested for astronomy-for-development projects. Of the proposals received, the OAD funded 86 projects (€ 409,157).

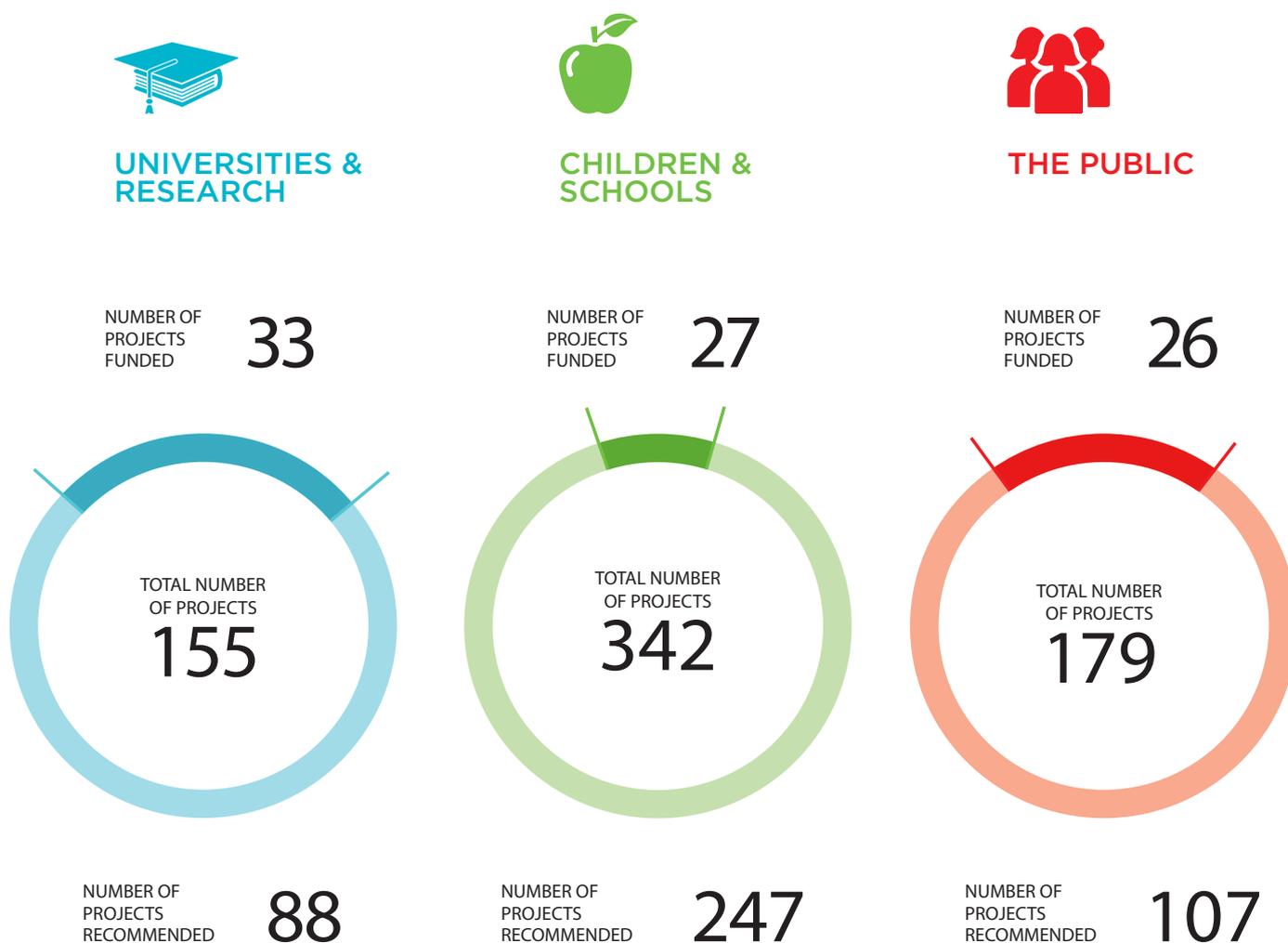


Fig. 2 Projects funded under each task force.

IMPACT CYCLE

The OAD believes that in order for astronomy-for-development activities to be effective, a scientific approach is needed. Evaluation is essential for identifying which projects work best, for whom and under what conditions. Evidence-informed project design and selection ensures that projects build on past lessons, thereby reducing the risk of negative unintended consequences and increasing the probabilities of positive cost-effective impacts.

The OAD Impact Cycle aims to enhance the OAD's project design, selection and delivery systems to support such continual improvement and potential expansion. By determining what works and, importantly, what doesn't work, the OAD can develop a library of evidence on best practice and ensure a positive feedback loop for projects.

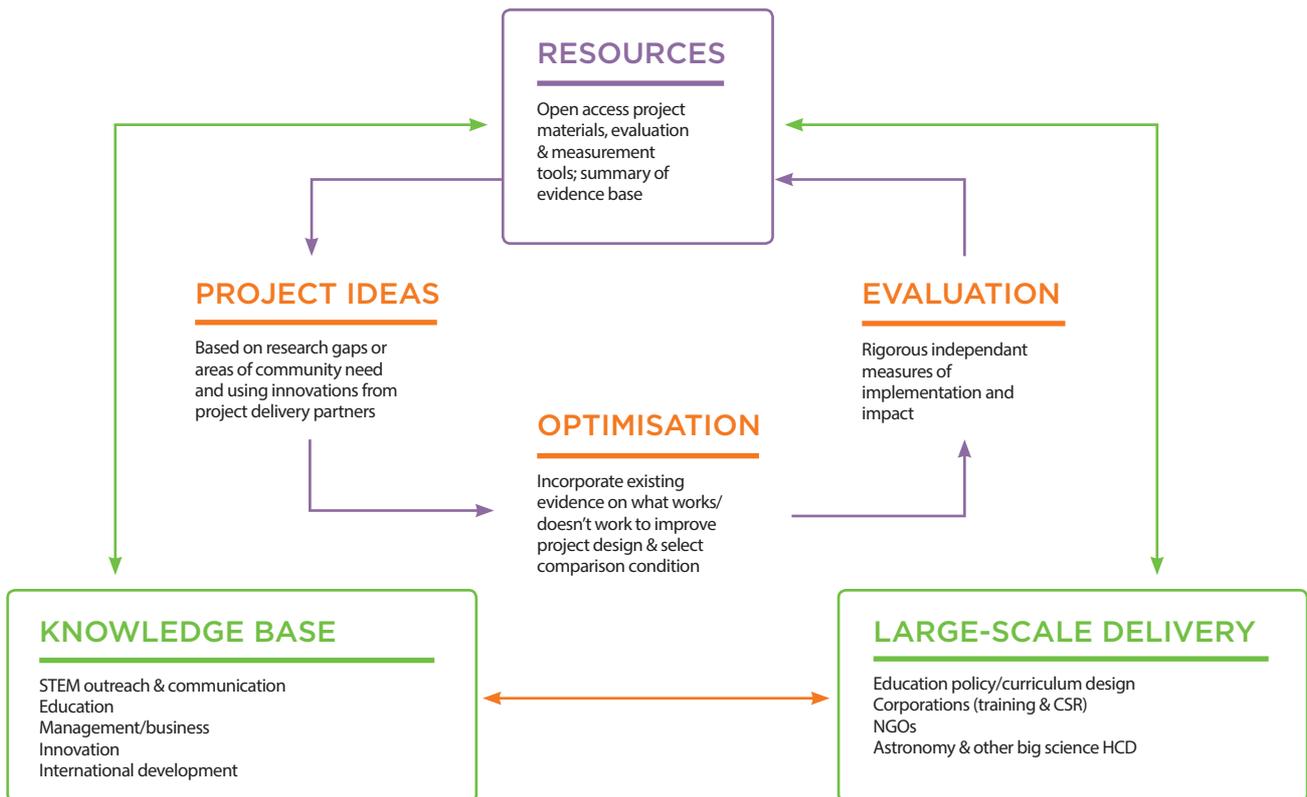


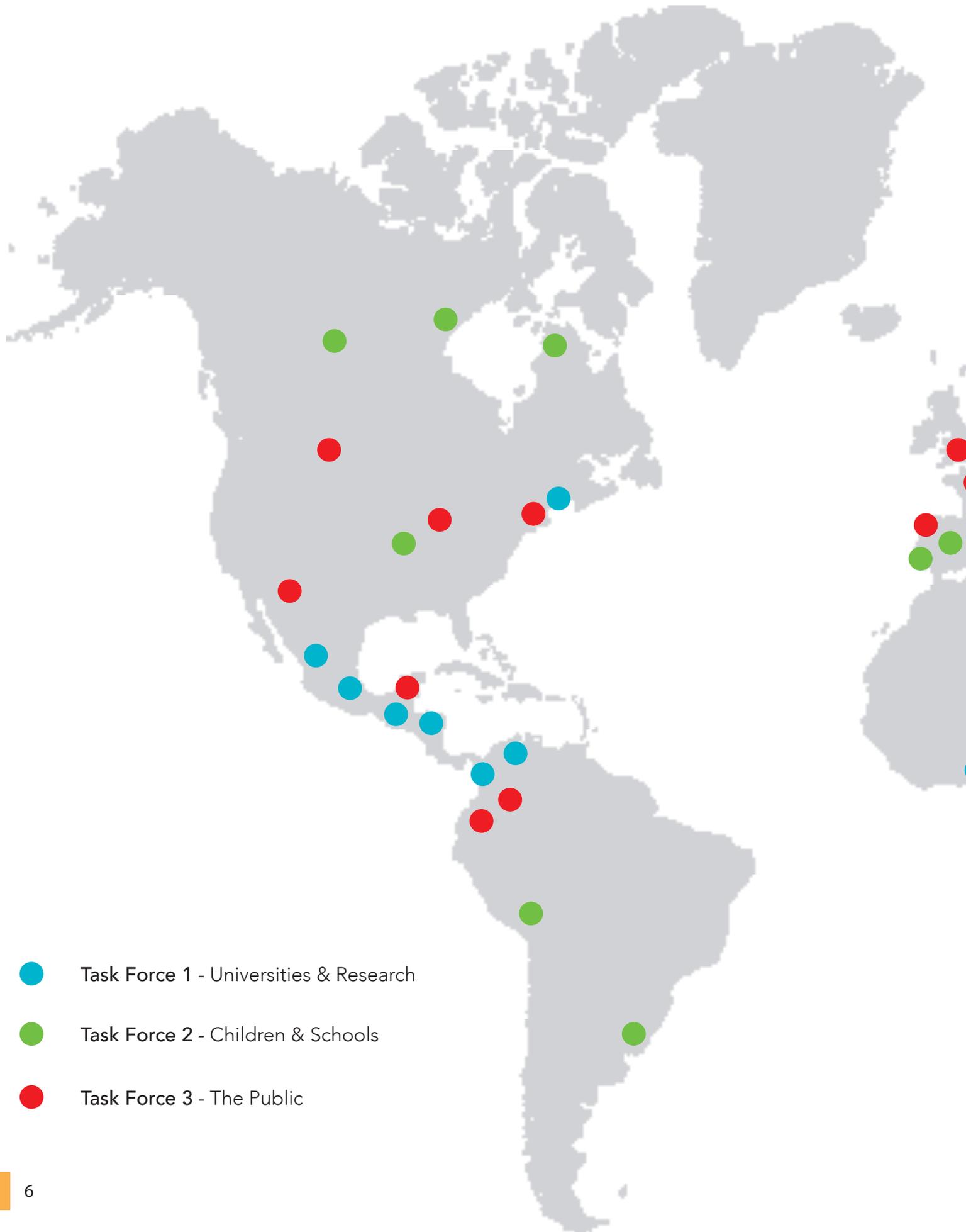
Fig. 3 The impact cycle illustrates a plan for using and building evidence of the best practices in astronomy for development projects.

At the Project Ideas stage, the OAD would provide guidelines on previous experience and existing research to allow proposers to focus their ideas and build on what has been done. This is followed by Optimisation, in which selected projects are optimised by making their theoretical assumptions and target outcomes explicit and incorporating best practice and evaluation design in their implementation plan.

Where possible, the Evaluation stage applies experimental (i.e. scientific) research designs to obtain valid and publishable measures of impacts, while keeping the implementation as unbureaucratic as possible for the project leaders. The Resources are a continuously updated library of best practices, that will capture what we learn in previous steps. The evidence will then feed back into the Project Ideas stage to create a positive feedback loop.

The Impact Cycle will feed into a global Knowledge Base both through academic publications on evaluated projects and by providing data to serve the STEM education, outreach, evaluation and development communities. Contributions to the global evidence base on science for development, education, outreach and human capital development provide a platform for ensuring that innovative, high-impact projects inform practice on a larger scale. The cycle generates the high quality evidence needed by policymakers and donors designing Large-Scale education and human capital development interventions.

2013 - 2016 FUNDED PROJECTS



● Task Force 1 - Universities & Research

● Task Force 2 - Children & Schools

● Task Force 3 - The Public

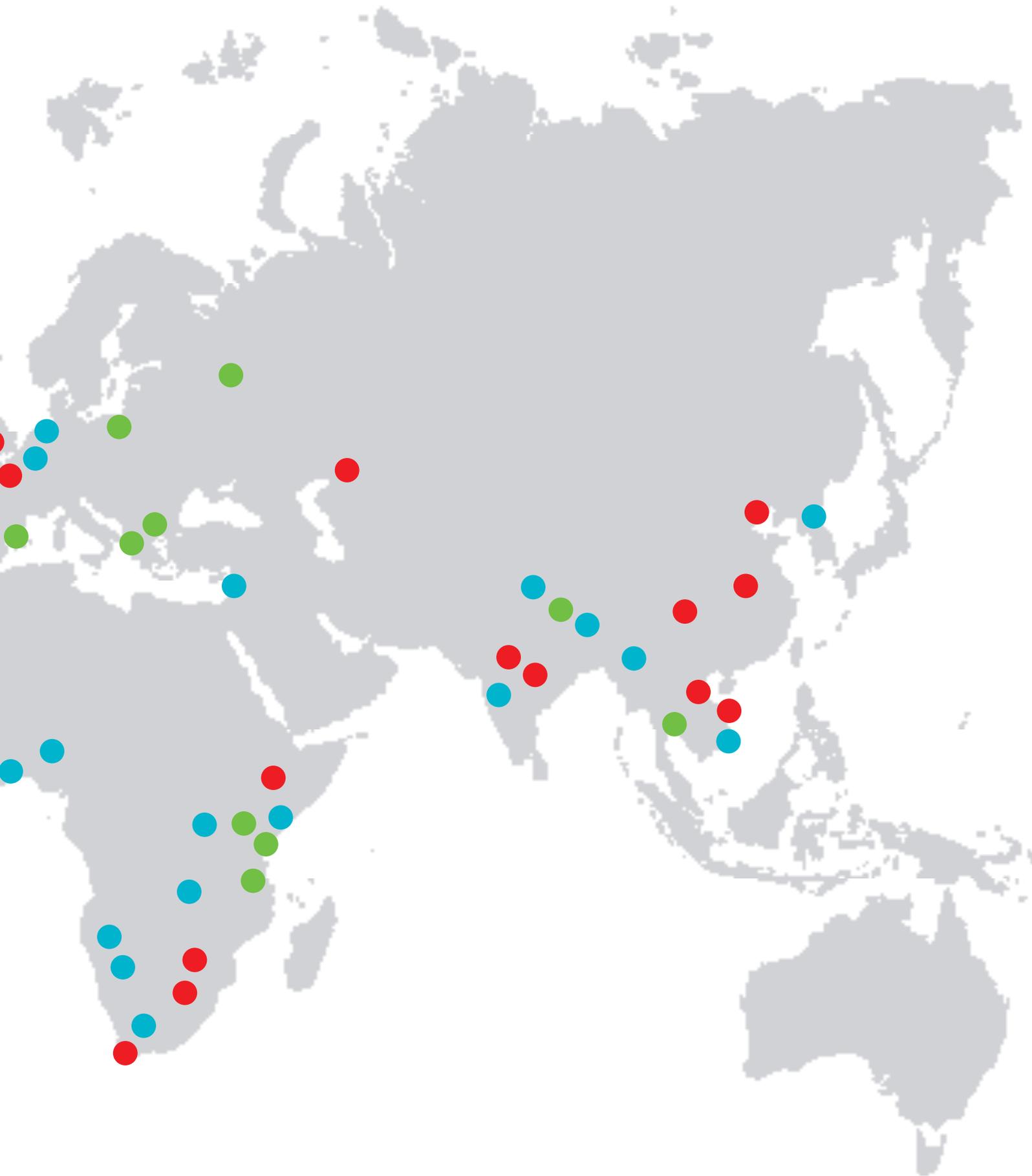


Fig. 4 The three different task forces of the OAD and projects funded under each task force by location.

"Space is for everybody. It's not just for a few people in science or math, or for a select group of astronauts. That's our new frontier out there, and it's everybody's business to know about space"
- Christa McAuliffe (1948 - 1986) Former crew member of NASA Space Shuttle Challenger (Teacher in Space project)



2013 FUNDED PROJECTS



TASK FORCE 1 - Universities & Research

Project title: **Strengthening astronomy research at the university level in Rwanda**

Location: Rwanda

Project leader: Dr. Pheneas Nkundabakura

Project title: **Democratic People's Republic of Korea Astronomy Research: Huairou Solar Station**

Location: China

Project leader: Prof. Richard De Grijs

Project title: **National workshop on Astronomy & Astrophysics in Kathmandu, Nepal**

Location: Nepal

Project leader: Binil Aryal

Project title: **Starlight in the university: Astrolab Phase 1**

Location: Sub-Saharan Africa & Europe

Project leader: Prof. Jean-Pierre de Grève

Project title: **Astronomy lectures for university students and teachers in Ghana**

Location: Ghana

Project leader: Dr. Jacob Ashong

Project title: **First Guatemalan school of Astrophysics**

Location: Guatemala

Project leader: Dr. Eduardo Rubio-Herrera

Project title: **MENA Regional summer school: "Astronomy with small telescopes"**

Location: Lebanon

Project leader: Prof. Roger Hajjar



TASK FORCE 2 - Children & Schools

Project title: **Astronomical kit for the visually impaired**

Location: Spain

Project leader: Dr. Amelia Ortiz-Gil

Project title: **Mathare Ambassadors of Astronomy**

Location: Kenya

Project leader: Ms. Katarzyna Tekien





Project title: **Galileo Teacher Training Program (GTTP), Nepal**
Location: Nepal
Project leader: Mr. Sudeep Neupane



Project title: **Network for Astronomy School Education (NASE)**
Location: Sub-Saharan Africa
Project leader: Prof. Rosa Ros



Project title: **Astronomical measurements in Ancient Greece**
Location: Europe
Project leader: Dr. Athanasios Taramopoulos

TASK FORCE 3 - The Public



Project title: **Astronomy for the extremely ill or traumatically injured children and their families, USA**
Location: USA
Project leader: Dr. Donald Lubowich



Project title: **Astronomía Periférica – Art & Astronomy, Colombia**
Location: Colombia
Project leader: Dr. Jaime Forero-Romero

Project title: **Chinese Ancient Poetry Astrophotography, China**
Location: China
Project leader: Ms. Bing Li

Project title: **Bringing Astronomy to remote areas in Vietnam**
Location: Vietnam
Project leader: Dr. Nguyen Luong Quang, Dang Tuan Duy & Nguyen Tan Vu

Project title: **Limpopo Astronomy Public Outreach**
Location: South Africa
Project leader: Mr. Kosma Coronaios

Project title: **Dark Skies Outreach to Sub-Saharan Africa, USA**
Location: USA and Sub-Saharan Africa
Project leader: Dr. Connie Walker

2014 FUNDED PROJECTS



TASK FORCE 1 - Universities & Research

Project title: **Regional School on Astrophysical Data Reduction**

Location: Nepal

Project leader: Prof. Binil Aryal

Project title: **Starlight in the University: Astrolab (Phase II-2014)**

Location: Europe & Sub-Saharan Africa

Project leader: Prof. Jean-Pierre de Grève

Project title: **The fourth East African Astronomy Workshop**

Location: East Africa

Project leader: Dr. Pheneas Nkundabakura

Project title: **Joint Exchange Development Initiative for Africa**

Location: Sub-Saharan Africa

Project leader: Dr. Nadeem Oozeer

Project title: **Latin American School of Observational Astronomy**

Location: Latin America & Caribbean

Project leader: Mr. Jose H. Pena

Project title: **Institute Twinning between the University of Antioquia (Colombia) and the Leiden Observatory**

Location: Colombia and the Netherlands

Project leader: Dr. Rafael Martínez-Galarza

Project title: **Sustainment of the development of astrophysics in Vietnam at the Master/PhD level in the radio astronomy domain**

Location: Vietnam

Project leader: Prof. Pierre Darriulat

Project title: **West African International Summer School for Young Astronomers**

Location: Nigeria

Project leader: Dr Bonaventure Okere



TASK FORCE 2 - Children & Schools

Project title: **Astro party**

Location: Europe

Project leader: Mr. Ivo Jokin

Project title: **Modern Astronomy: Science/Technology Transfer in the SEA-ROAD Region**

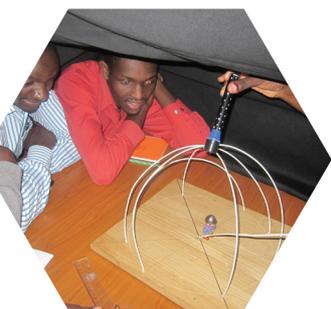
Location: Thailand

Project leader: Mr. Martin Callaway

Project title: **eScience Café: Building a global science community**

Location: Tanzania

Project leader: Dr. Pamela Gay



Project title: **The universe-our home full of wonders**
Location: Europe
Project leader: Paweł Zieliński



Project title: **Conduction of astronomical activities to motivate students in public schools of Nepal**
Location: Nepal
Project leader: Ms. Sarita Baral



Project title: **The UNAWE-UNESCO-Mobil I for Central America**
Location: Central America
Project leader: Mr. Daniel Ekdesman



Project title: **E-Teacher training: taking astronomy to the Portuguese Speaking Countries community**
Location: Europe
Project leader: Dr. Lina Canas



Project title: **A telescope to each high school in Mongolia**
Location: Mongolia
Project leader: Tuguldur Sukhbold

TASK FORCE 3 - The Public

Project title: **Documentary Series on Astronomy Research in India**
Location: India
Project leader: Mr. Rakesh Rao

Project title: **Communication and (social) media skills for young astronomers**
Location: Sub-Saharan Africa
Project leader: Ms. Marina Joubert

Project title: **Nanotarium: The Most Inexpensive, Quality DIY Planetarium on Earth**
Location: North America
Project leader: Dr. James Sweitzer

Project title: **Yunnan Minority Regions Astronomical Popularization Footprint Map Plan**
Location: China
Project leader: Mr. Guangpu Yang

Project title: **Accessible Citizen Science for the Developing World**
Location: Europe
Project leader: Dr. Robert Simpson

Project title: **Training of Policy Makers in Ethiopia**
Location: Ethiopia
Project leader: Dr. Solomon Tessema

Project title: **Coordinating Astronomy for Public Outreach in Vietnam (Phase 2): Uniting Amateur Astronomy Clubs and Bringing Astronomy to a Broader Public**
Location: Vietnam
Project leader: Dr. Quang Nguyen Luong



Summer visiting program for Astronomers at the Harvard-Smithsonian Center for Astrophysics

- 📍 United States
- ✅ Task Force 1 (Universities & Research)

In a pilot program, two visiting scientists from developing countries were selected to spend a month at the Harvard-Smithsonian Center for Astrophysics (CfA) in the United States. For the visiting scientists, it provided the opportunity to enhance their careers, interact with leading researchers and make connections for the development of astronomy in their respective countries.

Such visits open up avenues for exchanges in knowledge, research collaborations, contribution to education in the country of the visitor, and increased integration in the research community.

Summer School on Statistical Data Analysis and Data Mining in Astronomy

- 📍 Kenya
- ✅ Task Force 1 (Universities & Research)

This summer school at Kenyatta University focuses on statistical data analysis and data mining in astronomy. This will be achieved through lectures and hands-on exercises given by international experts. The target group is students at the MSc and PhD level from the East African region (Kenya, Burundi, Ethiopia, Rwanda, Tanzania, Uganda) although students from across the world are also welcome.

The main objective of this project is to transfer fundamental knowledge and skills in astronomy to postgraduate students in Kenya and the region. Building on what they learn at this workshop, the students will be able to make valuable contributions to astrophysics with a minimum of hardware resources, by applying advanced data analysis and interrogation methods on modest computing resources to the numerous astronomical data sets which are publicly available. This will set an important foundation for the establishment of long term expertise in astronomy in East Africa. This workshop has been postponed from its original date in 2015.

Latin American School of Observational Astronomy

- 📍 Mexico
- ✅ Task Force 1 (Universities & Research)

The Latin American School of Observational Astronomy is a short course at the observatory in Tonanzintla, Mexico dedicated to undergraduate-level students from Latin America. The School was conceived to help Central American and other Latin American students interested in astronomy to learn the basics, which would permit them to either continue their studies in astronomy or to share their knowledge with other students.

Twelve students were selected from 80 applications. Lecturers from various Mexican universities such as the Astronomy Institute of the National University (UNAM), the Instituto Nacional de Astronomía, Óptica, y Electrónica, the Universities of Guanajuato and Guadalajara, and the Ensenada branch of UNAM's Astronomy Institute were involved in teaching. The goal of the project is to facilitate the growth of astronomy in Central and South America.



Time Variability in Modern Astrophysics

- 📍 Thailand
- ✅ Task Force 1 (Universities & Research)

This project trained young researchers from South-East Asian countries in observation and data reduction methods. This workshop is the first of a series that National Astronomical Research Institute of Thailand (NARIT) aspires to organize as part of its strategy to become a leading astronomical institution in South-East Asia, and to provide resources and support for the development of astronomy in the region.

The focus of this NARIT International Astronomical Training Workshop (NIATW) was time-variable phenomena in astrophysics, with emphasis on short time scales from days to sub-seconds. It used the newly inaugurated 2.4m Thai National Telescope to address a number of phenomena subject to time variability. The program included two days of lectures in the classroom in Chiang Mai, and 5 days at the observatory site including a total of 3 nights of telescope time.



Optical camera for a 14-inch telescope

- 📍 Namibia
- ✅ Task Force 1 (Universities & Research)

This project is centred on purchasing an optical camera for a 14-inch telescope in Windhoek, Namibia. The country has been aspiring to engage in serious human capital development programs in astronomy to enable the locals to partake in some of the world leading scientific experiments.

This project will serve as an introductory and intermediate program in which students are introduced to observational astronomy, data reduction and data analysis from which they can acquire the necessary skills to get involved in high level research.

With the existence of gamma-ray astronomy through the High Energy Stereoscopic System and radio astronomy in the future via the planned Square Kilometre Array, this project will put Namibia in a position where it will have the capability to carry out optical follow-up observations to some of the detections made in the gamma-ray and radio regimes on a small scale. The objectives are to establish Namibia as hub in southern Africa for multi-wavelength astronomy.

Astronomy for Africa: Student Support for Astronomy Modules via Distance Learning

- 📍 South Africa
- ✅ Task Force 1 (Universities & Research)

Many universities in Africa offer a standard BSc degree in physics, but well-taught astronomy courses are difficult. However, with upcoming big astronomy projects such as Square Kilometer Array (SKA) and the African VLBI Network (AVN), both of which involve a number of African countries, it is important to offer the possibility of a degree in astronomy to all African students. This pilot project supports students all over Africa to study astronomy through distance learning.

Project funding covers course fees at the University of South Africa (UNISA), to enrol one student from Mauritius to do the full two year courses and ten students from the Copperbelt University in Zambia to do the Introductory Astronomy course. Applications have been submitted and the students will begin their courses in 2016.



National School on Astrophysical Simulation

- Nepal
- Task Force 1 (Universities & Research)

The 2016 National School on Astrophysical Simulation is the third, important step that built upon previous schools. In this school, participants (Ph.D. and Masters' thesis student) learned the nature of simulations that is used in Astrophysics research. Based on the positive outcomes from previous schools, the government of Nepal is providing regular support to the national school.

Participants will use Python to write programs for simulations using input parameters from database. The plan is to use SDSS (Sloan Digitized Sky Survey) DR7-DR10 database of about 20 Supercluster galaxies (Liivamagi et al. 2012, A&A 539, A80; Aryal et al. 2013, MNRAS, 434, 1939) and find expected isotropic distribution curves by performing Monte Carlo simulation for the galaxy orientation study. The project was postponed due to the 2015 earthquake in Nepal. It will be implemented in late 2016.

Introducing Data Analysis in the University System

- Zambia
- Task Force 1 (Universities & Research)

This project used astronomy to provide a path to implementing a research culture in the students and the faculty at the Copperbelt University in Zambia. A visiting researcher from India was sponsored to spend one month in the Physics Department and run workshops for the students and informal tutorials for the faculty. Astronomical data analysis was introduced into the university curriculum with the goal of enabling students and faculty to participate in new initiatives, including the upcoming Square Kilometer Array (SKA) in which Zambia is a partner. The primary objective was to develop a pool of manpower that is comfortable with modern data analysis techniques and with the scientific interpretation of astronomical data. Astronomical data is at the forefront of the new emphasis on data analytics and the skills gained through this proposal will be applicable to many other fields of astronomy, science and in the business community.

Students were introduced to Gnu Data Language (GDL) and the faculty were taught the basics of data analysis. A curriculum for an MSc program in astronomy was discussed and designed based on an existing one from India.

TARA, Observatory Node

- India
- Task Force 1 (Universities & Research)

The TARA Observatory combines a highly configurable robotic telescope array with an innovative sensor array network. Presently there are two TARA nodes in Cork- Ireland and California – USA.

Under this project, the third node is being setup in Fergusson College, India in partnership with Cork Institute of Technology, Ireland. Upon completion, this node will be able to acquire large volumes of data at remote sites and will also create significant computing opportunities with respect to effective data analysis and storage.

It will allow students to carry out projects and research in various disciplines using the setup for remote observations. The difference in time zones between the USA, Ireland and India is also ideal for day time astronomy - Solar studies. An integral part of the project will be the implementation of a public outreach scheme to allow schools and other colleges to utilize the robotic telescope system as a learning and inspirational tool. Students will learn remote observation techniques and carry out remote observations.



Guatemala



Task Force 1 (Universities & Research)

Guatemalan School of Astrophysics

Guatemala, along with many countries in the Central American and Caribbean region, lacks a solid and well consolidated program of astronomy and astrophysics at graduate level.

The GUAtemalan School of Astrophysics (GUASA) aims to trigger the change needed to improve upon that situation. The second GUASA was held in the colonial town of Antigua in Guatemala. It brought together local Central American and Caribbean undergraduate students of physics, mathematics and engineering with experts from prestigious astronomical institutions from around the world. This edition of the school was devoted to Cosmology- Our Dark Universe: Galaxies, Dark Matter, Dark Energy and High Precision Cosmology. The school provided undergraduate students a first hand experience with professional astronomers and exposed them to an international environment.



The school also involved the general public in rural Guatemala through public lectures, a cinema discussion, a public observation using a small telescope, an exposition of astronomical images and activities for small children. These activities will encourage children and teenagers to get closer to science and to continue their studies aiming for higher education.



Colombia



Task Force 1 (Universities & Research)

Andean Cosmology School

Cosmology has been identified as the research area with the strongest potential for development in the Andean Region (loosely defined by Venezuela, Colombia, Ecuador, Peru, Bolivia and Chile). There is a strong research tradition on the theoretical aspects of cosmology. Secondly, the collaborative nature of large projects in cutting-edge observational cosmology can open up the possibility of participation from Andean countries without a huge monetary investment. However, the capabilities in numerical and observational techniques must be developed for this area to grow.

This project hosted a one month school, at Uniandes in Bogota, on the theoretical, numerical and observational aspects of cosmology. It brought together 4 researchers of international expertise and 25 students from Latin-America. It tackled basic theoretical aspects and more advanced numerical and observational techniques.



Galileo Mobile Constellation

- 📍 South America
- ✅ Task Force 2 (Children & Schools)

GalileoMobile is a non-profit, itinerant education initiative that brings astronomy to young people in areas with limited access to outreach programmes. Constellation is a year long program of astronomy activities to establish a network of schools committed to the long term organisation of astronomical outreach activities amongst their pupils and local communities, and to provide the teachers of those schools with the material, training and support required to do so. The schools are connected through GalileoMobile's online platform and through social media, so that they can exchange their thoughts and experiences.

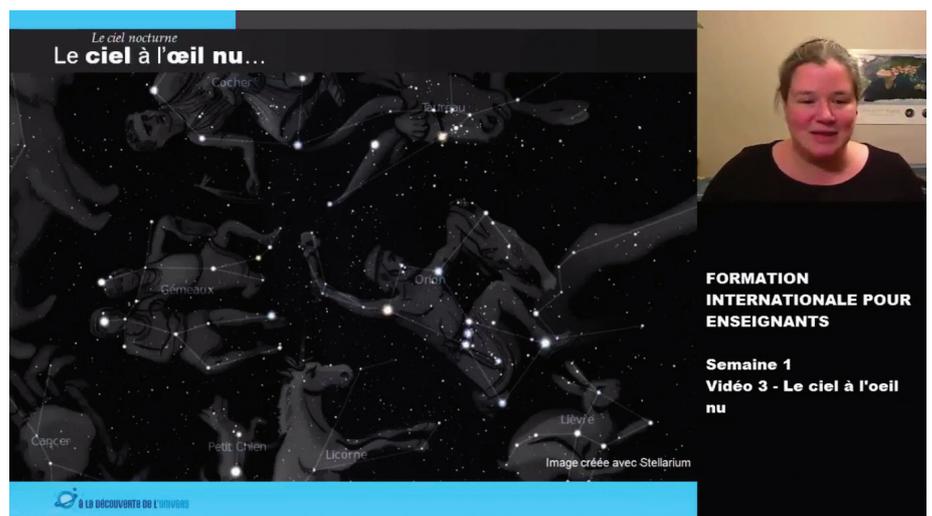


The schools were offered long-distance tutoring before Constellation went on the road, visiting 20 schools located in 6 countries across South America. Expeditions were run in Brazil, Colombia and Peru, Chile and Argentina, during which over 2000 students were reached across the continent.

Discover the Universe/a la decouverte de l'Univers – Online workshop for worldwide French teachers

- 📍 Global
- ✅ Task Force 2 (Children & Schools)

Discover the Universe is a free, online astronomy training program offered by Canadian astronomers for educators worldwide. The online workshop for French-speaking teachers was attended by 176 participants from 11 countries. The workshop was aimed at teachers without any prior knowledge of astronomy and who teach the very basics of astronomy. The contents of the workshop are available on the website and videos on Youtube.



📍 Canada

✅ Task Force 2 (Children & Schools)

AstroMcGill's Adopt an Astronomer program

AstroMcGill, the astronomy outreach group at McGill University, organised a program called "Adopt an Astronomer" where McGill University's young professional astronomers were sent to primary school classrooms around Québec. Each partner classroom "adopted" their own astronomer, interacting with her/him on multiple occasions during the school year.

These free classroom visits consisted of multiple, hands-on, fun astronomy activities and scientific experiments held in the classrooms that illustrated concepts tied to learning goals in the curriculum. Graduate students from the McGill Department of Education were consulted in developing these activities. The goal is to provide scientific mentors for the school children, hoping to suppress stereotypes and to foster the development of a lifelong love for astronomy and science.

The team has reached 126 primary school students in 4 schools in Montreal. The implementation of the project has been extended for another year with more classrooms scheduled to be visited in 2016.

📍 United States

✅ Task Force 2 (Children & Schools)

Astronomy Outreach for Inner City Youth

Carthage College and the Appalachian Mountain Club delivered astronomy and nature education and outreach and developed tools and activities to engage teachers who work with underserved inner city youth in poorer areas of the northeast United States.

Two workshops were held in a train-the-trainer format to provide real, hands-on experiential learning activities and provide science content and information that links the activities and astronomy content to the full suite of natural phenomena. The first workshop was held for forty-five teachers and the second for fifteen rural teachers. These two groups allowed the program to span different types of students and academic environments where science, especially astronomy, content may not be available.

📍 Kenya

✅ Task Force 2 (Children & Schools)

The Travelling Telescope

The Travelling Telescope is a project that focuses on promoting astronomy in Africa. The goal is to promote science learning in Kenyan schools in various locations exchanging knowledge about the sky through direct observations. In addition to direct observing, science is also taught using various hands-on activities and astronomy software, ideal for explaining concepts which are hard to understand and for a better grasp of the sights visible through the telescope.

University students with degrees in astronomy & Physics were recruited and trained in hands on activities, planetarium software, telescope operation, digital mobile planetarium, and astrophotography.

This team then visited schools in rural coastal Kenya, reaching 32 schools, 13,000 students and around 200 teachers.





- 📍 Chile, China, Nepal, Russia, South Africa, and the United States
- ✅ Task Force 2 (Children & Schools)

How Big Is Earth?

Using only the sunlight striking the Earth and a wooden dowel, students can measure the circumference of the earth recreating Eratosthenes's experiment from over 2,000 years ago. The project provided an online learning environment where students were able to do science the same way Eratosthenes did.

The online learning environment provided a platform for teachers and students to collaborate, share data, and reflect on their learning of science and astronomy. Data was collected on both teacher and student learning from surveys, discussions, and self-reflection done online.

- 📍 Tanzania
- ✅ Task Force 2 (Children & Schools)

Astro-Science Ambassadors Outreach for Science Education

Astro-Science Ambassadors are teachers trained to teach science subjects with inquiry based methods using astronomy as a tool. These ambassadors participated in a training workshop designed to develop Astro-Science curriculum activities in line with science syllabuses of Tanzania.

The project intended to show how astronomy could help transform education in Tanzania from content based to context based education curriculum, by giving teachers appropriate hands on teaching skills. The project offered an outreach experience to Astro-Science Ambassadors and allowed them to overcome challenges of transitioning into context education system currently promoted in the United Republic of Tanzania. Astro-Science activities were developed by the ambassadors through a workshop organized by Telescopes to Tanzania and UNawe-Tanzania in close association with the Science Center in Arusha. The activities were conducted in 24 schools, reaching over 30 teachers, engaged government district education officers and were experienced by around 1200 students in Arumeru district.





2015 FUNDED PROJECTS

A Weekly Astronomy Radio Show, and A Descriptive Guide to the Night Sky

- Mexico
- Task Force 3 (The Public)

“Obsesión por el Cielo” (Obsession for the Sky) is a weekly radio show on astronomy and space exploration. It was broadcast live on the radio station of the Universidad de Monterrey, in the metropolitan area of Monterrey in Mexico. It could also be heard live anywhere in the world through the internet, and the show is now available as a podcast on PodBean.

The radio program started to air in the year 2000 and to date 570 shows have been produced, the last 205 which are available as podcasts. Each program provides a summary of the most recent astronomy news, alerts of astronomical events that can be observed the following week, and discussions on specific topics related to the study and exploration of the Universe.



As part of the radio program, four 50-60 minute audio recordings were created to help the observers orient themselves in the night sky and describe the location, shapes and mythologies of the constellations available that particular season.

- South Africa
- Task Force 3 (The Public)

Public Library Astronomy Corners

This project is about identifying ten public libraries per annum and creating astronomy corners in the libraries. The aim of this project is to promote science awareness, with emphasis on astronomy in these communities. Educating children from a younger age in astronomy stimulates love and passion for the field and soon new emerging young astronomers will be visible. This project will initially be rolled out in the Western and Northern Cape provinces of South Africa and later expand to other provinces.

It will be run by the library at the South African Astronomical Observatory, which has supplied materials to the identified libraries and will also include an astronomy training workshop for the ten librarians.

- Global
- Task Force 3 (The Public)

Sign Language Universal Encyclopedic Dictionary

This project is developing a unique glossary of astronomical terms for the hearing impaired worldwide. While celestial objects are varied, the project gave special attention to the basic terms linked with the International Year of Light 2015, for example light, light year, star, sun, among others.

The development of this universal sign language of astronomical terms, the related multimedia material and the encyclopaedic dictionary will also be useful in countries with different languages, making it possible to carry out the same activities anywhere without the need for being translated.



2015 FUNDED PROJECTS

Cosmic Light: Bring Galileo's starry messenger to Vietnam

- 📍 Vietnam
- ✅ Task Force 3 (The Public)

Taking advantage of the International Year of Light, this project organised nation-wide activities to nurture children's love of the sky. With the help of such activities, the club aims to become the main hub to coordinate amateur astronomy in Vietnam as well as to circulate information on astronomical events, and science development in the country.

The book, Galileo's Starry Messenger, was translated and published online. The club also helped to build radio telescopes at a high school from television antennas and receivers. It organized numerous other activities such as astronomy field trips, lectures, games, competitions, stargazing and scientific exchanges.



Sensoroteca Astronomica

- 📍 Colombia
- ✅ Task Force 3 (The Public)

A Sensoroteca is a space in which objects that can be perceived through taste, hearing, smell, touch and sight are stored. This is the same concept as a library structure but in this case, instead of carrying books, the contents are objects and materials. The Sensoroteca contains a catalog of objects with which you can make presentations and activities on a topic with an emphasis on multi-sensory character. It is directed towards different populations with disabilities, minorities, children, and seniors. The purpose of these activities is not to create experts in astronomical topics, but awaken interests and promote learning of various kinds.

In the Planetario de Bogota, astronomy is the main theme that guides the activities performed in their facilities. The Sensoroteca Astronomica objects will be equipped so that space, physics, chemistry and general cosmography can be perceived by taste, hearing, smell, touch and sight. The catalog of objects is available online on the website.

The Universe is Old, Beautiful and Full of Life

- 📍 Portugal
- ✅ Task Force 3 (The Public)

Portugal is currently going through a deep and serious economic crisis. In a country in which agriculture was once the maintaining source of the Portuguese people, the elderly are now isolated in faraway inland villages with no access to new opportunities or simply forgotten in retirement homes.

In this project, the young and the elderly are brought closer by participating in activities related to astronomy. All activities are aimed at the involvement of the local youth community – schools and families of the elderly. The activities were be implemented in nursing and retirement homes, churches, parks and the observatory.

Astronomy can be used to bring people together by participating in scientific activities, to demystify associated myths to astronomy and other phenomenon and at the same time provide unique experiences.

Poetry and Sky Competition

- 📍 China
- ✅ Task Force 3 (The Public)

In 2013, the OAD supported the Chinese Ancient Poetry Astrophotography project which encouraged people to take pictures of the night sky according to ancient Chinese poems. In 2014, the Chinese Ancient Poetry Astrophotography Competition (CAPAC) was organised, resulting in a lot of positive feedback.

This effort expands the earlier projects for the International Year of Light 2015. While continuing with the CAPAC, a Sky Poetry Competition (SPC) has been added. Participants select the image from A Universe of Images (project of IYL2015) and then write poems for these images. It will help more people to appreciate the ancient and modern sky.



Astronomy on Camel Cart

- 📍 India
- ✅ Task Force 3 (The Public)

This large scale astronomy outreach project was run by a non-profit organization in India. It used travelling exhibitions on camel carts to reach people from socially excluded parts of several villages. Camel carts are more convenient, slow, steady, easy to venture into narrow lanes of Indian villages as they are quite open, flexi-travel having an inviting approach to education as villagers can connect with a camel cart more than any other mode of transport. The exhibition included presentations, hands on activities, astronomical observations, classroom discussions and activities. These modules were child friendly educational materials created by expert designers using hands-on learning approach with indigenous knowledge.

More than 35,000 students, 20,000 parents and community members were educated on astronomy and its linkage with everyday life under this project.



2016 FUNDED PROJECTS



TASK FORCE 1 - Universities & Research

Project title: **Starlight in the university: Astrolab Extended – 2016**

Location: Ethiopia, Kenya, Nigeria, Rwanda, South Africa, United Republic of Tanzania, Zambia

Project leader: Michele Gerbaldi

Project title: **Haiti All Sky Camera**

Location: Haiti

Project leader: Dr. Peter Teuben

Project title: **Uplifting the Mozambican astronomy community**

Location: Mozambique

Project leader: Claudio Paulo

Project title: **Gaza Ambassadors of Mars**

Location: Gaza

Project leader: Bisan Humaid

Project title: **Latin American School of Observational Astronomy**

Location: All countries in Central America, Colombia, Ecuador, Peru

Project leader: Jose H. Pena

Project title: **Radio Astronomy for Education**

Location: Botswana, Ghana, Kenya, Madagascar, Mauritius

(with Agalega, Rodrigues, Saint Brandon), Mozambique, Namibia, South Africa, Tanzania, Zambia

Project leader: Yannick Libert

Project title: **The First Arab Winter School for Astrophysics**

Location: Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen, Algeria, Comoros, Djibouti, Egypt, Eritrea, Libya/Libyan Arab Jamahiriya, Mauritania, Morocco, Somalia, Sudan, Tunisia

Project leader: Raid M Suleiman



TASK FORCE 2 - Children & Schools

Project title: **An Astronomy Center in Bangladesh**

Location: Bangladesh

Project leader: Shahjahan Mridha

Project title: **Solar System Play**

Location: Argentina

Project leader: Marcela Canada-Assandri

Project title: **Astronomy for Literacy**

Location: Sierra Leone

Project leader: Steph Dobrowolski

Project title: **Touching Space – Accessible Astronomy**

Location: United Kingdom

Project leader: Jasmin Evans

Project title: **Solving Problems and Cosmic Exploration (S.P.A.C.E)**

Location: South Africa

Project leader: MJ Schwartz

Project title: **Astronomy for Earthquake affected Students**

Location: Nepal

Project leader: Jayanta Acharya



TASK FORCE 3 - The Public

Project title: **AstroBus-Ethiopia**

Location: Ethiopia

Project leader: Yabebal Fantaye

Project title: **Astronomy with all Senses**

Location: Colombia

Project leader: Nayive Rodriguez

Project title: **Development of Astro Tourism in South West Asia**

Location: Armenia, Georgia, Iran, Israel, Turkey, United Arab Emirates

Project leader: Areg Mickaelian

Project title: **The Sky on a Bike**

Location: India

Project leader: Sachin Bahmba

Project title: **Community Development around Timor Observatory**

Location: Indonesia

Project leader: Premana W. Premadi



"Astronomy is one of the sublimest fields of human investigation. The mind that grasps its facts and principles receives something of the enlargement and grandeur belonging to the science itself. It is a quickener of devotion"
- Horace Mann (1796 - 1859) American politician and educational reformer

IAU General Assembly 2015

The IAU General Assembly (GA) is a periodic gathering of astronomers worldwide from all fields of astronomy. The most recent GA, a mix of scientific, strategic and administrative programmes, took place in August 2015 in the USA.



*IAU members casting their votes in favour of resolutions
Photo credit: IAU/R. Fienberg.*

The OAD coordinated a Focus Meeting titled "Astronomy for Development." The meeting

discussed the global developmental impact that aspects of astronomy can deliver at the university and research level, children and school level, and at the public level. The interdisciplinary nature of this meeting was relevant to all IAU Divisions and the professional astronomy community.

Agreements were signed at the General Assembly for establishing new Regional Offices in Armenia, Colombia, Jordan, Nigeria and Portugal. The OAD engaged in meetings of IAU Division C (Education, Outreach and Heritage), the new IAU Executive Committee, the IAU Women in Astronomy Working Group and meetings at the Institute for Astronomy with NASA. The office also participated in the Global Hands on Universe and Galileo Teacher Training Programme international workshops held before the GA.

IAU OAD South West Asian Regional Office Inauguration

The South West Asian OAD Regional Office was inaugurated on 13 October 2015 at the Byurakan Astrophysical Observatory (BAO) in Armenia. The inauguration ceremony included talks from Radik Martirosyan, President of the National Academy of Sciences of the Republic of Armenia, Piero Benvenuti, IAU General Secretary and Areg Mickaelian, director of the IAU South West Asian Regional Office. The event was attended by ambassadors and representatives from neighbouring countries, in addition to representatives from cultural, scientific and educational communities in South West Asia.



A delegation including ambassadors and representatives from neighbouring countries, cultural, scientific and educational communities in South West Asia. Photo credit: IAU.

The establishment of this South West Asian regional node is significant as this part of the continent hosts an array of leading astronomical facilities, such as the Byurakan Astrophysical Observatory in Armenia and the Abastumani Astrophysical Observatory in Georgia. Iran will soon host the Iranian National Observatory, which is currently under construction. The office in Armenia will utilise these facilities, and many more, to benefit the region at large.

The office hosted the first Armenian-Iranian Astronomical Workshop, which led to the discussion of joint scientific projects between the two nations.

Astronomy inclusion and accessibility

OAD post-doctoral researcher, Dr Wanda Diaz-Merced, is an Astronomer who makes use of sonification techniques to conduct her research. She lost her sight as a student at university and was left without a way to do her science. Then she had a revelatory insight: the light curves she could no longer see could be translated into sound. Through sonification, she regained mastery over her work, and now she's advocating for a more inclusive scientific community.

Dr Diaz-Merced leads the AstroSense project, which develops software to analyze astronomical data through sound and tactile astronomy resources for the visually impaired. She also runs workshops at the school for the blind in Cape Town. She is passionate about expanding on her work to improve accessibility and encourage greater inclusion in science through her work in astronomy. As the chair of the scientific committee, she organised the first workshop on 'Astronomy Beyond the Common Senses for Accessibility and Inclusion', that was held in Colombia on October 8.



OAD postdoctoral researcher Dr. Wanda Diaz-Merced working on her sonification techniques.

AstroVARSITY

The AstroVARSITY project intends to provide course and tutorial resources for Maths and Physics lecturers at undergraduate level in order to use astronomy to enhance science teaching as well as potentially start an astronomy module within their department. The project also offers hands-on activities and exercises based on an off-the-shelf telescope and instruments package to conduct practical experiments and research.

The pilot project, led by Dr. Sudhanshu Barway and Laure Catala from the South African Astronomical Observatory, targets historically black universities in South Africa that are less developed than their counterparts. Several workshops have been organized since 2012 to train lecturers, present astronomy teaching material, and discuss the format of an introductory course in astronomy. The most recent workshops focused on virtual observatory software and tools to create a conducive platform to produce world class astrophysicists and cosmologists.

The success of these workshops encouraged the University of Zululand to acquire their own astronomical equipment which has increased student interest in Physics and Mathematics at the university.



Project leaders Dr. Sudhanshu Barway (left-front standing) and Laure Catala (middle-centre), with some of the participants.

World Science Forum Hungary

The OAD was represented at the 2015 World Science Forum in Budapest, Hungary by Eli Grant. She was part of a group of 50 young scientists selected for the IAP/GYA/ICORSA/WAYS side event on 'Scoping the future: views and ideas of young scientists to tackle global challenges.' The young scientists were split into five groups and challenged with devising novel solutions for one or other of the Sustainable Development Goals. Eli Grant worked on the Science for Education group and outlined her group's idea to use young scientists and modern technology to consolidate best practices in education into a single UN-led platform.



OAD's Eli Grant giving a talk at the World Science Forum in Budapest, Hungary. Photo credit: (Source:WSF-SCIFORUM.HU/MTA.HU)

Inaugural Conference of the Portuguese Language Office of Astronomy for Development

The Portuguese Language Office of Astronomy for Development (PLOAD), the ninth Regional Office, was officially inaugurated in Portugal on 5 May 2016. This gathering marked the launch of the official website and memorandums of understanding were signed by representatives from Portugal, Brazil, São Tomé and Príncipe, Cape Verde and Mozambique. They discussed the challenges and state-of-the-art approaches to improve cooperation among Portuguese speaking communities in the field of astronomy and space sciences.

PLOAD is hosted at Núcleo Interactivo de Astronomia (NUCLIO), in collaboration with the Institute of Astrophysics and Space Sciences (IA), in Portugal to deal with all aspects relating to a Portuguese language and culture.



The delegates signing memorandums of understanding.

Science Forum South Africa - 2015

The Science Forum South Africa was held at the CSIR Convention Center, Pretoria. The OAD organised a session on Astronomy for Development. This session provided a platform for critical, evidence-based debate on direct contributions to Sustainable Development Goals (SDGs) that professional science communities can make by leveraging their skills and taking a scientific approach to their engagement with development challenges.

Five panellists reflected on how astronomy, a classically "blue sky" field, is currently being used in initiatives that tackle SDGs, sometimes in unexpected ways, and how the impact of these initiatives is being measured. The speakers raised challenges and potentially unanswered questions about how professional scientists can engage with development most effectively and efficiently.

IAU OAD Regional Offices Meeting

The 3rd face-to-face meeting of Regional Offices of Astronomy for Development was held between 2-4 March 2016 in Cape Town. The OAD has, at present, nine Regional Offices and Language Expertise Centers around the world. These offices work closely with the OAD in order to implement the IAU Strategic Plan. Participants discussed strategies and developed a roadmap for the future of Astronomy for Development.

A networking reception and dinner was hosted by the OAD to celebrate the 5th Anniversary of the OAD's establishment and the recent global recognition offered by the prestigious Edinburgh Medal. It was attended by stakeholders in astronomy, education, government and the media.



Members of the OAD Steering Committee, OAD staff, and representatives from Regional Offices & Office of Astronomy Outreach at the Regional Offices Workshop, 2016. Photo credit: Sze-leung, IAU-OAO.

IAU OAD West African Regional Office Inauguration

The inauguration of the West African Regional Office was held in Enugu, Nigeria, on November 27, 2015. It marked the commencement of activities for the Regional Office. It was attended by the director of the OAD, country coordinators from Gabon, Ivory Coast, Burkina Faso, Ghana and Nigeria and representatives from the host institution. The event coincided with the First Nigerian Astronomy and Space Science Forum. The first meeting of the country coordinators was also held during this time.



A delegation including Regional offices coordinators, Director of the Centre for Basic Space Science in Nigeria, and IAU General Secretary joining by video. Photo credit: IAU/ Dele

The West African Regional Office of Astronomy for Development (WA-ROAD) is hosted at the Center for Basic Space Sciences (CBSS), National Space Research and Development Agency (NASRDA) in Nigeria.

IAU-OAD Arab Regional Office and Arabic Language Expertise Center Inauguration

The inauguration of the Arab Regional Office and Arabic Language Expertise Center on December 02 and 03, 2015, marked the commencement of activities for the first Regional Office in the Middle East and the associated Language Expertise Center. It was attended by the IAU General Secretary, Director of the OAD, representatives from the host institution and from Arab states in the region. The meeting had individual sessions focusing on the Office of Astronomy for Development and astronomical projects and capacity building in the Arab states, in addition to a round table discussion. A meeting of the Regional Office Steering Committee was also convened during this time.



A Delegation including IAU General Secretary, Director of the OAD, representatives from the Royal Jordanian Geographical Centre and Arab States.

The Arab Regional Office (Arab-ROAD) and Arabic Language Expertise Center (Arabic-LOAD) is hosted by the Arab Union for Astronomy and Space Sciences (AUASS) which is located at the Royal Jordanian Geographical Centre (RJGC) in Amman, Jordan. In addition the RJGC hosts the Regional Centre for Space Science and Technology Education which is affiliated to the United Nations Office for Outer Space Affairs (UNOOSA).

Edinburgh Medal

The 2016 Edinburgh Medal was jointly awarded to Kevin Govender, Director of the OAD, and the International Astronomical Union on 30 March at the 2016 Edinburgh International Science Festival, to recognise their wide reaching contributions to science. It is the first time in its history that this award goes to a South African. Previous winners include four nobel laureates and illustrious names such as Prof Jane Goodall, Sir David Attenborough, Prof Abdus Salam, Prof Wangari Maathai, Prof Peter Higgs and Prof Jocelyn Bell Burnell. It was awarded



From left, IAU President Dr. Silvia Torres-Peimbert, Lieutenant and Lord Provost of the City of Edinburgh Rt Hon Donald Wilson, and OAD Director Kevin Govender.

jointly for the creation and practical establishment of the IAU Office of Astronomy for Development, which integrates the pursuit of scientific knowledge with social development for and with those most in need. Under the pioneering stewardship of its first Director, Kevin Govender, the OAD has successfully harnessed astronomy in the service of global education and capacity building. The OAD was established as part of the IAU's decadal strategic plan "Astronomy for Development," which was initiated and driven within the IAU by the renowned astronomer Prof George Miley.

PARTNERS

The OAD has established several partnerships and collaborates with organisations sharing common interests. These partnerships include visiting scientist programmes, funding of workshops, scholarships, joint funding proposals, sharing of expertise and provision of staff time.



REGIONAL OFFICES





Fig. 5 The OAD Regional offices across the world.

REGIONAL OFFICES

The Regional Offices of Astronomy for Development (ROAD) are similar to the OAD, established within host institutions and employing a full time coordinator, with a focus on activities in a specific geographic region. Language Centres or LOADs have a similar structure but with a focus on a particular language or cultural region, which sometimes stretches across the entire world.

The OAD has nine Regional Offices - eight ROADs (East Asia, South East Asia, East Africa, Southern Africa, West Africa, the Andean Region of South America, South West Asia, and the Arab world) and three LOADs (Chinese, Portuguese and Arabic languages and cultures) have been established. These offices, in addition to providing guidance and support to the OAD on regional matters, drive various activities in their respective regions.

The following is the summarized information of the OAD regional offices:

Andean Regional Office of Astronomy for Development

HOST INSTITUTION - Universidad de Los Andes, Parque Explora-Planetario de Medellín and Sociedad Chilena de Astronomía

HOST COUNTRY - Colombia and Chile

COUNTRIES UNDER THE OFFICE - Colombia, Chile, Bolivia, Ecuador, Peru, Venezuela

CO-ORDINATORS - Germán Chaparro, Farid Char, Jaime Forero, Angela Pérez

Arab Regional Office of Astronomy for Development and Arabic Language Expertise Centre

HOST INSTITUTION - Arab Union for Astronomy and Space Sciences, United Nations Regional Centre for Space Science and Technology Education

HOST COUNTRY - Jordan

COUNTRIES UNDER THE OFFICE - Algeria, Jordan, Iraq, Lebanon, Palestine, Oman, Sudan, Syria, United Arab Emirates

CO-ORDINATOR - Awni Al-Khasawneh

East Asian Regional Office of Astronomy for Development and Chinese Language Expertise Centre

HOST INSTITUTION - Xi'an Jiaotong-Liverpool University (XJTLU), Beijing Planetarium and Yunnan Astronomical Observatory

HOST COUNTRY - China

COUNTRIES UNDER THE OFFICE - People's Republic of China, Mongolia, Democratic People's Republic of Korea

CO-ORDINATORS - Thijs Kouwenhoven

East African Regional Office of Astronomy for Development

HOST INSTITUTION - Ethiopian Ministry of Science and Technology, Ministry of Education, The Ethiopian Space Science Society, and Addis Ababa University

HOST COUNTRY - Ethiopia

COUNTRIES UNDER THE OFFICE - Ethiopia, Burundi, Comoros, Djibouti, Democratic Republic of Congo, Eritrea, Kenya, Rwanda, Uganda, Somalia, Sudan, South Sudan, Seychelles, Tanzania

CO-ORDINATORS - Kelali Adhana Tekle

Portuguese Language Office of Astronomy for Development

HOST INSTITUTION - Núcleo Interativo de Astronomia (NUCLIO), in collaboration with the Institute of Astrophysics and Space Sciences

HOST COUNTRY - Portugal

COUNTRIES UNDER THE OFFICE - All Portuguese speaking countries including Portugal, Angola, Brazil, Cape Verde, Equatorial Guinea, Mozambique, Guinea-Bissau, Macau, São Tomé and Príncipe

CO-ORDINATORS - Sara Anjos

South East Asian Regional Office of Astronomy for Development

HOST INSTITUTION - National Astronomy Research Institute of Thailand (NARIT)

HOST COUNTRY - Thailand

COUNTRIES UNDER THE OFFICE - Thailand, Brunei, Cambodia, Indonesia, Laos PDR, Malaysia, Myanmar, The Philippines, Singapore, Vietnam

CO-ORDINATORS - Wichan Insiri, Supaluck Chanthawan, Sulisa Chariyalertsak, Setthawut Thongmee

South West and Central Asian Regional Office of Astronomy for Development

HOST INSTITUTION - Byurakan Astrophysical Observatory (BAO)

HOST COUNTRY - Armenia

COUNTRIES UNDER THE OFFICE - Armenia, Georgia, Iran, Kazakhstan, Tajikistan

CO-ORDINATORS - Areg Mickaelian: Director and Armenian Coordinator, Maya Todua: Georgian Coordinator, Habib Khosroshahi: Iranian Coordinator, Rashit Valiullin: Kazakhstan Coordinator, Gulchehra Kohirova: Tajikistan Coordinator

Southern African Regional Office of Astronomy for Development

HOST INSTITUTION - Copperbelt University

HOST COUNTRY - Zambia

COUNTRIES UNDER THE OFFICE - Zambia, Botswana, Lesotho, Namibia, South Africa, Swaziland, Zimbabwe, Mozambique, Malawi, Madagascar, Mauritius, Ghana.

CO-ORDINATORS - Prosperity Simpemba, Lenganji Mubanga Mutembo

West African Regional Office of Astronomy for Development

HOST INSTITUTION - Centre for Basic Space Science (CBSS), National Space Research and Development Agency (NASRDA) at the University of Nigeria

HOST COUNTRY - Nigeria

COUNTRIES UNDER THE OFFICE - Nigeria, Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Senegal, Sierra Leone, Togo, Saint Helena, Ivory Coast, São Tomé and Príncipe

CO-ORDINATOR - Bonaventure Okere

GETTING INVOLVED

There are many ways to engage with the OAD. We welcome your ideas and input towards the vision of Astronomy for Development.

The bulk of the implementation of projects is carried out by volunteers, supported by the OAD and the ROADs/LOADs, with advice and guidance from the Task Forces, and oversight by an international Steering Committee. The greatest resource enabling the OAD to achieve its vision is therefore its volunteer community.

Assistance is sought on an ongoing basis from professionals, amateurs, educators, students or members of the public anywhere in the world. There is an active call on the OAD website for volunteers to register their skills, preferred target regions and interests so that the OAD can match volunteers with opportunities. There is also a call for organisations or projects to submit requests for volunteers, with the OAD facilitating the volunteer matching process. The OAD currently has over 500 volunteers who are regularly called upon to engage and support various projects and activities.

CALL TO ACTION



PERFORM RESEARCH AT OAD



VOLUNTEER / REQUEST A VOLUNTEER



ADOPT A PROJECT



SET UP A REGIONAL OFFICE



BE A MENTOR OR A MENTEE



PROPOSE A PROJECT



FUND A PROJECT



PARTNER WITH OAD



BECOME AN OAD INTERN OR FELLOW

Volunteering with the OAD offers opportunities to make new friends and develop international collaborations; travel; develop new skills; learn about science for development and policy research; publish in peer-reviewed journals; be recognised for your contributions; and, most of all, use your time and energy to make a difference.

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This brochure was produced in October 2016. All activity photos used were submitted to the OAD by the respective project leaders. More information on project leaders and photo credits can be found on www.astro4dev.org.



"Since its establishment, OAD performance has been outstanding, particularly given the very limited resources that have been made available to an organisation with such ambitious terms of reference. [...] Comments we have heard about the work of the OAD include: 'done exceptionally well'; 'amazing they have managed to do as much as they have'; 'Remarkable achievement.'" - 2015

OAD Review Panel: Jocelyn Bell Burnell, Ron Ekers, George Ellis

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