

UN GA 76 SCIENCE SUMMIT

# The Unique Role of Astronomy in Advancing the SDGs

REPORT TO THE  
United Nations Secretary General



Universiteit  
Leiden  
The Netherlands

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- 1 The European Regional Office of Astronomy for Development is a partnership between the European Astronomical Society and Leiden University. It is one of 11 regional offices associated with the IAU Office of Astronomy for Development in Cape Town, with the mission of using astronomy to advance the SDGs.
  - 2 Partnership between the European Astronomical Society and Leiden University

Organised by the  
International Astronomical Union European  
Regional Office of Astronomy for Development<sup>1</sup>

Under auspices of Intelligence in Science and AERAP by the  
International Astronomical Union Office of Astronomy  
for Development and its European Regional Office<sup>2</sup>

15 September 2021 | 15.00 – 17.30 CEST

## Introduction

In 2020 the United Nations and the UN Secretary General instituted the UN GA75 Dialogues as a way for citizens of the world to provide input. The present 2021 virtual session on *“The unique role of astronomy in advancing the SDGs”* was held as part of the UN GA76 Science Summit. It is a sequel to the virtual Dialogue organised during the UN GA75 on *“Astronomy: a unique educational tool for furthering the SDGs and stimulating a global perspective”*. The 2020 Dialogue was almost exclusively devoted to education. Being complementary, the 2021 summit focused on ways other than education by which astronomy is contributing to advancing the UN Sustainable Development Goals.

The programme of the Summit session is listed in the Appendix. The new President of the International Astronomical Union (IAU) welcomed participants to the session and outlined the various activities being carried out by the IAU in the areas of development, education and outreach. A highlight was an inspirational lecture on an “Introduction to Astronomy for Development” by Grace Naledi Pandor, Minister of International Relations and Cooperation of the Republic of South Africa and Honorary Professor of Astronomy for Development at Leiden University. This was prerecorded on the occasion of the award to her of an honorary doctorate by University College Dublin. Also, the Director General of the European Southern Observatory Xavier Barcons talked about how ESO was working to advance the SDGs and Anna Scaife described the role of radio astronomy, the Square Kilometre Array and Meerkat in furthering the SDGs in Africa.

Other talks were given by Chiara Moenter on the SDG indicators that are relevant for astronomy, Violette Impellizzeri of Astronomers for Planet Earth on Astronomy and Climate Action and Sonal Asgotraa about projects to advance economic development by exploiting Astrotourism. Charles Takalana of the African Astronomical Society (AfAS) also described how AfAS is contributing towards attaining the SDGs.

- The IAU Office of Astronomy for Development is supporting many projects around the world that are using aspects of astronomy to stimulate development. Ramasamy Venugopal described the OAD programme and played short prerecorded descriptions of 4 very diverse projects that are supported by the OAD.

Finally, the meeting participants together with the IAU Office of Astronomy for Development and its European Regional Office adopted the following resolution.

## “Considering the following:

- the importance of the United Nations Sustainable Development Goals for the protection and survival of our planet;
- the unique role that astronomy can have in advancing the SDGs;
- the concluding resolution adopted in the 2020 United Nations GA 75 Dialogue – Astronomy: “A Unique Educational Tool for furthering the SDGs and Stimulating a Global Perspective”;
- the recent report of the European Commission on the international dimensions of research that recommends exploiting synergies between Horizon Europe and the Neighbourhood, Development and International Cooperation Instrument (NDICI):

## We urge that:

- A portion of global public and private expenditure on space and astronomy should be devoted to providing resources for projects and initiatives that use the unique aspects of space and astronomy to contribute directly towards advancing the United Nations Sustainable Development Goals.
- A particular focus should be that of SDG4 (Education), including measures to involve women, girls and disadvantaged groups.”

The UN GA76 resolution is a companion resolution to help implement the resolution that was adopted as the conclusion of the UN GA75 Dialogue.

## “To advance the SDGs:

Before they are 10 years old, every child should be introduced to the inspiring notion that we all inhabit a tiny planet in a vast wonderful Universe, illustrated by the iconic pictures of our earth taken from space. This will help them realise that we all belong to a common humanity (SDG 4.7), who must respect and protect our planet (SDG 13) and advance the cause of peace (SDG 16)”.

3 Complementary to the UN GA 75 Dialogue – Astronomy: A Unique Educational Tool for furthering the SDGs and Stimulating a Global Perspective [https://astro4dev.eu/images/main/Dialogue\\_summary.pdf](https://astro4dev.eu/images/main/Dialogue_summary.pdf)

3 Funded with partial support of Grant 483.20.005 from NWO, the Netherlands Organisation for Scientific Research.

5 Pre-recorded. Lecture given at University College Dublin on the occasion of the award of an honorary doctorate to her by the National University.

## APPENDIX

# The Unique Role of Astronomy in Advancing the SDGs<sup>3,4</sup>

## Programme

- 15:00 – 15:05**      **Welcome and context**  
**Kevin Govender** | Director IAU Office of Astronomy for Development  
**Michelle Willebrands** | Coordinator IAU European Regional Office of Astronomy for Development
- 15:05 – 15:10**      **Astronomy for Development – The IAU Role**  
**Debra Elmegreen** | IAU President / Vassar College, USA
- 15:10 – 15:40**      **Introduction to Astronomy for Development<sup>5</sup>**  
**Grace Naledi Pandor** | Minister of International Relations and Cooperation of the Republic of South Africa and Honorary Professor of Astronomy for Development at Leiden University
- 15:40 – 15:50**      **Astronomy and the SDGs**  
**Chiara Moenter** | Windesheim College / Leiden University
- 15:50 – 16:05**      **Radio Astronomy Skills, Technology and Facilities in advancing the SDGs**  
**Anna Scaife** | University of Manchester / UK
- 16:05 – 16:25**      **The role of the European Southern Observatory in advancing the SDGs**  
**Xavier Barcons** | Director General European Southern Observatory
- 16:25 – 16:35**      **Astronomy and Climate Action**  
**Violette Impellizzeri** | Astronomers for Planet Earth / Yale University
- 16:35 – 16:45**      **The African Astronomical Society (AfAS): Contributing towards SDG's**  
**Charles Takalana** | African Astronomical Society / Cape Town
- 16:45 – 16:55**      **Astrotourism and Economic Development**  
**Sonal Asgotraa** | Project Manager / Astrostays
- 16:55 – 17:05**      **Summary of OAD projects**  
**Ramasamy Venugopal** | IAU Office of Astronomy for Development / Cape Town
- 17:05 – 17:15**      **Description of 4 selected projects**  
each for 2 min – pre-recorded
- 17:15 – 17:35**      **Closing remarks, with concluding resolution about funding and discussion**  
**George Miley** | Previous IAU Vice President