

# The Office for Outer Space Affairs

## Global Partnership in Space Exploration and Innovation: COPUOS Action Team and First Workshop



# Action Team on Space Exploration and Innovation

Thematic Priority 1 -  
Global partnership in space  
exploration and Innovation

UNISPACE  
+50



# Action Team on Space Exploration and Innovation

## ➤ **Co-Chairs**

**China, Jordan and the United States of America**

## ➤ **Members**

Austria, Canada, China, France, Germany, India, Italy, Japan, Jordan, Luxembourg, Pakistan, Poland, Qatar, Romania, the Russian Federation, Saudi Arabia, South Africa, Switzerland, Tunisia, the United Arab Emirates, the United Kingdom of Great Britain and Northern Ireland, and the United States of America

Committee on Space Research, the European Southern Observatory, the European Science Foundation, the European Space Agency, the Inter-Islamic Network on Space Sciences and Technology, the International Law Association, the National Space Society and the United Nations Environment Programme

## ➤ **Substantive support by UNOOSA**



# Action Team on Space Exploration and Innovation

- **Scientific exploration** (the Moon, near-Earth asteroids, Mars and beyond - the origin and co-evolution of life and understanding the future of humankind in the universe)
- **Innovation** (new business models, investments, commercial space ventures - job creation and social welfare)



# Action Team on Space Exploration and Innovation

- **Partnerships** (open and inclusive on a global scale, fostering dialogue with space industry and the private sector, governance)
- **Capacity-building** (economic driver, new opportunities for addressing global challenges, Sustainable Development Goals)
- **Openness** (openness and resilience of architecture, open access to data and simulations, citizen science)



**SPACE4SDGS**

# Action Team on Space Exploration and Innovation

- Produced the **first-ever United Nations report** emphasizing the importance of human space exploration beyond low Earth orbit (A/AC.105/1168)
- **Recommendations** for the the Committee on the Peaceful Uses of Outer Space

**Thematic priority 1. Global partnership in space  
exploration and innovation**

**Note by the Secretariat**

**I. Introduction**

1. At its fifty-ninth session, in 2016, the Committee on the Peaceful Uses of Outer Space endorsed the seven thematic priorities of the fiftieth anniversary of the United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50), as well as their objectives and mechanisms (A/71/20, para. 296).
2. The Action Team on Exploration and Innovation was established as the mechanism under thematic priority 1: Global partnership in space exploration and innovation. The Action Team's terms of reference were made available to the Committee at its sixtieth session, in 2017, in conference room paper A/AC.105/2017/CRP.21. The present document resulted from the work of the Action Team: the content was developed and discussed at meetings of the Action Team, as well as through electronic channels, with substantive and secretariat support provided by the Office for Outer Space Affairs of the Secretariat. (Conference room paper A/AC.105/C.1/2018/CRP.3 provides further procedural details on the Action Team's work.)
3. The present document is an updated version of document A/AC.105/C.1/114, which delegations had before them at the fifty-fifth session of the Scientific and Technical Subcommittee, and includes information on the second International Space Exploration Forum, held in Tokyo on 3 March 2018.

**II. Background**

**A. The human quest to explore**

4. Human desire to know what is beyond Earth dates back to antiquity. The myths and legends from the various regions of the world show that exploring the vast cosmos has been a common dream of humanity since ancient times.
5. Humanity's interest in the heavens has been universal and enduring. Humans are driven to explore the unknown, discover new worlds, push the boundaries of science and technology and then push even further. The desire to explore and



# Committee on the Peaceful Uses of Outer Space



# Committee on the Peaceful Uses of Outer Space



UNITED NATIONS  
Office for Outer Space Affairs

Research and  
development

Space object  
launches

Human space flight  
programmes

Robotic exploration

Space stations

Satellite-, lander-,  
rover- and  
helicopter-based  
experiments

In situ resource  
utilization technology

Innovative uses of  
additive  
manufacturing and  
artificial intelligence

Samples returned to  
Earth



## United Nations/Jordan Workshop: Global Partnership in Space Exploration and Innovation Amman, Jordan 25-28 March 2019



**Cross-sectoral - Capacity-building - Strategic**

## Thematic sessions

- Current space exploration and innovation programmes
- Current and potential future cooperation mechanisms
- Open and inclusive partnerships
- Planetary protection
- Space and astrophysics
- Terrestrial analogues to space environments



# United Nations/Jordan Workshop

## Field trip to Wadi Rum - Terrestrial analogue to Mars



## Recommendations

- SHARE information on space programmes to build **transparency and confidence** and **build capacity** of new and emerging space actors.
- COOPERATE - Continue **North-South, South-South and triangular cooperation** in fields related to space exploration and innovation
- ENGAGE **young people** in science, technology, engineering and mathematics (STEM) within the context of space exploration and innovation.
- SUPPORT **female role models** in space science with which people from diverse backgrounds identify



SPACE FOR  YOUTH

- A.1 Adopt, revise and amend, as necessary, national regulatory frameworks for outer space activities
- A.2 Consider a number of elements when developing, revising or amending, as necessary, national regulatory frameworks for outer space activities

## POLICY AND REGULATORY FRAMEWORK FOR SPACE ACTIVITIES

Guidelines for the Long-term Sustainability of Outer Space Activities: Section A

- A.3 Supervise national space activities
- A.4 Ensure the equitable, rational and efficient use of the radio frequency spectrum and the various orbital regions used by satellites
- A.5 Enhance the practice of registering space objects

- B.1 Provide updated contact information and share information on space objects and orbital events
- B.2 Improve accuracy of orbital data on space objects and enhance the practice and utility of sharing orbital information on space objects
  - B.2.1 Promote the collection, sharing and dissemination of space debris monitoring information
- B.3 Promote the collection, sharing and dissemination of space debris monitoring information
- B.4 Perform conjunction assessments during all orbital phases of controlled flight
- B.5 Develop practical approaches for pre-launch conjunction assessments
- B.6 Share operational space weather data and forecasts

## SAFETY OF SPACE OPERATIONS

Guidelines for the Long-term Sustainability of Outer Space Activities: Section B

- B.7 Develop space weather models and tools, and collect established practices on the mitigation of space weather effects
- B.8 Design and operation of space objects regardless of their physical and operational characteristics
- B.9 Take measures to address risks associated with the uncontrolled re-entry of space objects
- B.10 Observe measures of precaution when using sources of laser beams passing through outer space

- C.1 Promote and facilitate international cooperation in support of the long-term sustainability of outer space activities
- C.2 Share experience related to the long-term sustainability of outer space activities and develop new procedures, as appropriate, for information exchange

## INTERNATIONAL COOPERATION, CAPACITY-BUILDING AND AWARENESS

Guidelines for the Long-term Sustainability of Outer Space Activities: Section C

- C.3 Promote and support capacity-building
- C.4 Raise awareness of space activities

- D.1 Promote and support research into and the development of ways to support sustainable exploration and use of outer space

## SCIENTIFIC AND TECHNICAL RESEARCH AND DEVELOPMENT

Guidelines for the Long-term Sustainability of Outer Space Activities: Section D

- D.2 Investigate and consider new measures to manage the space debris population in the long term

Thank you for your attention.