



United Nations Platform for Space-based Information for Disaster Management and Emergency Response

UN-SPIDER empowers developing countries to utilise Earth Observation assets, building institutional resilience through training and mentorship in all phases of the disaster management cycle. Participating countries learn how to invoke International Emergency Response Mechanisms (e.g., International Charter Space & Major Disasters; Copernicus EMS; Sentinel Asia), bringing assets and resources to their aid. UN-SPIDER also global space receives voluntary expert support from a network of Regional Support Offices and maintains a **Knowledge Portal** with best practices, projects, and resources.

Since 2006, UN-SPIDER has delivered 50 tailored advisory Missions:





Technical Advisory Missions (TAM)

Institutional Strengthening **Missions (ISM)**

Expert Missions (EM)



unspider@un.org

Impact Case Study

UNOOSA partnered with the Dominican Republic for almost ten years, empowering experts and decision-makers to space information for disaster management. The use Dominican Republic can now obtain up-to-date satellite imagery, providing emergency responders with critical, realtime data. With UN-SPIDER's support, the Dominican Republic launched a national integrated information system, which is a decision-making tool for disaster risk reduction and emergency response that uses space data to analyze, visualize, and disseminate information.

UN-SPIDER Donors







Awareness-Raising & Capacity-Building - Implementation of the Guidelines for the Long-term Sustainability of Outer Space Activities

Currently, millions of pieces of orbital debris, or 'space junk', threaten Earth's orbital space environment. In 2019, COPUOS adopted the **LTS Guidelines**, which guide the safe and sustainable use of space by addressing: A) Policy and regulatory frameworks; B) Safety of space operations; C) International cooperation, capacity-building and awareness; and D) Scientific and technical research and development.



2 x Expert <u>Event</u> <u>Series</u>







Capacity-building Resources

A UNOOSA project compliments the ongoing work on LTS taking place in the COPUOS content, creating a growing series of tools and resources to support LTS Guideline implementation.

In 2023, for example, it launched a free **E-learning Course on the LTS Guidelines.** The course consists of 26 brief lessons and is open to anyone. It addresses the various interrelated aspects of LTS while also linking learners to further reputable sources.

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Space Law for New Space Actors: Fostering Treaty Implementation Through National Legislation

Launched in 2019, **Space Law for New Space Actors** gives emerging space-faring nations the legal tools to underpin their future national space activities, driving trust and confidence for potential investors. UNOOSA brings together government stakeholders, regulators, and international experts to:



Improve understanding of international space law

AW



Build capacity to develop/revise national space law & policy



Implement existing normative frameworks

Tailored and targeted services

- Delivered in four stages over 12-month period
- Technical Advisory Mission: high-level event and simulation exercise of the application of international law to the national context

Open-access digital tools

- 4 interactive eLearning modules on space law & policy in English, French and Spanish
- Accessing Space Treaty Resources Online (ASTRO) database of international and national instruments on space activities

Contact us to become a Donor and contribute to capacity building in Space Law and Policy



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Contact us <u>unoosa-spacelaw@un.org</u>





Space4Youth: Inspiring and Connecting the Next Generation

The first person to walk on Mars is alive today. Winners of the annual **Space4Youth Essay Competition** attend NASA Space Camp, meet senior White House space officials, and share their perspectives with international leaders. This exciting opportunity, in collaboration with the Space Generation Advisory Council, pairs aspiring space professionals and students with mentors and showcases their ideas on leveraging space for the Sustainable Development Goals (SDGs) and tackling climate change.



competitions



15 winners



1,000+ participants

Share your ideas!



countries



The 2023 winning essays include:



Cannelli Selene, Italy: " <u>A Picasso in the sea. So</u> <u>beautiful, so deadly</u>."



Das Sia, India: "<u>Women, Water and Space: Role of</u> <u>Indigenous Women in using Geospatial Tech for</u> <u>Conserving Water</u>"



Kitambo Benjamin, Democratic Republic of the Congo: "<u>Application of radar altimetry in surface</u> water bodies monitoring of the second largest worldwide river basin"

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See the full list of previous winners <u>here</u>.

Space4Youth Partner







Contact us <u>space4youth@un.org</u>





Space4Women: Promoting Gender Equality in Space & on Earth

Only 1 in 5 space industry workers are women, and only 11% of astronauts. The **Space4Women** project promotes access to space as well as Science, Technology, Engineering and Mathematics (STEM) education and careers for women and girls around the world.



Portal





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The **Space4Women Portal** is a platform for women to share diverse experiences about working in the space sector. As a Space4Women Network member, participants are part of a global professional and educational network focused on advocacy, awareness-raising, and action in supporting gender equity. Sign up at space4women.unoosa.org!



Contact us space4women@un.org







Space4Climate Action

UNOOSA serves as a conduit for facilitating international coordination, cooperation and providing a multiplying-effect for existing efforts. It aims at awareness raising as well as to strengthen and deliver targeted **capacity-building**, facilitate **multi-stakeholder collaboration** and to promote the use of Space4Climate Action.

UNOOSA fulfils a niche role in facilitating international cooperation and the wider use of space-based technologies to implement climate change mitigation, adaptation, and resilience initiatives

The Office welcomes **new partners** in this area and a **deepening of existing cooperations**.



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PAC E4





Space Economy Initiative

The global space economy is worth more than USD 400 billion and is projected to grow to USD **1 trillion by 2040**. UNOOSA's Space Economy Initiative leverages in-house expertise and peer-to-peer exchanges with established space-faring nations to share insights, case studies, and good practices on how to grow dynamic and sustainable space economies and support prosperous socioeconomic development.



Conferences







70+ countries

Reports

Capacity-building

Our Offer:

- Tailored training courses and workshops focused on the priorities of the requesting country.
- Virtual or in-situ space economy outreach events to raise awareness on the contribution of space to general socio-economic growth.
- Peer-to-Peer engagement with space economy experts.

Space Economy 2020 Outcome Report

<u>Space Economy 2021 Outcome</u> <u>Report: Africa in Focus</u>

Partners





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SPACE ECONOMY Initiative

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Access to Space for All: Bridging The Gap In Space Capabilities

Access to Space for All creates a workforce for space-related activities by facilitating space-based solutions, end-to-end space capabilities, orbital experiments, and small satellite launches, as well as preparing future generations for space exploration. Unique partnerships with space agencies, research institutions, academia, and industry support hands-on and educational opportunities, as well as access to diverse tools in three scientific and technological tracks:



Access to Space for All in Numbers

- ${f 9}$ Hands-on and ${f 2}$ Educational opportunities
- **32** Awardees involving 44 entities from 32 countries
- 5 CubeSats launched
- 7 Microgravity experiments performed
- 20 Projects in development
- **68** Scholarships granted
- 100+ Hours of educational videos on YouTube
- *as of July 2023

Partnership Opportunities

UNOOSA is always welcome to new **partners** that can provide unique opportunities to individuals and teams from emerging space-faring nations.





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Access to Space for All: Hands-On Opportunity "Drop Tower Experiment Series" (DropTES)

DropTES replicates the physical conditions/properties of space here on Earth via the Bremen Drop Towers. UNOOSA, in partnership with the Center of Applied Space Technology and Microgravity (ZARM) and the German Aerospace Center (DLR) provides the opportunity for teams to conduct their own microgravity experiments.

> **Microgravity** experiment



In partnership with



Currently OPEN for applications for 9th Round! Deadline: 26 November 2023



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Access to Space for All: Hands-On Opportunity "Drop Tower Experiment Series" (DropTES)

Benefits of Hypergravity/Microgravity

- Achievable entry point to acquire knowledge and skills by conducting various experiments in many different scientific fields.
- Beneficial first step to start capacity-building for space activities.



The Drop Tower in Bremen can host a range of experiments on fluid physics, combustion, thermodynamics, material science, and biotechnology.

DropTES Awardee Case Study

Universidad Católica Boliviana "San Pablo" awardee of 2nd & 7th rounds:

- In 2015, the team examined and evaluated the property of Nitinol, which is a metal alloy often used in medical devices.
- In 2022, the team tested 3D printing techniques using liquid resin, which could lead to new applications in various fields.



The technical expertise and skills acquired through the experiments helped develop ventilators during the COVID19 pandemic.









Access to Space for All: Hands-On Opportunity Hypergravity Experiment Series (HyperGES)

Hypergravity is rapidly becoming an exciting new medium for basic research and commercial spinoff technology. In collaboration with the **European Space Agency (ESA)**, this opportunity provides researchers access to the Large Diameter Centrifuge Facility at the European Space Research and Technology Centre (ESTEC) in the Netherlands, to conduct their own **hypergravity experiments**. Experiments in modified gravity levels can unveil novel physical, chemical, and biological properties.



In partnership with



Currently OPEN for applications for 3rd Round! <u>Deadline: 12 November 2023</u>



Awardees

2020 Mahidol University of Thailand **Effect of hypergravity on watermeal**, the smallest and fastest-growing flowering plant on Earth, as a source for food and oxygen for space exploration missions



2023 Macau University of Science & Technology **Medical and biotechnological potential of fungi** for future space exploration.

2023 Universidad Católica Boliviana "San Pablo" **Effects of hypergravity on the break-up of human red blood cells** to get a better understanding of anaemia in space.







Access to Space for All: Hands-On Opportunity ISS Bartolomeo Platform

Emerging space actors need access to **external space experiment platforms**. UNOOSA, in collaboration with **Airbus**, provides a unique opportunity for teams to **place a 3U CubeSat class payload on the Airbus Bartolomeo external platform of the International Space Station (ISS).** In collaboration with the winners, Airbus will integrate, launch, and install the CubeSat.

Test your payload outside of the ISS



©Airbus

In partnership with





1st round selection results



UNOOSA selected a consortium team from **Egypt**, **Kenya**, **and Uganda** as the 2021 Bartolomeo awardees. The team will develop an **imaging system to monitor climate change**.

The team gathered in Egypt and is working on the **ClimCam payload**, which aims to be delivered to the ISS in 2024.











Access to Space for All: Hands-On Opportunity China Space Station

Access to Lower Earth Orbit and opportunities for scientific collaboration is key to realizing the Sustainable Development Goals. UNOOSA partnered with the **China Manned Space Agency** (CMSA) to provide scientists from around the world with opportunities to **conduct their experiments onboard the China Space Station (CSS)**.

Test your payload both inside/outside of the CSS



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1st round Awardees

First round awardees: 7 international teams from 13 countries:

China, Germany, India, Italy, Japan, Kenya, Mexico, Peru, Poland, Russia, Saudi Arabia, Spain, Switzerland



Selected **7** teams for the 1st round:



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17 institutions from13 Member States

"Under #AccSpace4All, the China Manned Space Agency cooperates closely with UNOOSA to bring access to space for more countries in need, especially developing countries, via China Space Station." Chun Hao, Director General of CMSA









Access To Space For All: Education Opportunity Kibo Robot Programming Challenge (Kibo-RPC)

Software programming and robotic-relates skills are crucial for developing space activities. Japan Aerospace Exploration Agency (JAXA) organizes the Kibo Robot Programming Challenge (Kibo-RPC) that gives an opportunity to students to acquire these skills through running programs on free-flying robots onboard the International Space Station (ISS) Japanese Experiment Module "Kibo". UNOOSA joined Kibo-RPC from 2023 to expand the reach and allow more countries from all over the globe to join.

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For more information on Kibo-RPC, please see the JAXA webpage



1st Awardee under UNOOSA Slot





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Team ORION from Yogyakarta State University (Indonesia) has been selected as the awardee for the UNOOSA slot. They will proceed to the final round in October 2023.









Access to Space for All: Hands-On Opportunity Payload Hosting Initiative (PHI)

PHI allows emerging space entities to take a step toward spaceflight autonomy by flying a payload in space without having to build a satellite themselves. UNOOSA, in partnership with the **Mohammed Bin Rashid Space Centre (MBRSC)**, **hosts slots on MBRSC's PHI satellite platform**. PHI also provides access to launch and ground stations services.

A maximum volume of **5**U



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NEW round of applications will open in fall 2023. Stay tuned!



1st round Awardees





Two payloads from the National Space Science Agency of the Kingdom of Bahrain and the Antarikchya Pratisthan Nepal have been selected to be on board the PHI-1 mission.

Their payloads will test an optimized Advanced Encryption Standard and study the operation of a middleware for drones in space, respectively.

The payloads will be onboard the PHI-1 mission, which aims to be launched in 2024.









Access to Space for All: Hands-On Opportunity CubeSat Deployment From "KiboCUBE"

A 10 x 10 x 10cm 1U CubeSat is the first step to access the benefits of space. Through this partnership with the Japan Aerospace Exploration Agency (JAXA), KiboCUBE enables research institutions, universities, and other public organizations to develop and deploy a 1U CubeSat from the Japanese Experiment Module "Kibo" of the International Space Station.

Deploy your **IU** CubeSat from the ISS



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Currently OPEN for applications for 8th Round! <u>Deadline: 31 December 2023</u>

1	5 CubeSats deployed into space			
		2018	1KUNS-PF	University of Nairobi, Kenya
	(3)	2020	Quetzal-1	Universidad del Valle de Guatemala
		2021	MIR-SAT-1	Mauritius Research and Innovation Council
	<u> </u>	2022	TUMnanoSAT	Technical University of Moldova
A Constant		2023	SS-1	Surya University, Indonesia
U m		3	CubeSats in	development
SPA	P	lanned for d 2024	eployment in: MORAZAN-SAT	Central American Integration System
8	٩	2024	Gxiba-1	Universidad Popular Autónoma del Estado de Puebla
×	(2024	TUNSAT-1	École Supérieure Privée d'Ingénierie et de Technologie Appliquée
Contact	us			

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Access To Space For All: Hands-On Opportunity KiboCUBE - Space as a Catalyst for National Development



1KUNS-PF

- First satellite of Kenya
- More than 300 images downloaded.
- Major catalyst for the growth and interest in space science in Kenya.
- Contributed to the creation of Kenya Space Agency.



- First satellite of Guatemala
- 211 days in operation; 84,976 data packages.
- Involved more than 100 students; developed 70% of the CubeSat in-house.
- Outreach activities included media, student workshops, books, and documentaries.







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KiboCUBE Academy

KiboCUBE Academy empowers potential applicants of KiboCUBE and anyone who wants to learn about the whole life-cycle of CubeSats to the fundamentals of **developing, operate, and utilising small satellites.** Materials of the live-sessions and on-demand pre-recorded lectures available on UNOOSA website and YouTube.







Contact us unoosa-access-to-space@un.org





Access To Space For All: Educational Opportunity Post-Graduate Study In Nano-Satellite Technologies

Develop strong engineering foundations. Learn the theory to design small satellites. Become a satellite builder. Create a network of contacts in the space sector. This fellowship offers three masters and three doctoral slots in the Space Engineering International Course (SEIC) at the Kyushu Institute of Technology (Kyutech), a Japanese university that holds the title of most CubeSats designed and launched by an academic institution.

Learn full-lifecycle of a nano-satellite





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Master's Program I (2 years duration) **3 per year**

Doctoral's Program (3 years duration)

3 per year



NEW round of applications will open in fall/winter 2023. Stay tuned!



PNST awardee's story

Abhas Maskey, PNST alumni managed the team that developed the first satellite of Nepal "NepaliSat-1", and the first satellite of Sri Lanka "Raavana-1".



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After graduation, he created a non-profit organisation which is active in satellite projects with university students, satellite constellation projects in Thailand with high school students, and CanSat training programmes.

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Access to Space for All: Hands-On Opportunity Accessing Space with the Vega C Rocket

Launching a satellite is the first step in becoming an autonomous satellite developer. UNOOSA partners with **Avio** to provide an opportunity to launch a 3U-sized CubeSat free of charge, using the **Vega C** launch vehicle.

A maximum volume of



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In partnership with



1st round Awardee



The **"NaSPUoN-OGPM2030"** team from Kenya is the first-round awardee of Vega C. They will develop a 3U class CubeSat at the University of Nairobi and will be supported by the University of Arizona and Space Trust.

The selected team will launch a CubeSat at no cost on board the Vega C rocket.



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Access to Space for All: Hands-On Opportunity ISONscope

Astronomy and basic space science are the first steps in space exploration. UNOOSA, in collaboration with the **Keldysh Institute of Applied Mathematics of the Russian Academy of Sciences**, **provides small telescopes** and technical support for the establishment of telescope-related facilities for academic and research institutions in developing countries.

Small wide FOV telescope with accessories/training

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In partnership with



1st round Awardees





The Kenyan Space Observation and Research Telescope Project led by the Kenya Space Agency and Delta Scuti Photometric Study Project led by the Nigeria Centre for Basic Space Science, are the awardees of the first-round of ISONscope.

The awardee teams will join the International Scientific Optical Network (ISON) joint scientific observations project.

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Space4Water: Promoting Expertise and Protecting the Planet

Almost two-thirds of the world's population - **4 billion people** experience severe water scarcity for at least one month every year. The **Space4Water Project** fosters **collaboration** and **knowledge exchange** to address the water challenge. Participants tap into the full potential of space-based technology and data for any water-related topic.



In collaboration with







Access >700 Knowledge Resources Calls, Software, Articles Publications **Events Opportunities** Models Dataset Training Glossary **Projects Case studies** Material Search **Using Space Tech 4 Water?** Join us! Apply here

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Contact us office@space4water.org





Removing Barriers for Disability Inclusion In Space

An estimated 15% of the world's population experience some form of disability. This project promotes inclusive and equitable development in the space sector through fostering international cooperation, public outreach and education in two focus areas:

(1) Innovative space tools and technologies enabling accessibility



Sonification



Accessible human spaceflight



"Space+ : Pathways for all abilities" interview series

Targeted internships

(2) Employment and

empowerment





Space spinoffs



Stakeholders' roadmap

Unique internship for persons with disabilities

Tackling the low employment rate of persons with disabilities (PwD) in STEM, this internship supports their professional development with a customized workplan and accessible work environment. Six interns five countries have benefitted since the from initiative's inception.

Partnership for the way forward

We welcome all stakeholders in the space sector and the DEI (Diversity, Equity and Inclusion) community to partner with us in designing the roadmap for full participation of PwD in the space sector.

Contact us oosa@un.org









Promoting the use of space technology and applications in the work of the United Nations

UN-Space is a formal inter-agency mechanism aimed at enhancing coordination of space-related activities within the UN system, promoting synergies and preventing duplication of efforts related to the use of space technology and applications in the work of United Nations entities.

UN-Space generates biennial reports of the Secretary-General on the coordination of space-related activities within the UN system.



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UN-SPACE





Promoting inter-agency coordination and synergies

UN-Space organizes open informal session with participation of Member States and other stakeholders to promote dialogue and demonstrate examples of how the United Nations system responds to the selected themes.

Disaster Management	Agriculture and food security	Sustainable Development		
Access to Space4all	Resiliency	Africa	• Beesion of the later Agency meeting on Duter Space Activities and Doen Informal session on Space	
Education and training	Emergency Communications	Climate Change	technology on Energency communications Constituenties of space-stated activities within the United Rations system Geneva - Switzerland - 10-12 March 2010	

UN-Space produces publications to raise awareness of activities within UN system involving the use of space technology

SPACE-RELATED ACTIVITIES WITHIN THE UNITED NATIONS SYSTEM

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Committee on the Peaceful Use of Outer Space

The **Committee on the Peaceful Use of Outer Space (COPUOS)** was established by the United Nations General Assembly in 1959 (RES 1472 (XIV) to address matters related to the international cooperation in the peaceful use of outer space for the benefit of all humankind. The Committee meets annually at the UN Headquarters in Vienna, Austria, and reports to the **United Nations General Assembly**. COPOUS has been the negotiation platform to the five United Nations Space treaties and the five principles of outer space. The **United Nations Office for Outer Space Affairs** acts as Secretariat of the Committee.

Bureau	Holding States Group				
Dureau	2022-23	2024-25	2026-27		
COPUOS Chair	Omran Sharaf (UAE)	Sherif Mohamed Sedky (Egypt) Rafiq Akram (Morocco)	WEOG		
1st Vice- Chair	Jenny Tapio (Finland) Carolina Rêgo Costa (Portugal)	GRULAC	EEG		
2nd VC / Rapporteur	Oleg Ventskovsky (Ukraine)	Asian-Pacific States	African States		
STSC Chair	Juan Francisco Facetti (Paraguay)	Eastern European States	Asian-Pacific States		
LSC Chair	Nomfuneko Majaja (South Africa)	Santiago Ripol Carulla (Spain)	GRULAC		





102 member States



Structure and Composition

51 permanent observers

COPUOS has two Subcommittees, the Scientific and Technical Subcommittee and the Legal Subcommittee. Within the Subcommittees, there are six Working Groups on more complex matters.









COPUOS Scientific and Technical Subcommittee

The Scientific and Technical **Subcommittee** (STSC) of COPUOS meets annually to discuss questions related to the scientific and technical aspects of space activities. Topics space weather, near-Earth objects, the include, use of technology for socioeconomic development, for space or disaster management support, global navigation satellite systems, and the long-term sustainability of outer space activities.

Chair of the Subcommittee:



2022-23: Juan Francisco Facetti (Paraguay) **2024-25:** Group of Eastern European States **2026-27:** Group of Asian Pacific States

Secretary: Aygul Duysenhanova

Currently, the STSC has three Working Groups:

Working Group of the Whole		WorkingGroupontheLong-TermSustainabilityofOuterSpaceActivities
Chair :	Chair :	Chair :
Prakash Chauhan	Leopold Summerer	Umamaheswaran R.
(India)	(Austria)	(India)
Secretary :	Secretary :	Secretary :
Aygul Duysenhanova	Romana Kofler	Tanya Keusen

Further mechanisms, established by COPUOS, that report to STSC:

- International Asteroid Warning Network (IAWN)
- Space Mission Planning Advisory Group (SMPAG)
- Space and Global Health Network



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COPUOS Legal Subcommittee

The **Legal Subcommittee (LSC)** of COPUOS meets every year for two weeks to discuss legal questions related to the exploration and use of outer space. Topics include the status and application of the five United Nations treaties on outer space, the definition and delimitation of outer space, national space legislation, legal mechanisms relating to space debris mitigation, and international mechanisms for cooperation in the peaceful exploration and use of outer space.

Chair of the Subcommittee:

2022-23: Nomfuneko Majaja (South Africa) 2024-25: Santiago Ripol Carulla (Spain) 2026-27: Group of Latin American and Caribbean States

Secretary: Aygul Duysenhanova

Currently, the LSC has three Working Groups:

Working Group on the status and application of the five UN treaties on outer space	Working Group on the definition and delimitation of outer space	Working Group on legal aspects of space resource activities
Chair: Franziska Knur (Germany)	Chair: Ian Grosner (Brazil)	Chair: Andrzej Misztal (Poland) Vice-Chair: Steven Freeland (Australia)
Secretary: Yukiko Okumura	Secretary: Tanya Keusen	Secretary: Michael Newman









United Nations instruments on international space law

"International space law" is commonly understood as the rules, principles and standards on international law enshrined in the **international treaties** and the **principles** governing outer space. There are **resolutions** and **guidelines** complementing these rules.

Treaties	Muter Space Treaty	
Convention	Registration Convention	Moon Agreement
Principles	Declaration of Legal Principles	Broadcasting Principles
Remote Sensing Principles	Principles on Nuclear Power Sources	Benefits Declaration
Resolutions	RES 1721 (XVI) (1961) A/RES/55/122 (2000) A/RES/59/115 (2004)	A/RES/62/101 (2007) A/RES/68/74 (2013) A/RES/72/78 (2017)
Guidelines	Space Debris Mitigation Guidelines	Guidelines for the Long-term Sus- tainability of Outer Space Activities

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related tools, mechanisms, projects & platforms that Member States can benefit from and use as guide to build global partnerships (SDG 17) and ensure that the benefits of space are brought to everyone, everywhere.

Contact secretariat: <u>romana.kofler@un.org</u>

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Strengthening International Collaboration in Case of a Potential Asteroid Impact Hazard : Near-Earth Objects

Building resilient societies is one of the key challenges of the 21st century. Given the global significance of a potential impact by an asteroid, COPUOS in 2013 recommended the establishment of the International Asteroid Warning Network (IAWN) and the Space Mission Planning Advisory Group (SMPAG), which Member States adopted in the General Assembly Resolution 68/75.

Objective

 \triangleright

To coordinate and focus the efforts of institutions of countries in the effort **to guard against this cosmic hazard** and **strengthen international collaboration and response to a potential near-Earth objects (NEO) impact hazard**



What are IAWN & SMPAG?

International Asteroid Warning Network (IAWN)

- Virtual network of observatories, scientific institutions, space agencies and other entities.
- Serves as the source of accurate and up-to-date information on NEOs and NEO impact risks
- Search-and-characterization of NEOs
- Communication via UNOOSA, to Member States in case of a credible impact hazard

Web iawn.net smpag.net

Space Mission Planning Advisory Group (SMPAG)

- Comprises space agencies to lay out the advice on the framework, timeline and options for initiating and executing space mission response activities in case of a credible impact threat
- Promotes opportunities for international collaboration on research and techniques for NEO deflection



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Strengthening International Collaboration in Case of a Potential Asteroid Impact Hazard : Near-Earth Objects



International Asteroid Day, 30 June

Proclaimed in 2016 by the General Assembly **in resolution 71/90** as the **International Asteroid Day, 30 June,** to observe each year at the international level the anniversary of the **Tunguska impact** over Siberia, Russian Federation, on 30 June 1908 and to **raise public awareness about the asteroid impact hazard.**



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Space and Global Health

The UN General Assembly, in its Resolution 77/120 of 2022 entitled "Space and global health", requested UNOOSA to strengthen capacity-building and networking and to support projects for strengthening collaboration between space and health sectors as an efficient strategy for making better use of space science and technology for access to global health. UNOOSA works to increase contributions of space to enhance life sciences and digital health technologies, such as telehealth, telemedicine and teleepidemiology, for the prevention and control of diseases and global health issues, the promotion of human health, environmental health, animal health and food sourcing and supply, and the advancement of medical research and health practices.







International Committee on Global Navigation Satellite Systems

SPACE4SDGS 🕔

Executive Secretariat for the International Committee on Global Navigation Satellite Systems (ICG)

From border security, aviation, maritime, rail, road and mass transit, Global Navigation Satellite Systems are critical space-based tools. UNOOSA serves as ICG Executive Secretariat, facilitating compatibility, interoperability, and transparency among all satellite navigation systems. The ICG promotes and protects open service applications, benefitting the global community with seamless, global coverage.











PUBLICATION: Future GNSS Applications

GNSS users increasingly rely on these signals for autonomous navigation in space. The ICG's latest publication, "The Interoperable GNSS Space Service Volume" (ST/SPACE/75/Rev.1), provides a new perspective this of on new era space navigation.



13 ICG Members

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21 International Organizations

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ANNUAL REPORT 2022

