



UNITED NATIONS
Office for Outer Space Affairs

United Nations and Outer Space

Programme on Space Applications

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25 January 2016

Presentation Overview

- I. United Nations and Outer Space
- II. Programme on Space Applications
- III. Basic Space Technology Initiative
- IV. Outlook & Conclusions
- V. Careers with the United Nations

Note: United Nations documents quoted in this paper are available from the website of the Office for Outer Space Affairs at www.unoosa.org and from the Official Document System of the United Nations at documents.un.org.

Disclaimer: The views expressed in this paper are those of the authors and do not necessarily reflect the position of the United Nations and its Office for Outer Space Affairs.



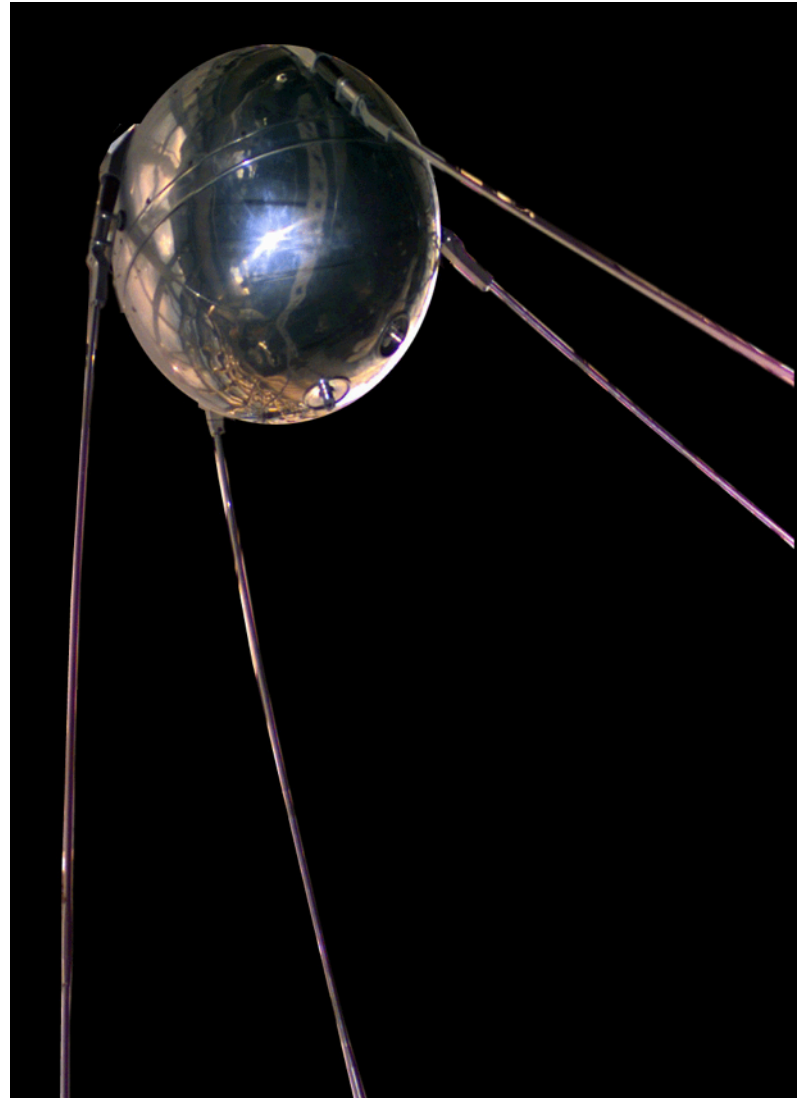
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I. United Nations and Outer Space

Beginning of the Space Age

- The Space Age began with the launch of Sputnik I satellite on 4 October 1957
- It raised several questions
 - How to prevent the extension of the cold war arms race into outer space?
 - Who should define rules and regulations for activities in outer space?
 - How to ensure that space activities benefit all humankind?
- Agreement that these questions should be addressed by the United Nations



Committee on the Peaceful Uses of Outer Space

- **1958 UN General Assembly resolution 1348(XIII)**
 - Outer space to be used for peaceful purposes only and to be exploited to the benefit of mankind
 - Established an ad-hoc Committee on the Peaceful Uses of Outer Space (COPUOS) as an appropriate body for international cooperation
- **1959: UN General Assembly resolution 1472 (XIV)** reaffirmed the role of COPUOS and mandated the Committee to:
 - Review international co-operation
 - Study space-related activities that could be undertaken under United Nations auspices
 - Encourage and assist with national space research programmes
 - Study legal problems which may arise from the exploration of outer space



Committee on the Peaceful Uses of Outer Space

- Establishment of two Subcommittees in 1961:
 - Scientific and Technical Subcommittee (STSC)
 - Legal Subcommittee (LSC)
- 77 Member States and >30 organizations with permanent observer status (one of the largest UN Committees)
- Works on consensus principle
- Reports to the Fourth Committee of the General Assembly and adopts an annual resolution on “International cooperation in the peaceful uses of outer space”



25 January 2016



Office for Outer Space Affairs



77 COPUOS Member States

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> • Albania • Algeria • Argentina • Armenia • Australia • Austria • Azerbaijan • Belarus • Belgium • Benin • Bolivia • Brazil • Bulgaria • Burkina Faso • Cameroon • Canada • Chad • Chile • China • Colombia • Costa Rica • Cuba • Czech Republic • Ecuador • Egypt • France | <ul style="list-style-type: none"> • France • Germany • Ghana • Greece • India • Indonesia • Iran • Iraq • Italy • Japan • Jordan • Kazakhstan • Kenya • Lebanon • Libyan Arab Jamahiriya • Luxembourg • Malaysia • Mexico • Mongolia • Morocco • Netherlands • Nicaragua • Niger • Nigeria • Pakistan • Peru | <ul style="list-style-type: none"> • Philippines • Poland • Portugal • Republic of Korea • Romania • the Russian Federation • Saudi Arabia • Senegal • Sierra Leone • Slovakia • South Africa • Spain • Sudan • Sweden • Switzerland • Syrian Arab Republic • Thailand • Tunisia • Turkey • United Kingdom of Great Britain and Northern Ireland • United States of America • Ukraine • Uruguay • Venezuela • Viet Nam |
|--|---|---|

34 COPUOS Observer Organisations

Intergovernmental Organizations

- Asia Pacific Space Cooperation Organization (APSCO)
- Association of Remote Sensing Centers in the Arab World (ARSCAW)
- Centre for Remote Sensing of the North African States (CRTEAN)
- European Organization for Astronomical Research in the Southern Hemisphere (ESO)
- European Space Agency (ESA)
- European Telecommunications Satellite Organization (EUTELSAT)
- International Mobile Satellite Organization (IMSO) previously INMARSAT
- International System and Organization of Space Communications (INTERSPUTNIK)
- International Telecommunications Satellite Organization (ITSO) previously INTELSAT

Non-governmental Organizations

- African Association of Remote Sensing of the Environment
- African Organization of Cartography and Remote Sensing (AOCRS)
- Association of Space Explorers (ASE)
- Committee on Earth Observation Satellites (CEOS)
- Committee on Space Research (COSPAR)
- European Association for the International Space Year (EURISY)
- European Space Policy Institute (ESPI)
- Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation
- Inter-Islamic Network on Space Sciences and Technology
- International Academy of Astronautics (IAA)
- International Association for the Advancement of Space Safety (IAASS)

- International Astronautical Federation (IAF)
- International Astronomical Union (IAU)
- International Institute for Applied Systems Analysis (IIASA)
- International Institute of Space Law (IISL)
- International Law Association (ILA)
- International Society for Photogrammetry and Remote Sensing (ISPRS)
- International Space University (ISU)
- National Space Society (NSS)
- Prince Sultan Bin Abdulaziz International Prize for Water (SIPW)
- Scientific Committee on Solar-Terrestrial Physics (SCOSTEP)
- Secure World Foundation (SWF)
- Space Generation Advisory Council (SGAC)
- The Planetary Society (TPS)
- World Space Week International Association (WSWA)

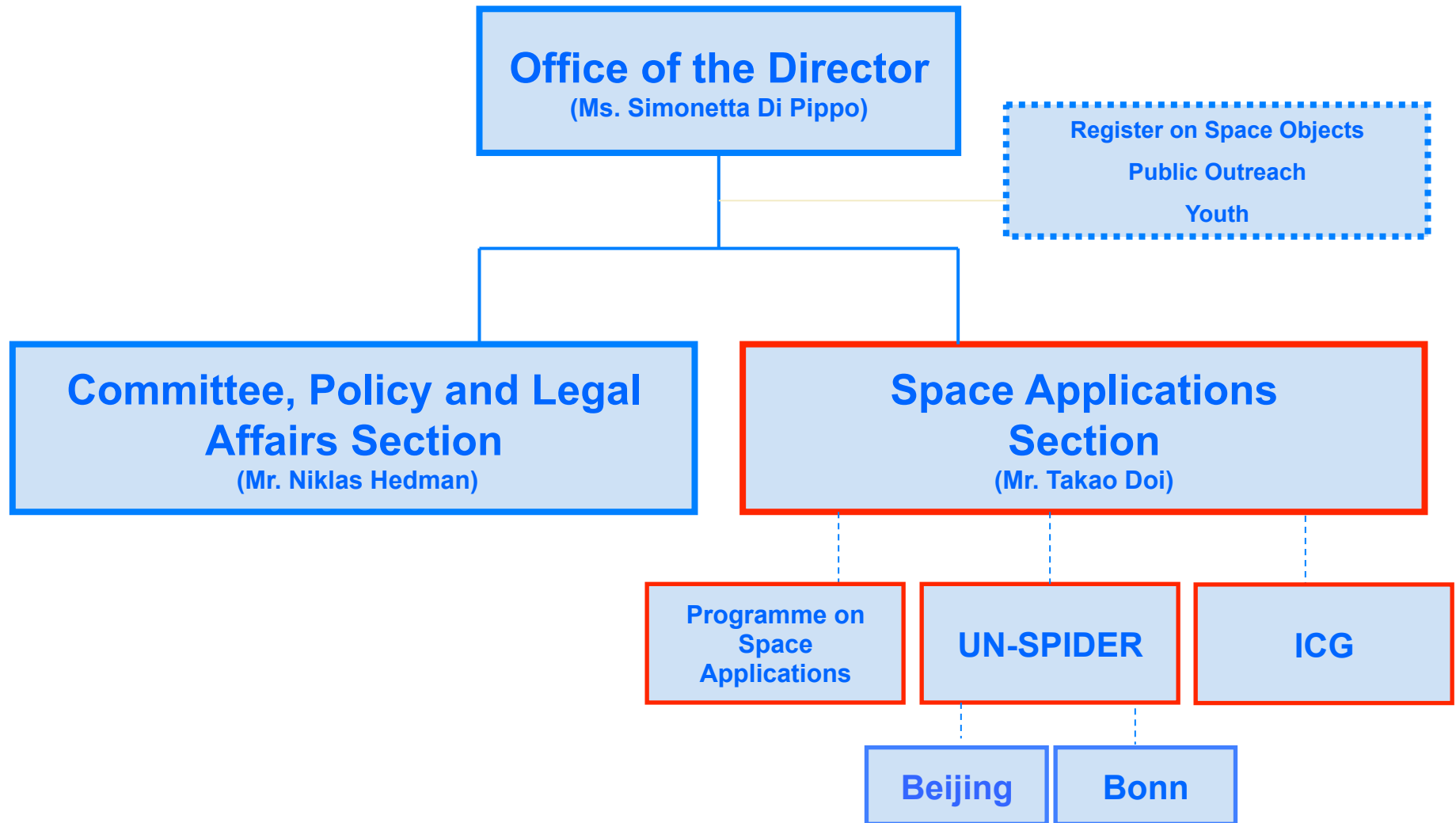
Status as of 25 November 2014

Office for Outer Space Affairs

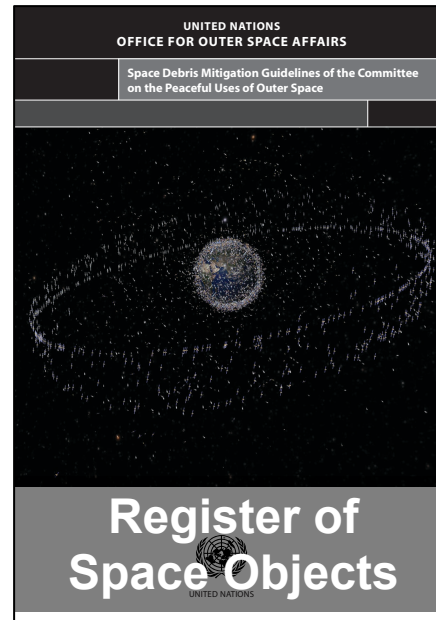
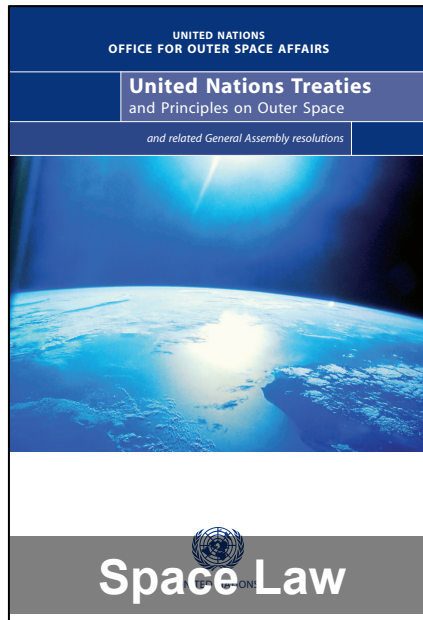


- Originated as a small expert unit in the UN Secretariat to service the Ad Hoc COPUOS meeting
- Eventually transformed into the United Nations Office for Outer Space Affairs (UNOOSA)
- Relocated from New York to the UN Office at Vienna (UNOV) in 1993
- 25 staff members (scientists, lawyers, political scientists), plus several seconded staff and interns
- Offices in Bonn, Germany and Beijing, China (UN-SPIDER Programme)

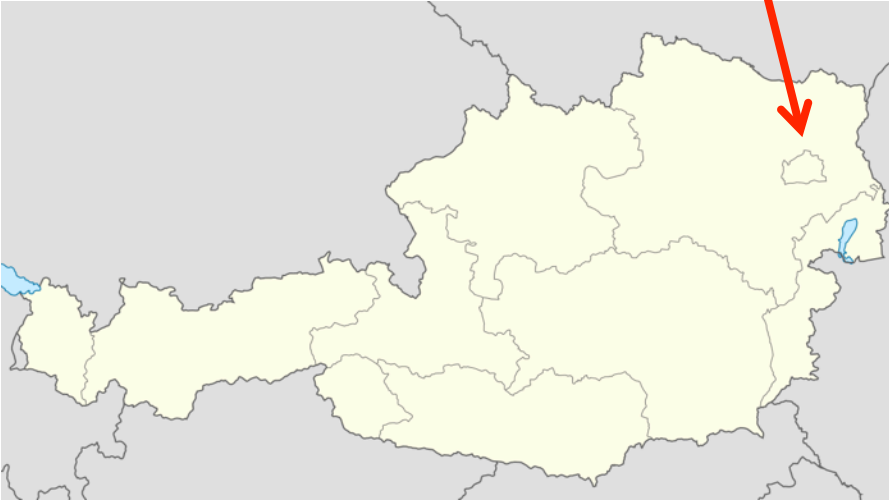
Office for Outer Space Affairs



OOSA Roles and Responsibilities



Vienna, Austria



United Nations Office at Vienna





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II. Programme on Space Applications

United Nations Programme on Space Applications



- Established in response to recommendations of the first UNISPACE conference in 1968
- Creation of the position of the United Nations Expert on Space Applications to promote space applications
- Operational from 1971 and implemented by OOSA
- UNISPACE conferences held in 1982 and 1999 updated the mandate of the Programme

Mandate of the Programme

Promote
International
Cooperation

Support
Capacity Building

Disseminate
Information

Conduct Technical
Advisory Services

United Nations General Assembly Resolution 37/90 (§7), <http://www.unoosa.org/oosa/en/ourwork/psa/mandate.html>

Implementation of the Programme

Conferences and Workshops on thematic priorities:

- Biodiversity/Ecosystems
- Climate Change
- Disaster Management
- Environmental Monitoring and Natural Resource Management
- Global Health
- Global Navigation Satellite Systems
- Satellite Communications

Basic Space Science Initiative (BSSI)

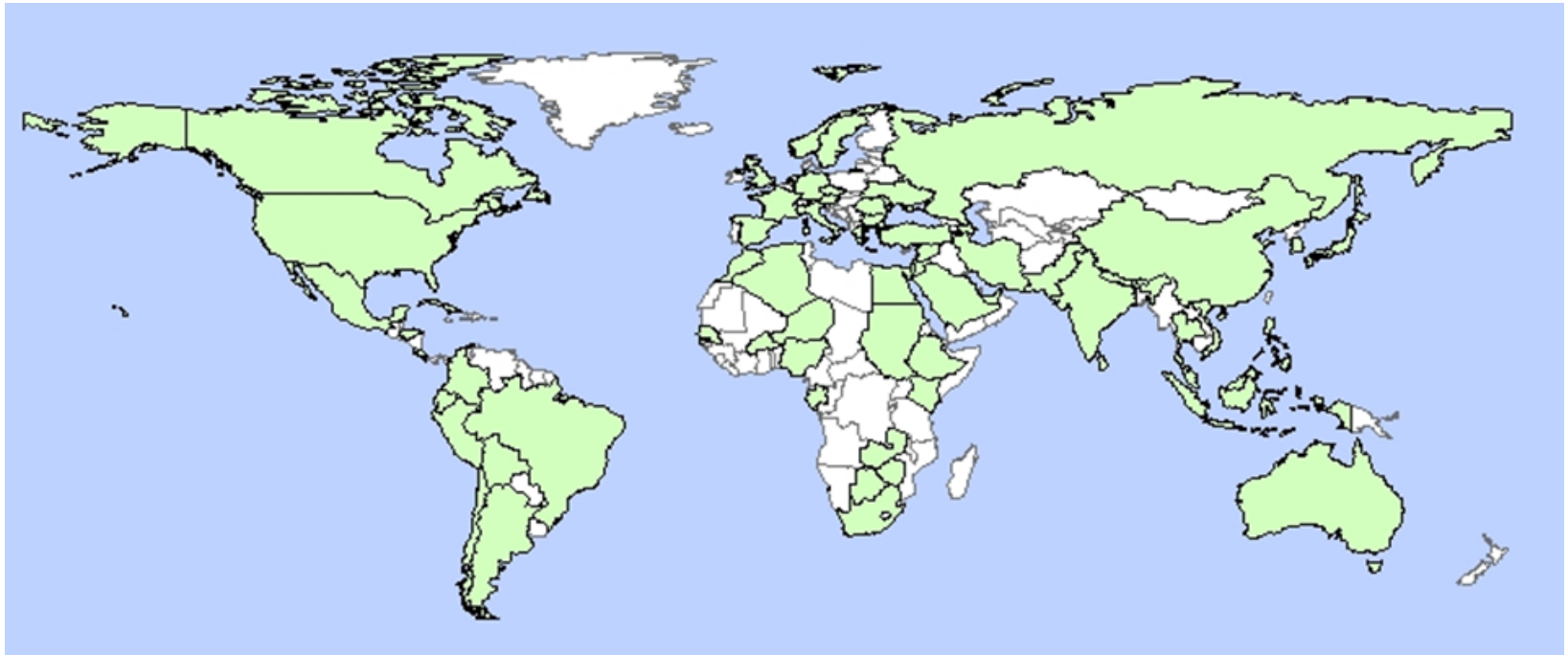
Basic Space Technology Initiative (BSTI)

Human Space Technology Initiative (HSTI)

Support the Regional Centres for Space Science and Technology Education, affiliated to the United Nations

Administrate Long-Term Fellowship Programmes

Programme Activities 1971-2014



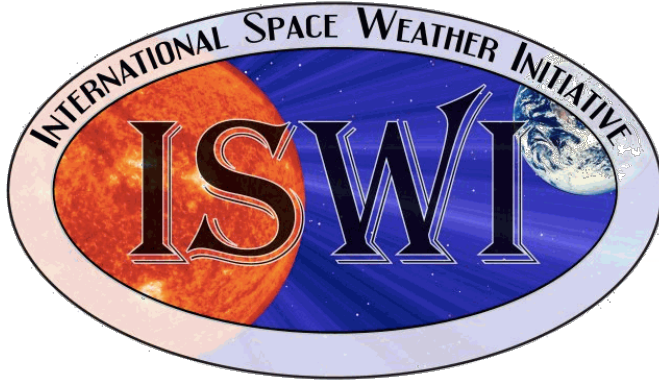
- 305 Expert Meetings/Seminars/Workshops/Conferences
- 75 countries, more than 21000 participants
- Topics covered: COSPAS/SARSAT, Environmental Monitoring, Global Navigation Satellite Systems, Mountain Regions, Natural Resources Management, Socio-Economic Benefit, Space Law, Space Science and Technology, Tele-Health/Tele-Medicine

Programme Activities Planned in 2016

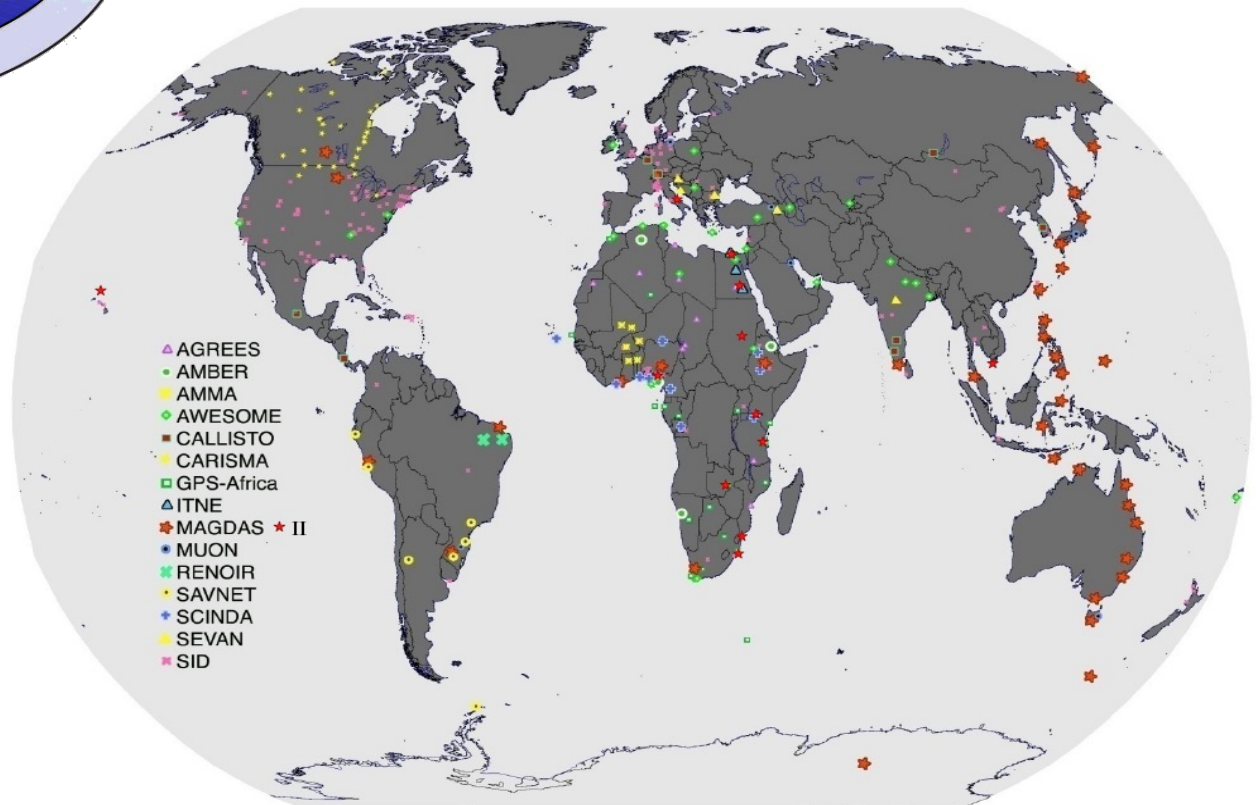
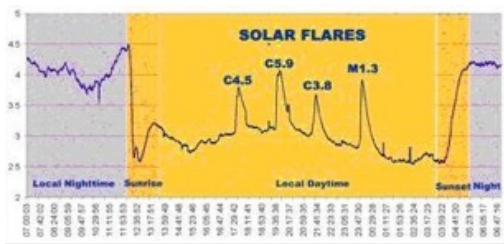
Activity	Location, Date
UN/Costa Rica Workshop on Human Space Technology	San José, Costa Rica 7-11 March 2016
UN/India Workshop on the Use of Earth Observation Data in Disaster Management and Risk Reduction; Sharing the Asian Experience	Hyderabad, India 8-11 March 2016
UN/Austria Symposium on Integrated Space Technology Applications for Sustainable Development in Mountain Regions	Graz, Austria 12-14 September 2016
UN/International Astronautical Federation Workshop on Space Technology for Socio-Economic Benefits	Guadalajara, Mexico 23-25 September 2016
UN/Nepal Workshop on the Applications of Global Navigation Satellite Systems	Kathmandu, Nepal 5-9 December 2016
UN/Kenya Workshop on Space Technology and Applications for Wildlife Management and Protecting Biodiversity	Nairobi, Kenya TBD 2016
UN/Islamic Republic of Iran Workshop on the Use of Space Technology for Dust Storm and Drought Monitoring in the Middle East Region	Tehran, Iran TBD 2016
UN/European Space Agency on the Applications of Global Navigation Satellite Systems	TBD 2016

See <http://www.unoosa.org/oosa/en/SAP/sched/index.html>

Basic Space Science Initiative (BSSI)



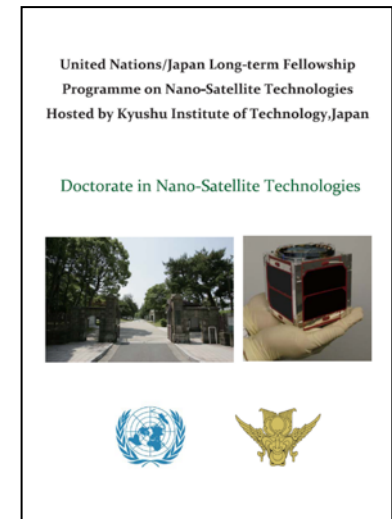
- Int. Space Weather Initiative (2010-2012)
- Coordination of ISWI Instrument Networks
- Deployment and operation of 14 ground-based, world-wide instrument networks



<http://www.unoosa.org/oosa/en/ourwork/psa/bssi/index.html>

Basic Space Technology Initiative (BSTI)

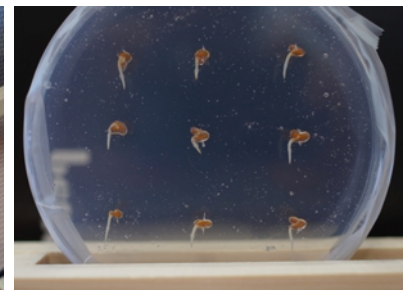
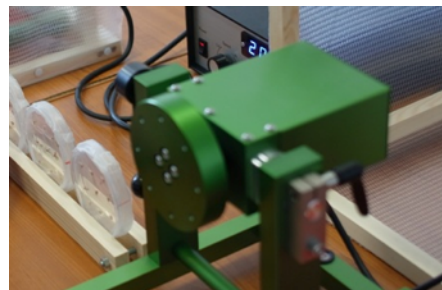
- Objective:
 - Support capacity building and international cooperation in basic space technology development, particularly in the field of small satellite development
- Projects:
 - Annual international space technology symposiums
 - Long-term fellowship programme
 - Space engineering education curriculum



<http://www.unoosa.org/oosa/en/ourwork/psa/bsti/index.html>

Human Space Technology Initiative (HSTI)

- Objectives:
 - Create awareness among Member States on the benefits of human space technology and its applications;
 - Promote international cooperation in human space flight and space exploration-related activities;
 - Support capacity-building in microgravity research and education
- Projects:
 - Zero-Gravity Instrument Project (ZGIP)
 - Drop Tower Experiment Series (DropTES)
 - KiboCube – Satellite Deployment from ISS



<http://www.unoosa.org/oosa/en/ourwork/psa/hsti/index.html>

Kibo-CUBE Launch Opportunity



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About Us ▾ Our Work ▾ Benefits of Space ▾ Information for... ▾ Events ▾ Space Object Register ▾ Documents ▾ COPUOS 2016 ▾

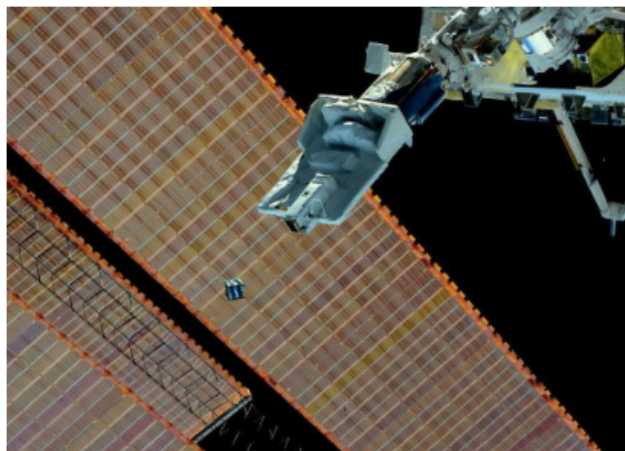
[Our Work](#) > [Programme on Space Applications](#) > [HSTI](#) > [International Cooperation](#) > [KiboCUBE](#)

The United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station (ISS) Japanese Experiment Module (Kibo) "KiboCUBE"

BACKGROUND

The [United Nations Office for Outer Space Affairs \(UNOOSA\)](#) and the [Japan Aerospace Exploration Agency \(JAXA\)](#) are pleased to announce the *United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station (ISS) Japanese Experiment Module (Kibo) "KiboCUBE"*.

KiboCUBE is the dedicated collaboration between UNOOSA and JAXA in utilizing the ISS Kibo for the world. KiboCUBE aims to provide educational or research institutions from developing countries of United Nations membership with opportunities to deploy, from the ISS Kibo, cube satellites (CubeSats) which they develop and manufacture.



Deployment of a CubeSat from the ISS. Photo: NASA/JAXA

- <http://www.unoosa.org/osa/en/ourwork/psa/hsti/kibocube.html>
- Call Deadline: 31 March 2016

Our Work

Secretariat of COPUOS

Programme on Space
Applications

PSA News

Expert on Space Applications

Fellowships

Schedule of Activities

BSSI

BSTI

HSTI

International Cooperation

[KiboCUBE](#)

Outreach

Capacity-Building

ZGIP

DropTES

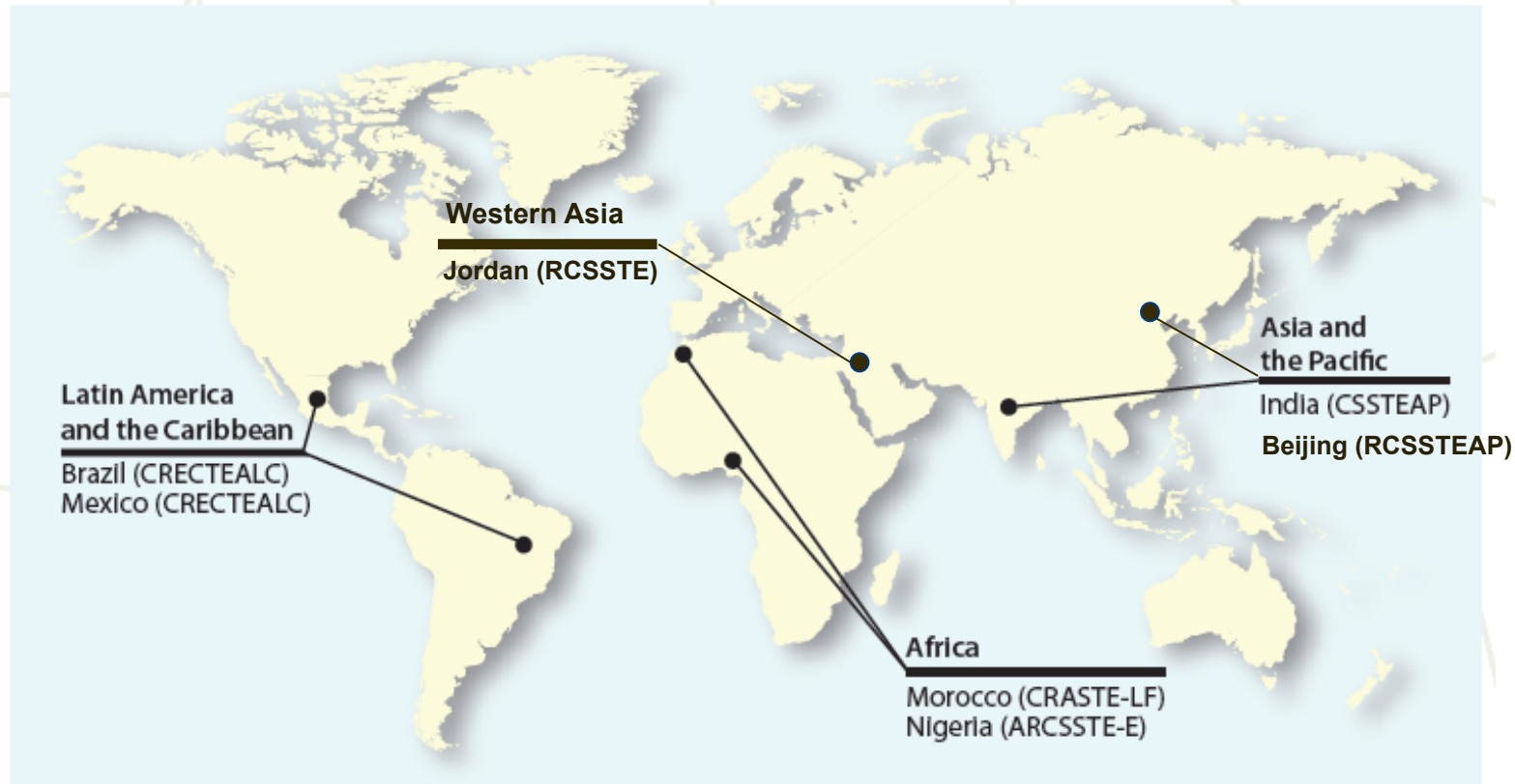
Thematic Priorities

Regional Centres

Publications

Reports

Regional Centres, affiliated to the United Nations



International Committee on GNSS

- Global Navigation Satellite Systems (GNSS) and their applications are overarching, enabling space technologies
- ICG Membership is open to GNSS providers or users of GNSS services
 - 9 nations and the European Community
 - 15 organizations (UN system entities, IGOs, NGOs)
- Regular ICG meetings
 - Adopted the ICG Work Plan and Terms of Reference
 - Established a Providers Forum
- <http://www.unoosa.org/oosa/en/ourwork/icg/icg.html>



UN-SPIDER Programme

- Ensure that all countries and regional and international organisations have access to and develop the capacity to use all types of space-based information to support the full disaster management cycle
 - being a gateway to space information for disaster management support;
 - serving as a bridge to connect the disaster management and space communities; and
 - being a facilitator of capacity-building and institutional strengthening.
- Builds on existing capacities
- <http://www.un-spider.org>



UN-SPIDER
in Vienna



UN-SPIDER
Beijing Office

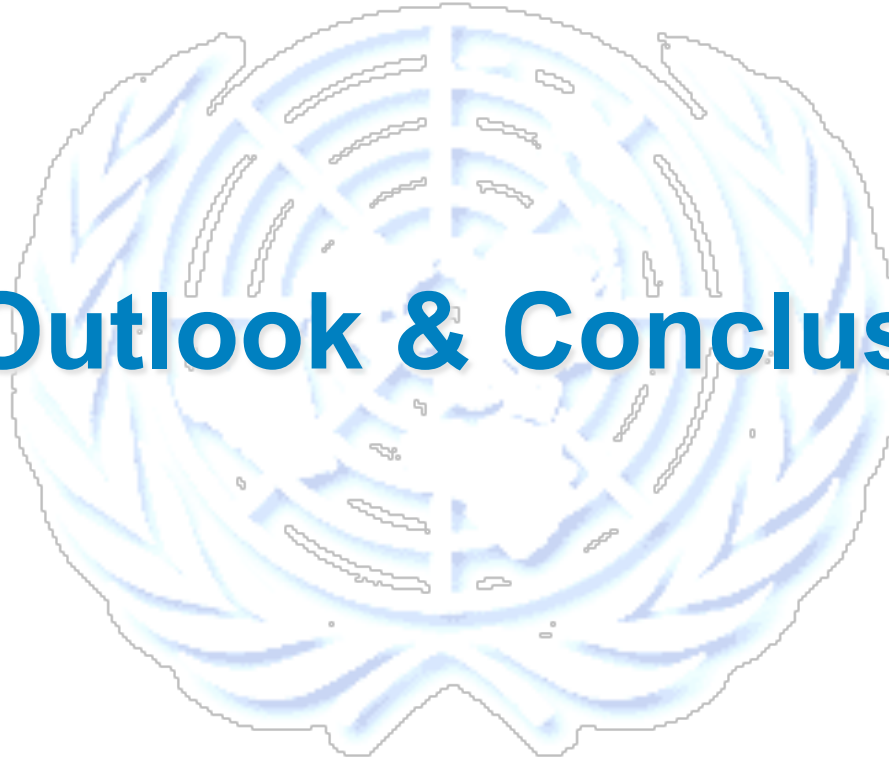


UN-SPIDER
Bonn Office



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IV. Outlook & Conclusions



2030 Agenda for Sustainable Development



17 Goals, 169 Targets

Space & Sustainable Development Goals



green – direct, black – indirect space contributions

UNISPACE+50

- In 2015 the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), adopted the **UNISPACE +50 initiative**
- UNISPACE+50, to be held in 2018, seeks to **develop stronger space governance and supporting structures at all levels**, building on the **2030 Agenda for Sustainable Development**
- UNISPACE+50 will consider ways and means for **strengthening the role of UNOOSA** and the Committee within the United Nations system and the global space community
- It prioritises improved governance, capacity-building, resilience, interoperability of systems and space for sustainable development.



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V. Careers at the United Nations



A Career with the United Nations



Peace and Security

Human Rights

Economic and
Social Development

<https://careers.un.org>

A Career with the United Nations

- Professional Category: requires minimum 5 years of professional work experience
- Young Professional Programme (age < 32 years)
 - Probably the best way to start a long-term UN career
 - Check careers.un.org website for information on next selection round
- Associate Expert Programme
 - 1-3 years duration (usually age < 32 years)
 - Japan is participating in this programme
- Secondment to the United Nations
 - For OOSA usually through space agencies (ASI, JAXA, KARI...)
- Internship with OOSA
 - For opportunities look at <https://careers.un.org> and <http://www.unoosa.org/oosa/en/aboutus/employment.html>

Thank you for your attention!

Questions?



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