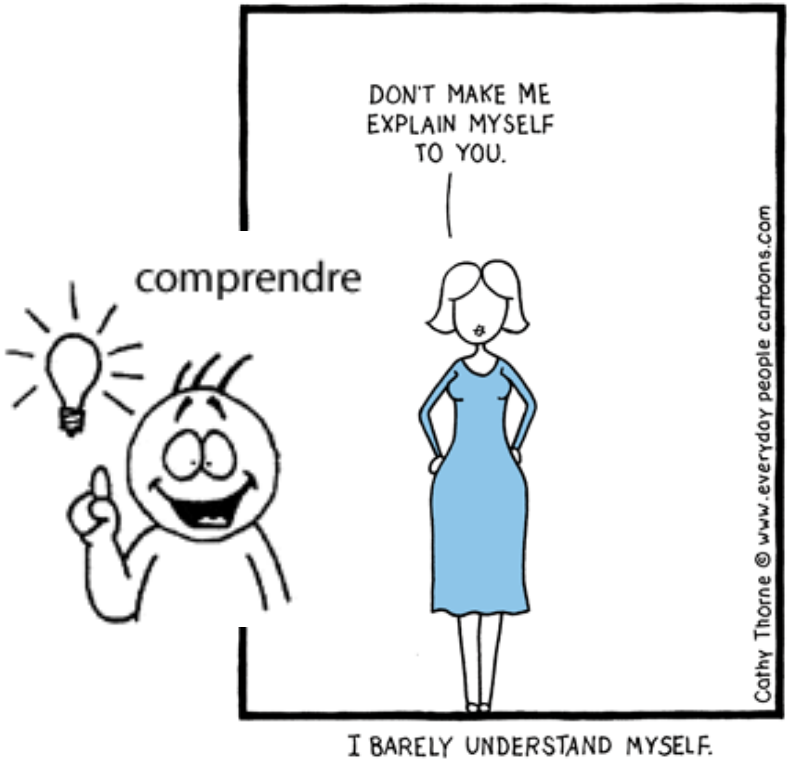
Inter-Agency Coordination and Liaison Office in Geneva for the promotion of space-based tools and technology for humanitarian affairs, environment and security

LUC ST-PIERRE
United Nations Office for Outer Space Affairs
United Nations Office at Vienna
www.unoosa.org

UNITED NATIONS
Office for Outer Space Affairs

Titles are undervalued…

1. **Inter-agency coordination**
2. **and liaison office in Geneva**
3. **for the promotion of space-based tools**
4. **and technology**
5. **…and applications**
6. **for humanitarian affairs,**
7. **environment**
8. **and security**



This presentation:

- **UNOOSA in Geneva: why, how, what**
- **What UNOOSA can bring: knowledge, partnerships, networks**
- **The approach of UN-SPIDER**
- **A relevant space agenda to sustainable development**

Informal consultations by UNOOSA in 2014 indicate that many entities of the United Nations System seek support in streamlining the use of space-based data and information in their planning, decision-making and reporting processes.

Many can also be key partners in developing applications of Earth observation tools or other space-based tools and technology to the benefit of the UN Member States.

Many can also be key partners in developing applications of Earth observation tools or other space-based tools and technology to the benefit of the UN Member States.

AIM

develop a direct and daily coordination for the promotion of space-based tools and technology between:

1. UNOOSA/UN-SPIDER and GEO;
2. UNOOSA and Geneva-based UN entities,
   international organisations
   and global Non-Governmental Organisations.

The coordination is about:

1. the identification and design of projects
2. at the mobilization of resources for their implementation
3. and at the open dissemination of their results

DELIVERABLES are:

1. Preparation and dissemination of support material
   www.unoosa.org www.un-spider.org
2. Meetings and outreach activities with UN entities and international organisations in Geneva
3. One **expert meeting** and associated consultations on Earth observation benefits for the management of the environment and natural resources
4. One **expert meeting** and associated consultations on Earth observation benefits for humanitarian affairs;
5. One **expert meeting** and associated consultations on Earth observation benefits for another area to be defined;
6. Project proposals when and where possible;

EXPERT MEETINGS:

- Bring together key Geneva-based interested parties to discover new advanced and innovative space-based solutions;
- UNOOSA to mobilise international experts from academia, national agencies, private sector;
- Small groups around pre-identified thematics and needs;
- Bilateral sessions for high level project design;
- Follow-up for project definition, joint fund-raising and implementation; and
- Customised sessions.

L. St-Pierre and team to consult for calendar of meetings

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- **What UNOOSA can bring: knowledge, partnerships, networks**
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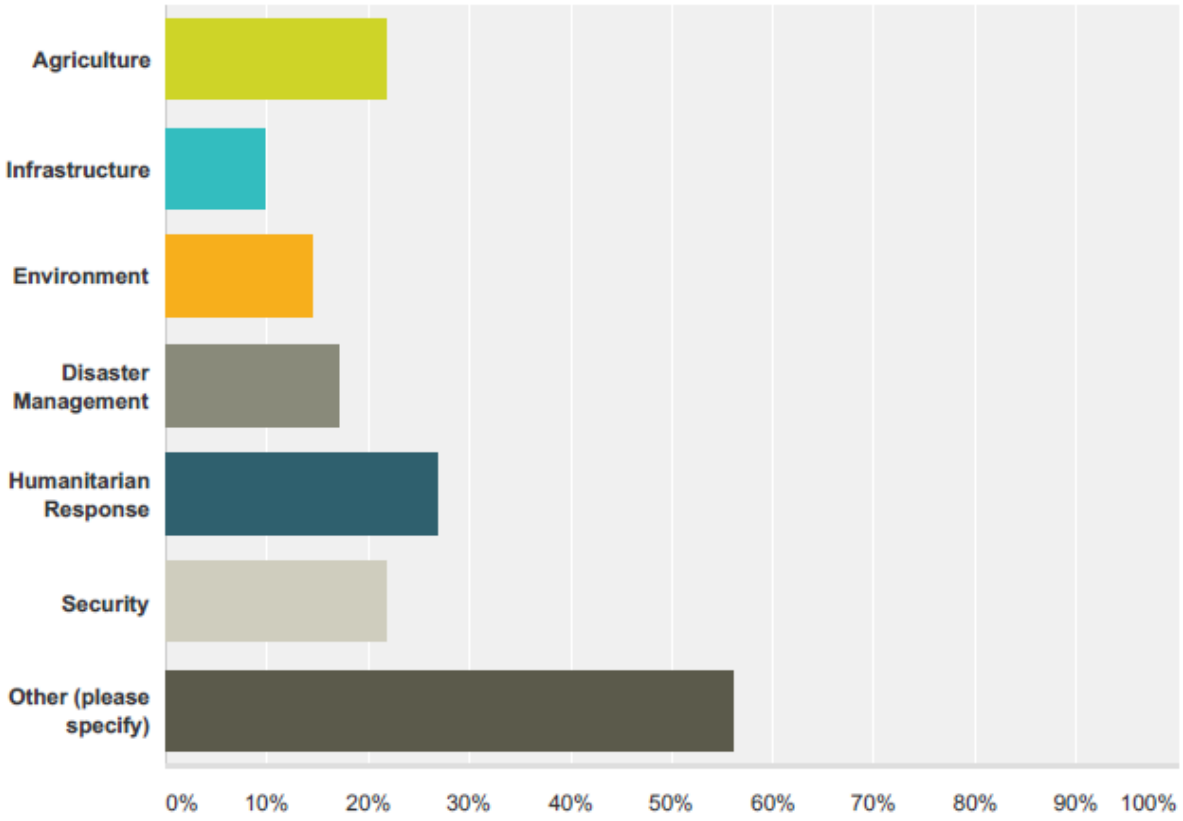
United Nations VHR Imagery Needs Survey

Q5 What is your primary field of work:

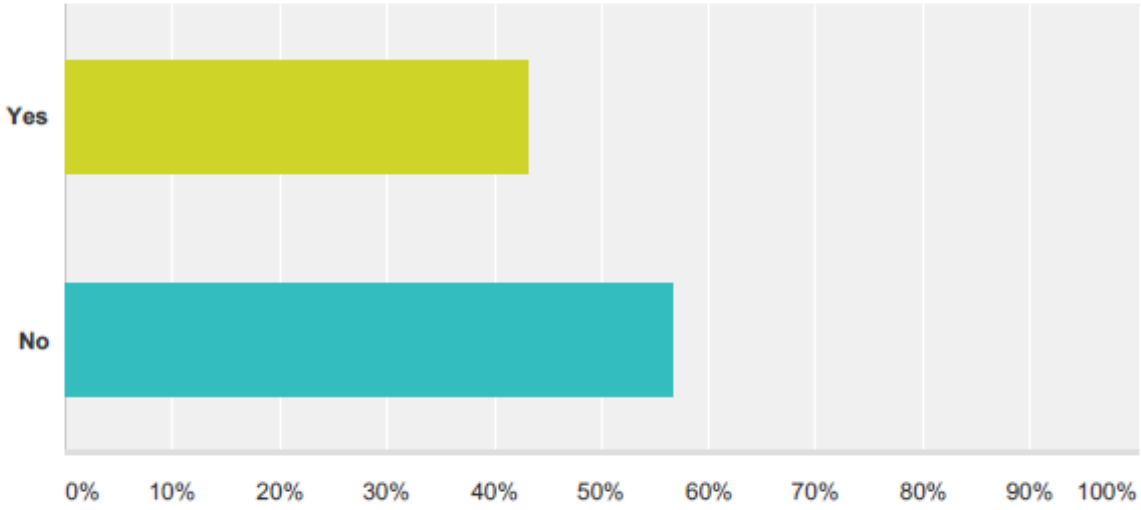
Answered: 41 Skipped: 1



United Nations VHR Imagery Needs Survey

Q9 Are you currently sharing your available satellite data or services with any other UN institutions or Member States?

Answered: 37 Skipped: 5



- Agriculture
- Infrastructure
- Environmental monitoring / natural resources
- Disaster management
- Humanitarian response
- Safety / security / peacekeeping

United Nations VHR Imagery Needs Survey

Q13 Agriculture

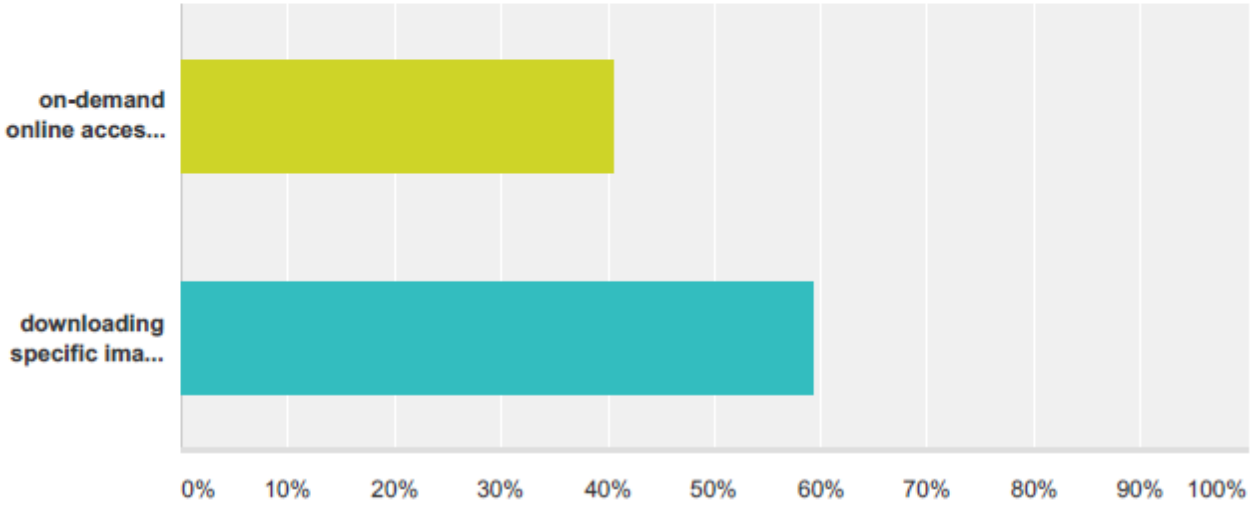
Answered: 26 Skipped: 16

Answer Choices
Are you trying to identify something? A crop type? Trees? Vegetation? Farmland?
Do you wish to monitor something? To measure change? Impact? Encroachment or Expansion?
Do you wish to classify an area? What do you wish to classify?
Do you want to measure something, vertical or horizontal? movement decline or development?
Do you need to forecast something?

United Nations VHR Imagery Needs Survey

Q19 Do you prefer...

Answered: 27 Skipped: 15



WHAT do we bring:

1. Partnerships with providers products and solutions:
   - Satellite imagery
   - High resolution of satellite imagery
   - Very High resolution satellite imagery

WITH

√ **Digital Globe**

√ **China National Space Administration**

→ Italian Space Agency

→ Israel Space Agency

→ others

MEMORANDUM OF UNDERSTANDING BETWEEN UNITED NATIONS AND DIGITALGLOBE INC.

WHEREAS the Office for Outer Space Affairs, representing the United Nations, has the mandate to promote international cooperation in the peaceful uses of outer space;

WHEREAS DigitalGlobe is a leading global provider of commercial high-resolution earth imagery products and services, and an important source of indispensable geospatial information;

WHEREAS OOSA and DigitalGlobe recognize their mutual interest in the use of earth observation technologies for economic, social and scientific development for the benefit of humankind, especially in developing countries.

…with the purpose of exploring how **high resolution satellite imagery** and **geospatial analytics** can be shared and leveraged more effectively and efficiently across the **entire United Nations System**. It is envisaged that by jointly promoting cooperation and collaboration in the area of geospatial information and analytics at the local, national and international levels, **the Parties can dramatically improve the technical and financial aspects of how the United Nations, its entities and its Member States address economic, environmental, geopolitical and societal issues of pressing importance**.

Food and Agriculture Organization of the United Nations

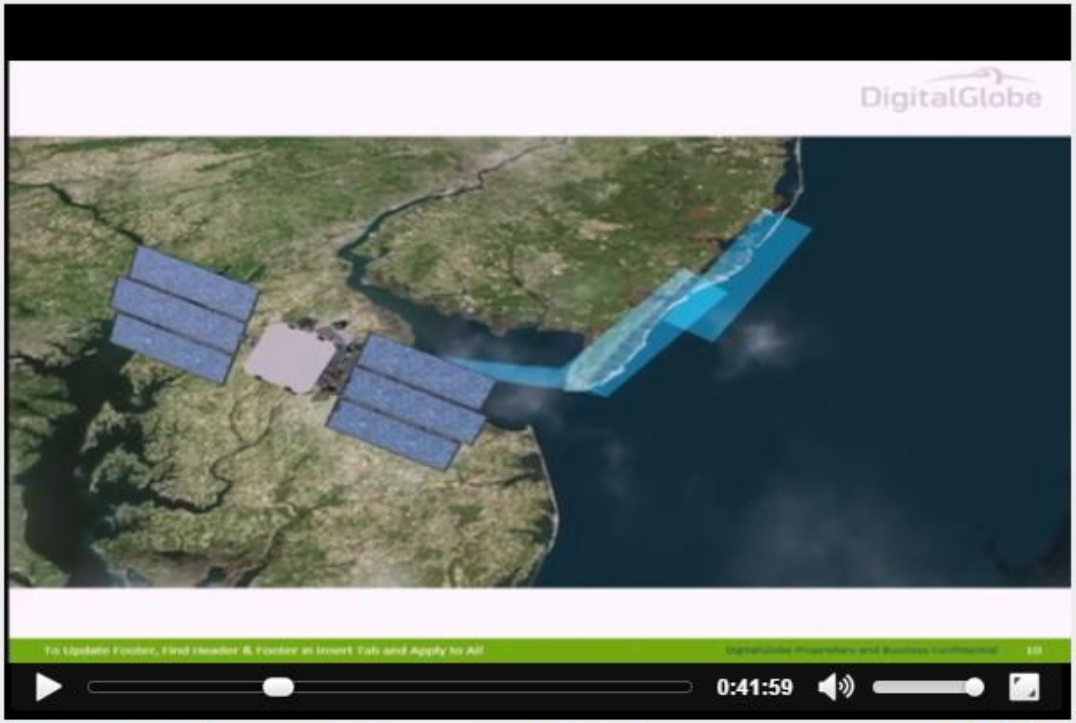
About FAO | In Action | Countries | Themes | Media | Publications

Home > webcast > Home

Discovery Day: The value of Geospatial Information for improving land governance

17.12.2015

Sheikh Zayed Centre (FAO Headquarters)



Choose Language

http://www.fao.org/webcast/home/en/item/4

The United Nations Office for Outer Space Affairs (UNOOSA), the United Nations Economic Commission for Europe (UNECE), DigitalGlobe and the Food and Agriculture Organization of the United Nations (FAO) are jointly organizing a *Discovery Day* event which will provide a high level perspective on the benefits and applications of space-based geospatial information for improving land governance, monitoring the effects of climate change and respond to emergency and crisis events.

Programme on Space Applications: Thematic Priorities

BIODIVERSITY / ECOSYSTEMS

CLIMATE CHANGE

DISASTER MANAGEMENT

GLOBAL HEALTH

GLOBAL NAVIGATION SATELLITE SYSTEMS

ENVIRONMENTAL MONITORING AND NATURAL RESOURCES MANAGEMENT

SATELLITE COMMUNICATIONS

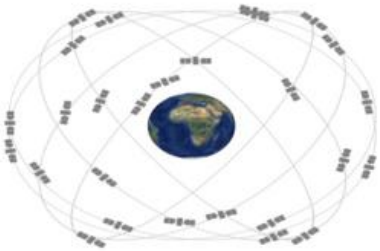
UN-Space offers a forum for UN entities to meet and discuss matters related to the use of space technologies in their activities.

CTBTO
Convention on Biological Diversity
United Nations Peacekeeping
FAO
IAEA International Atomic Energy Agency
ICAO OACI
IMO
ITU International Telecommunication Union
UNCTAD
UNDSS
UNDP
Empowered lives. Resilient nations.
ESCAP
United Nations Economic Commission for Africa
United Nations Economic Commission for Europe
Naciones Unidas CEPAL
UNESCO United Nations Educational, Scientific and Cultural Organization
UNEP United Nations Environment Programme
United Nations Framework Convention on Climate Change
UNHCR The UN Refugee Agency
UN-HABITAT
UNIDO
unitar UNOSAT
UNOPS
UNISDR
UNCCD
UN DESA
ESCWA
OCHA
WFP
World Health Organization
WIPO
World Meteorological Organization Weather • Climate • Water

UNITED NATIONS
Office for Outer Space Affairs

International Committee on Global Navigation Satellite Systems

MEMBERS



PROVIDERS' FORUM

WORKING GROUPS

ANNUAL MEETINGS

PROGRAMME ON GNSS APPLICATIONS

RESOURCES/DOCUMENTS

Providers' Forum

- China
- India
- Japan
- European Community
- Russian Federation
  United States

This *[too long]* **presentation:**

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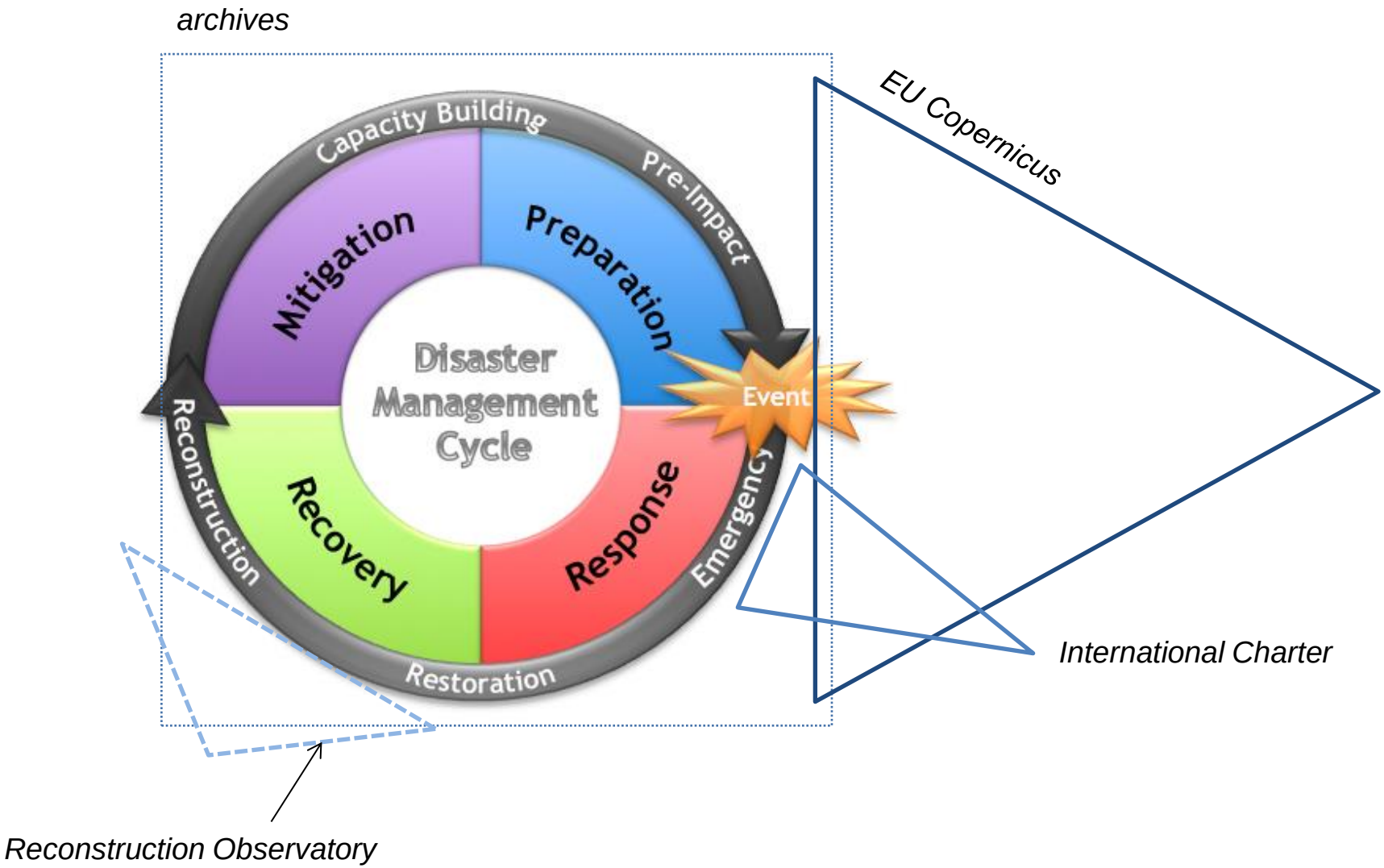

archives
Capacity Building
Pre-Impact
Mitigation
Preparation
Disaster Management Cycle
Event
Reconstruction
Recovery
Response
Emergency
Restoration
EU Copernicus
International Charter
Reconstruction Observatory

Sendai Goals

(a) Substantially reduce global disaster **mortality** by 2030…

(b) Substantially reduce the number of **affected** people globally by 2030…

(c) Reduce direct disaster **economic loss** in relation to global gross domestic product (GDP) by 2030

(d) Substantially reduce disaster damage to **critical infrastructure** and disruption of **basic services**, among them **health** and educational facilities, including through developing their resilience by 2030;

(e) Substantially increase the number of countries with **national and local disaster risk reduction strategies** by **2020**;

(f) Substantially enhance **international cooperation** to developing countries …

(g) Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.

UNITED NATIONS
Office for Outer Space Affairs

UN-SPIDER KNOWLEDGE PORTAL

Space-based information for Disaster Management and Emergency Response

English Español Français

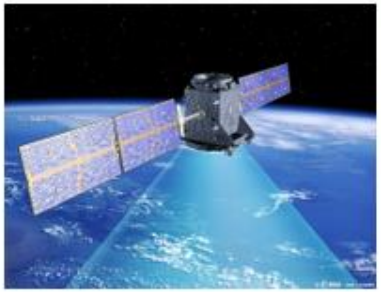
Inicio | Aplicación Espacial | Riesgos y Desastres | Enlaces y Recursos | Asesoría | Redes | Proyectos | Noticias y e

UN-SPIDER and UNDP Bhutan office support efforts to manage landslide risk in Bhutan

UN-SPIDER, UNDP and the Department of Disaster Management (DDM) (Ministry of Home and Cultural Affairs) conducted follow up activities and a training workshop as a next step after the UN-SPIDER Technical Advisory Mission (TAM) to Bhutan, offered in June 2014. The activities were executed from 17 to 21 August, 2015.

Explore el Portal del Conocimiento

¿Cómo se puede emplear la tecnología espacial en caso de desastres?



¿Dónde puedo acceder a datos satelitales y otros recursos?

¿Quiénes son los usuarios de la tecnología espacial para los desastres?

¿Qué es lo que ONU-SPIDER puede proporcionar a los Estados Miembros?

UN-SPIDER Network of Regional Support Offices

UNITED NATIONS
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UN-SPIDER
www.un-spider.org

NEWSLETTER

May 2015 Vol. 2/15

In Focus

Space-based information for post-2015 sustainable development

2015 is a milestone year for the United Nations. Not only is the organization celebrating its 70 years of existence, the year is also the starting point for major agreements and frameworks that will shape global sustainable development in the years to come. Nations worldwide will jointly embark on new paths to end poverty, promote prosperity and well-being for all, protect the environment, address climate change and reduce disaster risks. It is in this context that the United Nations Secretary-General Ban Ki-moon has launched the "2015: Time for Global Action" campaign.

Most notable among the processes to be kicked off in 2015 are these three:

The Sendai Framework for Disaster Risk Reduction (2015-2030); a new global agreement on climate change; and a new set of targets for economic, social and environmental development: the Sustainable Development Goals (SGDs) which are building on the Millennium Development Goals running out at the end of 2015.

Drought and shrinking water levels in the Jaguari Reservoir, Brazil observed by the Landsat 8 satellite in August 2014 (Image: NASA)

Satellite technologies can be key in ensuring the successful implementation of these three frameworks. The data that satellites can collect from space provide vital input to decision-making processes as well as to monitoring and evaluation efforts. With such inputs, nations and societies can stay on track in achieving these global goals and implement their national plans with regards to disaster risk reduction, climate change adaptation and mitigation and sustainable development in it various dimensions.

The United Nations Office for Outer Space Affairs (UNOOSA), through its UN-SPIDER programme among others, is working with governments and partners in promoting the use of reliable and objective data that satellite technologies provide - especially in developing countries. It does so through awareness raising, capacity building, technical advisory support and outreach events.

From 26 to 28 May 2015, UNOOSA/UN-SPIDER, in cooperation with the German Aerospace Center (DLR) and the German Federal Ministry for Economic Affairs and Energy, is organising the United Nations/Germany International Conference for Earth Observation. 120 international experts will convene in Bonn, Germany, to discuss and share knowledge on the use of space technologies in the context of the post-2015 agreements on disaster risk reduction, on climate change adaptation and mitigation and on the Sustainable Development Goals.

In this issue

UNITED NATIONS
Office for Outer Space Affairs
UN-SPIDER
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AUGUST 2015 UPDATES

UN-SPIDER at a glance

UN-SPIDER and IGAC conducted a Regional Expert Meeting in Colombia

UN-SPIDER and its Regional Support Office IGAC conducted a Regional Expert Meeting in Bogota, Colombia from 12 to 14 August within the International Geomatic Week carried out by the Geographic Institute Agustin Codazzi (IGAC). The meeting brought together around 20 participants from the Caribbean, Central America and South America. The Regional Expert Meeting benefitted from the participation of regional and international experts from the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRECTEALC), the International Research Centre on El Niño Phenomena (CIIFEN), the Federal University of Santa Maria in Brazil (UFSM) and the Central American Agriculture and Livestock Committee (CAC).

Read more: Knowledge Portal

Agreement between UNOOSA and the Swiss Government

The United Nations Office for Outer Space Affairs (UNOOSA) is pleased to announce an agreement with the Swiss Government to support the development of new initiatives to advance the use of space-based tools and technology in the various areas of work of Geneva-based United Nations entities, international organisations or non-governmental organisations. Funded by the Federal Department of Foreign Affairs and the Federal Department of Environment, Transport, Energy and Communications, the agreement aims at increasing awareness of the benefits of space-based tools and technology for environment and natural resource management, humanitarian affairs, peace building and security. Switzerland, a Member State of the Committee on the Peaceful Uses of Outer Space (COPUOS), hopes through this collaboration to strengthen the capabilities of Geneva-based entities in using space-based data, information, products and services.

Read more: Knowledge Portal

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The UN-SPIDER, the UNDP and the Department of Disaster Management (DDM) (Ministry of Home and Cultural Affairs) conducted follow up activities and training workshop as a next step after the UN-SPIDER Technical Advisory Mission (TAM) to Bhutan, offered in June 2014. The activities were executed from 17 to 21 August, 2015.

Soon after the TAM was conducted, the UN Resident Coordinator secured funding to implement the recommendations of the TAM through the UN joint project titled "Recovery Preparedness and Resilience-building in Bhutan". Through this funding, 19 officials from Bhutan visited the UN Affiliated Centre for Space Science Technology Education in Asia and the Pacific in India to attend one week training programme titled "Response and recovery preparedness" in April 2015. This training provided general understanding on the role of space based information in managing various hazards in Bhutan.

Read more: Knowledge Portal

UN-SPIDER issues the Role of World Natural Heritage and Sites in Disaster Risk Reduction in a workshop in India

The International Workshop on the Role of World Natural Heritage (WHS) Sites in Disaster Risk Reduction (DRR) was organised by UNESCO Category 2 Centre (C2C) World Natural Heritage Management and Training for Asia and the Pacific Region based at Wildlife Institute of India. The event was performed in Dehradun city on 24 and 25 August.

Read more: Knowledge Portal

UN-SPIDER meets students of 20th Post Graduate Diploma in Remote Sensing and GIS

The head of the UN-SPIDER Beijing Office, Shirish Ravan, visited the UN Affiliated Centre for Space Science Technology Education in Asia and the Pacific (CSSTEAP), in Dehradun, India, on 25 August 2015; to interact with 24 international

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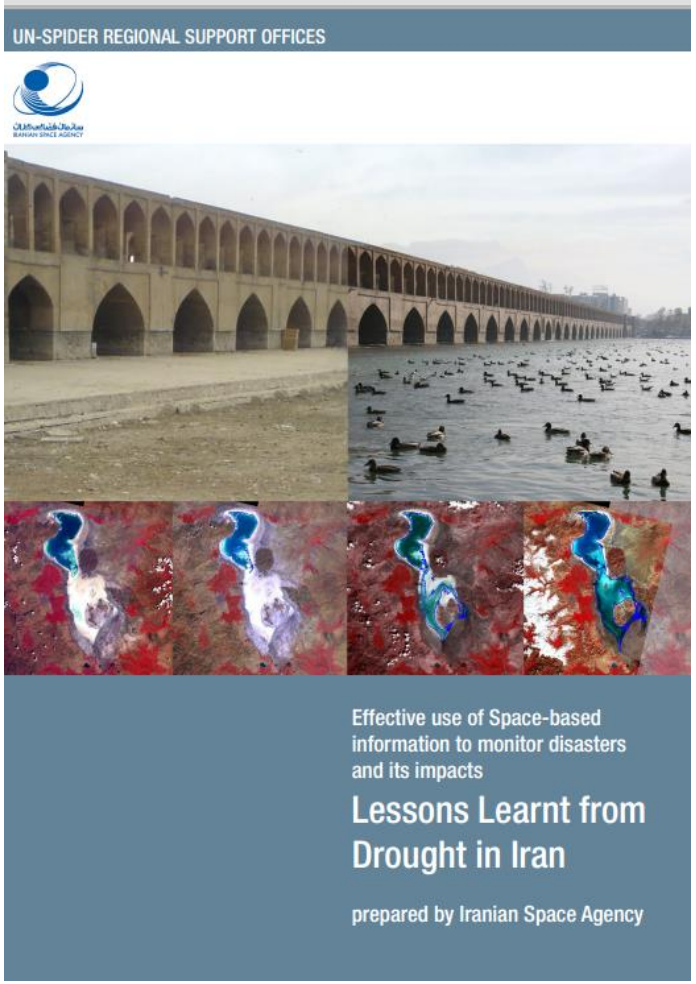
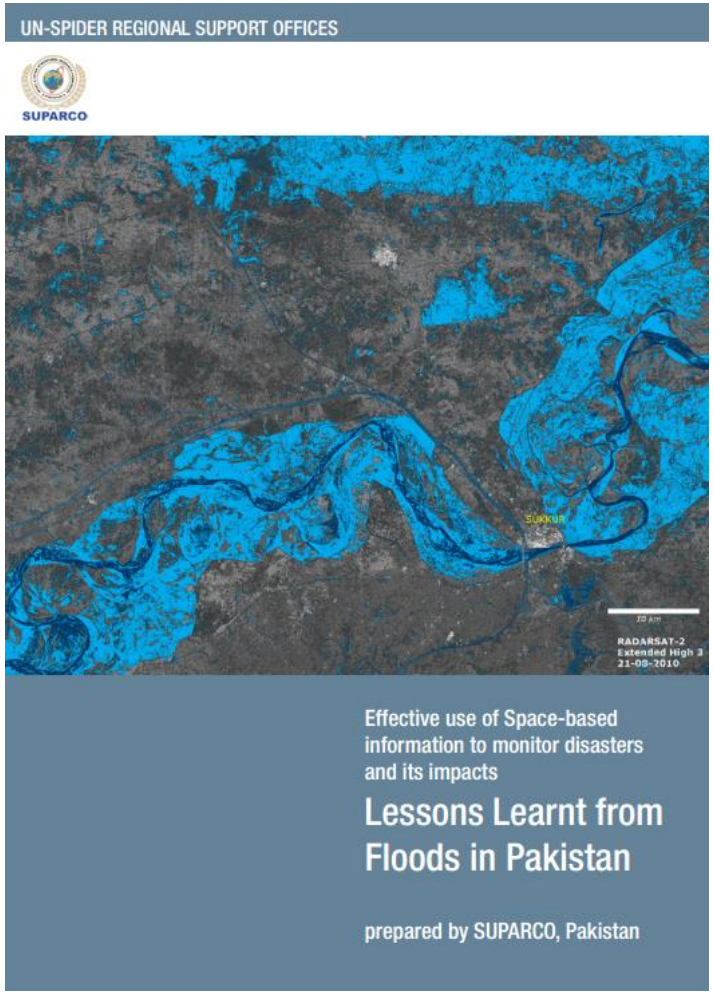

UN-SPIDER REGIONAL SUPPORT OFFICES
Effective use of Space-based information to monitor disasters and its impacts
Lessons Learnt from Drought in Iran
prepared by Iranian Space Agency


UN-SPIDER REGIONAL SUPPORT OFFICES
SUPARCO
SUKKUR
RADARSAT-2
Extended High 3
21-08-2010
Effective use of Space-based information to monitor disasters and its impacts
Lessons Learnt from Floods in Pakistan
prepared by SUPARCO, Pakistan

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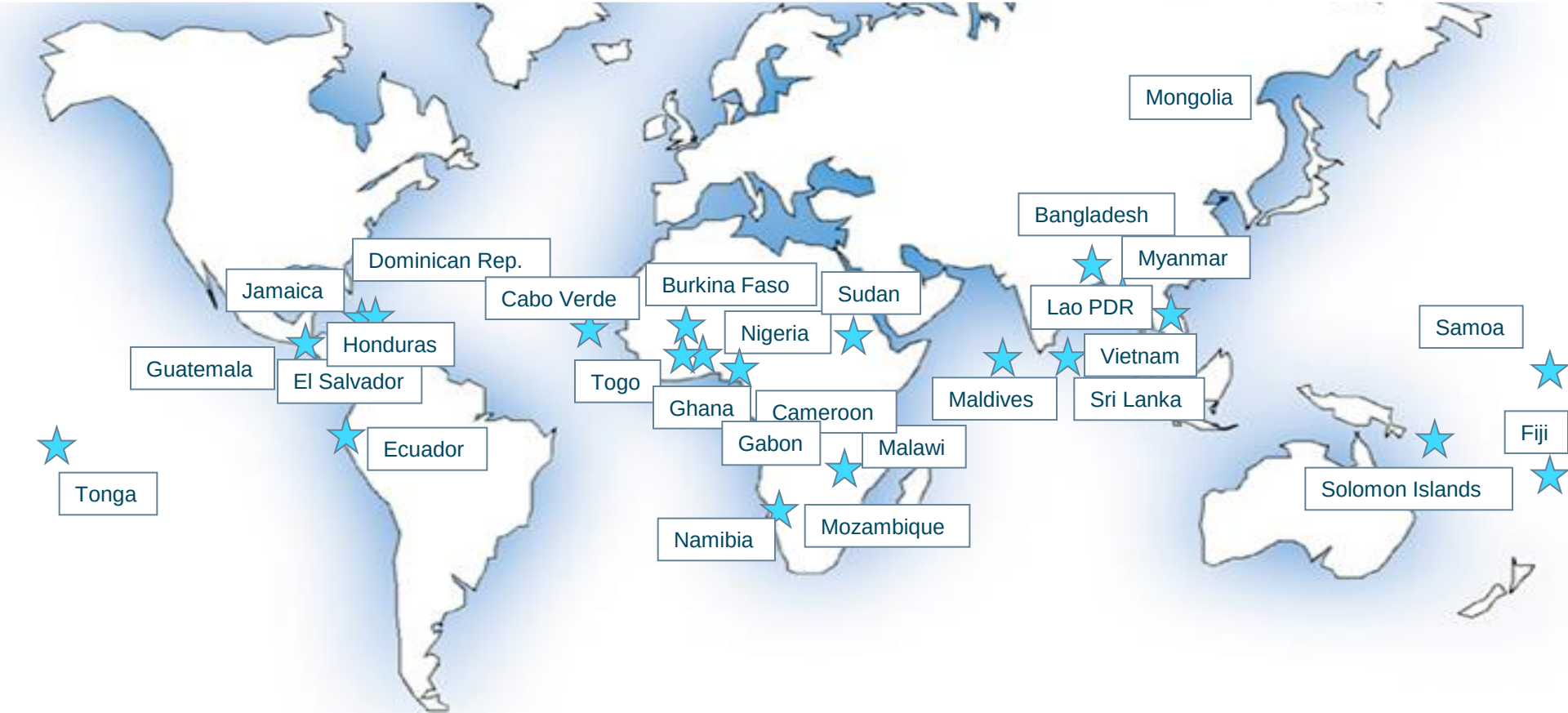
Technical Advisory Mission (2008 - 2015)



UN-SPIDER Technical Advisory Missions

Government
Main stakeholders

Mission Team
(Multi-disciplinary, multi-organisation)

Observations and Recommendations:
Policy making
Awareness Raising
Capacity Building
Coordination
Information Sharing
Data standards & access

Space-based tools for improved Disaster Risk Reduction and Emergency Response

This *[almost finished]* **presentation:**

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SPACE AND LAW

Five UN Treaties and five sets of Principles on Outer Space

- **Outer Space Treaty, 1967 (103 States parties / 25 additional signatures)**
- **Rescue Agreement, 1968 (94/24)**
- **Liability Convention, 1972 (92/21)**
- **Registration Convention, 1975 (62/4)**
- **Moon Agreement, 1979 (16/4)**

- Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space *(1963)*
- Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting *(1982)*
- Principles Relating to Remote Sensing of the Earth from Outer Space *(1986)*
- Principles Relevant to the Use of Nuclear Power Sources in Outer Space *(1992)*
- Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, Taking into Particular Account the Needs of Developing Countries *(1996)*

SPACE AGENDA TODAY: greening space

Mitigating Space Debris

In 2007, COPUOS achieved a major result by adopting its own **Space Debris Mitigation Guidelines.** There is general agreement among States that the implementation of these voluntary guidelines for the mitigation of space debris at the national level would increase mutual understanding on acceptable activities in space, thus enhancing stability in space and decreasing the likelihood of friction and conflict.

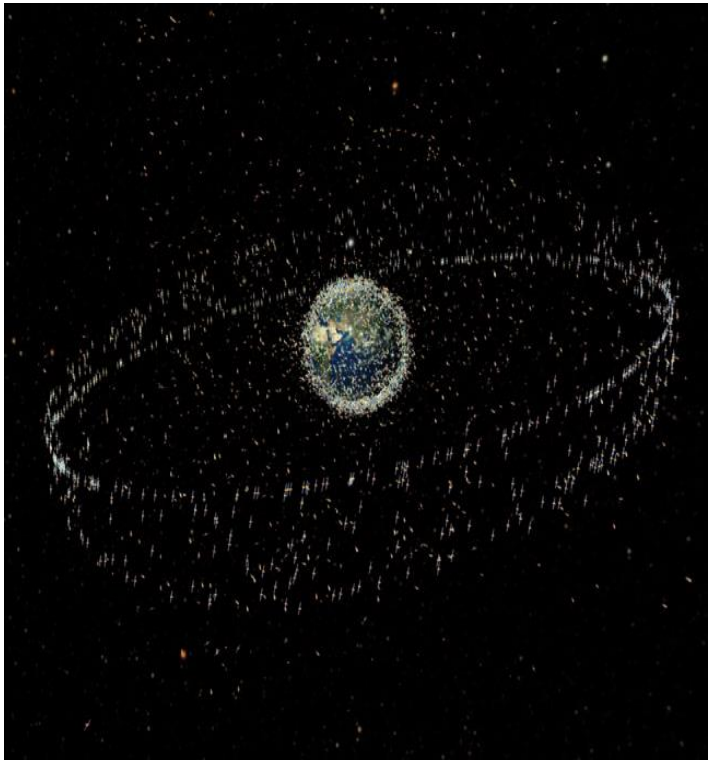


Photo: Over 22,000 man-made objects are being tracked in Earth orbit. Fewer than 2,000 of these are operational. The ring around the Earth is the satellite orbit used for satellite television and other purposes. Image: Artist's impression ©ESA

UN Register on Objects Launched into Outer Space

- UNOOSA maintains a registry of launchings since 1962, in accordance with General Assembly resolution 1721 B (XVI)

- The Register is the central repository of official information provided by States on space objects

- Since the Convention on Registration of Objects Launched into Outer Space entered into force in 1976, another register of launchings has been established for information received from Member States and intergovernmental organizations that are parties to the Convention

www.unoosa.org/oosa/en/spaceobjectregister/index.html

SPACE AGENDA TODAY: Threats from asteroids

Near-Earth Objects (NEOs) are asteroids, comets and large meteoroids whose orbit intersects

the Earth's orbit and may therefore pose a danger of collision. NEOs with a diameter of over 1 km hit the Earth a few times in a million

years.

COPUOS works on establishing international

procedures and decision-making mechanisms for dealing with a potential NEO threat.

Photo: Japan's Hayabusa space probe travelled to the Itokawa asteroid and in 2010 returned the first samples of an asteroid to Earth. Photo ©JAXA

SPACE AGENDA TODAY: Long-term sustainability of outer space activities

Sustainable development on Earth is not possible without sustainable space.

COPUOS works on issues such as:

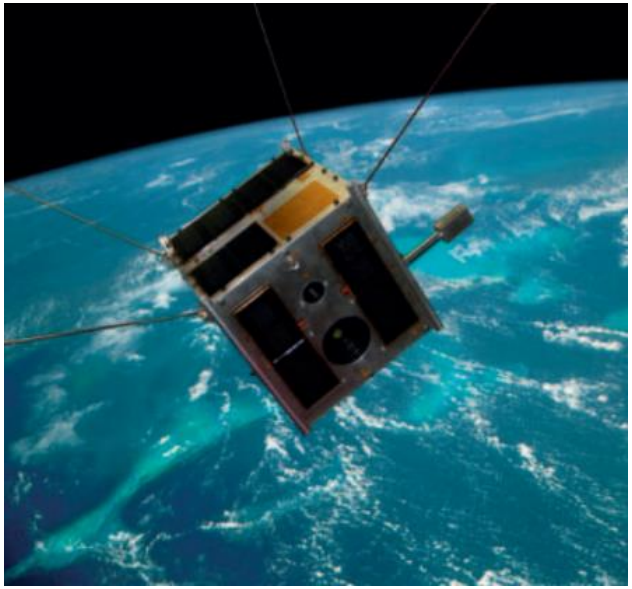
“Space and sustainable development”:

-the use of space technology and its applications climate change, food security, monitoring of natural resources,
agriculture….

“Long - term sustainability of outer space activities:

- Sustainable Space Utilization supporting Sustainable Development on Earth, Space Debris, Space Operations and Tools,Space
Weather, Regulatory Regimes and Guidance for Actors In the Space Arena

SPACE WEATHER



Basic Space Technology Initiative (BSTI)

Human Space Technology Initiative (HSTI)

UN SPACE EXHIBIT in Vienna

Education benefits

www.unoosa.org

Thank you

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United Nations Office for Outer Space Affairs
United Nations Office at Vienna
luc.st-pierre@unoosa.org

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