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
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.

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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-spiider.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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Q5 What is your primary field of work:

Answered: 41  Skipped: 1

- Agriculture
- Infrastructure
- Environment
- Disaster Management
- Humanitarian Response
- Security
- Other (please specify)
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

- Yes
- No
Agriculture
Infrastructure
Environmental monitoring / natural resources
Disaster management
Humanitarian response
Safety / security / peacekeeping
United Nations VHR Imagery Needs Survey

Q19 Do you prefer...

Answered: 27   Skipped: 15

- on-demand online access...
- downloading specific ima...
**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.
Discovery Day: The value of Geospatial Information for improving land governance
Sheikh Zayed Centre (FAO Headquarters)

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.
Providers’ Forum

- China
- India
- Japan
- European Community
- Russian Federation
United States
This [too long] presentation:

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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.
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
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, this 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:

1. 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 that are building on the Millennium Development Goals (MDGs) which are coming to an end in 2015. 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 its various dimensions.

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

3. 20-23 May 2015 UNOOSA/UN-SPIDER, in cooperation with the German Aerospace Center (DLR) and the German Federal Ministry for Economic Affairs and Energy, is organizing 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 agenda on disaster risk reduction, climate change adaptation and mitigation and on the Sustainable Development Goals.

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Effective use of Space-based information to monitor disasters and its impacts

Lessons Learnt from Drought in Iran

prepared by Iranian Space Agency

Effective use of Space-based information to monitor disasters and its impacts

Lessons Learnt from Floods in Pakistan

prepared by SUPARCO, Pakistan
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**
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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)
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

**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
Thank you

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