

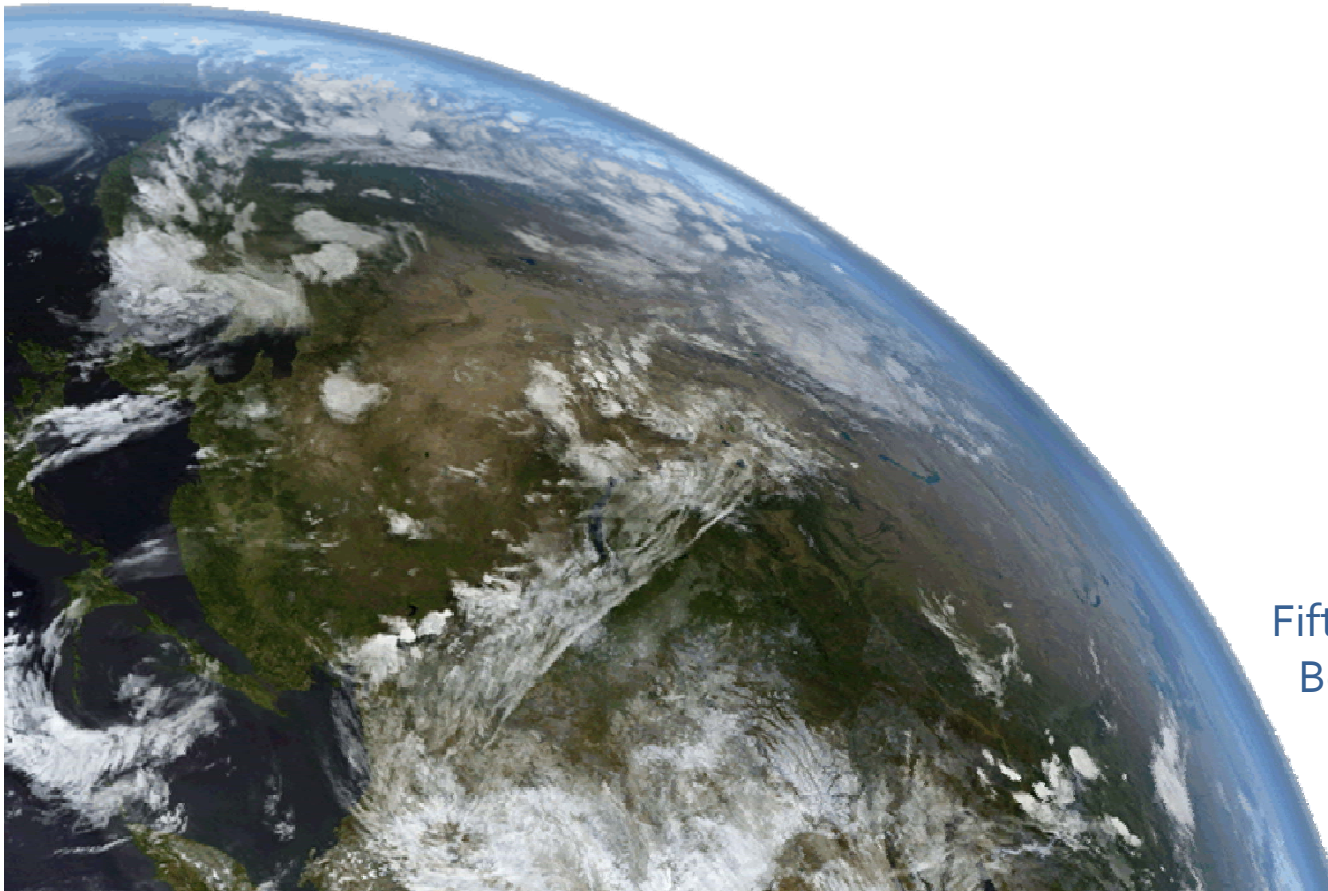


UNITED NATIONS
Office for Outer Space Affairs



Deutsches Zentrum
für Luft- und Raumfahrt
German Aerospace Center

The UN-SPIDER Programme



Luc St-Pierre,
UN-SPIDER

Fifth International UN-SPIDER
Bonn Workshop on Disaster
Management and Space
Technology
24 – 26 April 2012



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The Space-Community perspective...



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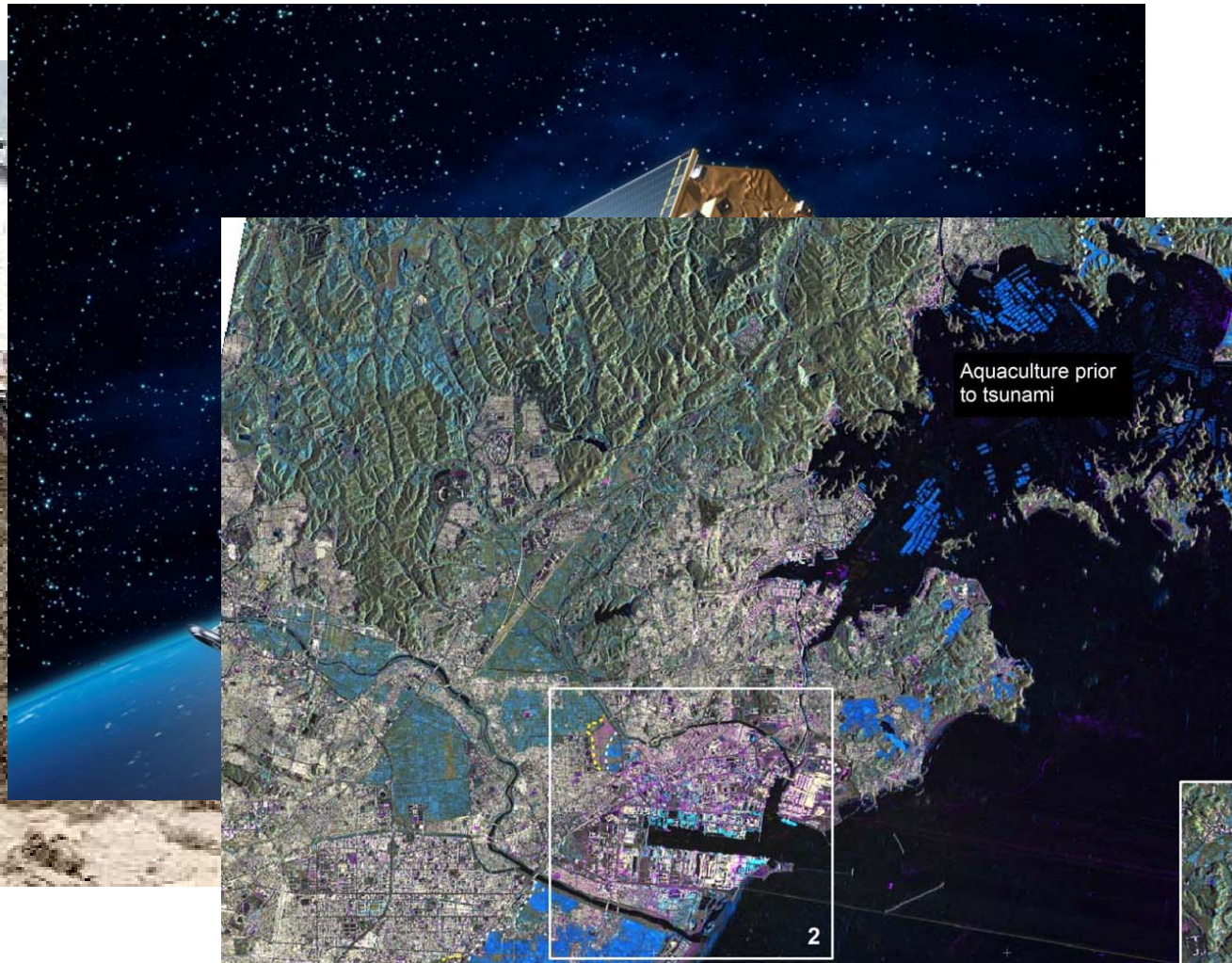
...and the Disaster Management Community reality!



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Bridging the gap





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Space-based Information

Satellite communications

- to warn people at risk (remote areas)
- to connect a disaster area to the outside world



Global navigation satellite systems

- positional information on events
- support to relief forces



Images from Earth observing satellites

mapping disaster areas (overview, damage assessment),
data layers for GIS applications (early warning, risk and
vulnerability mapping)

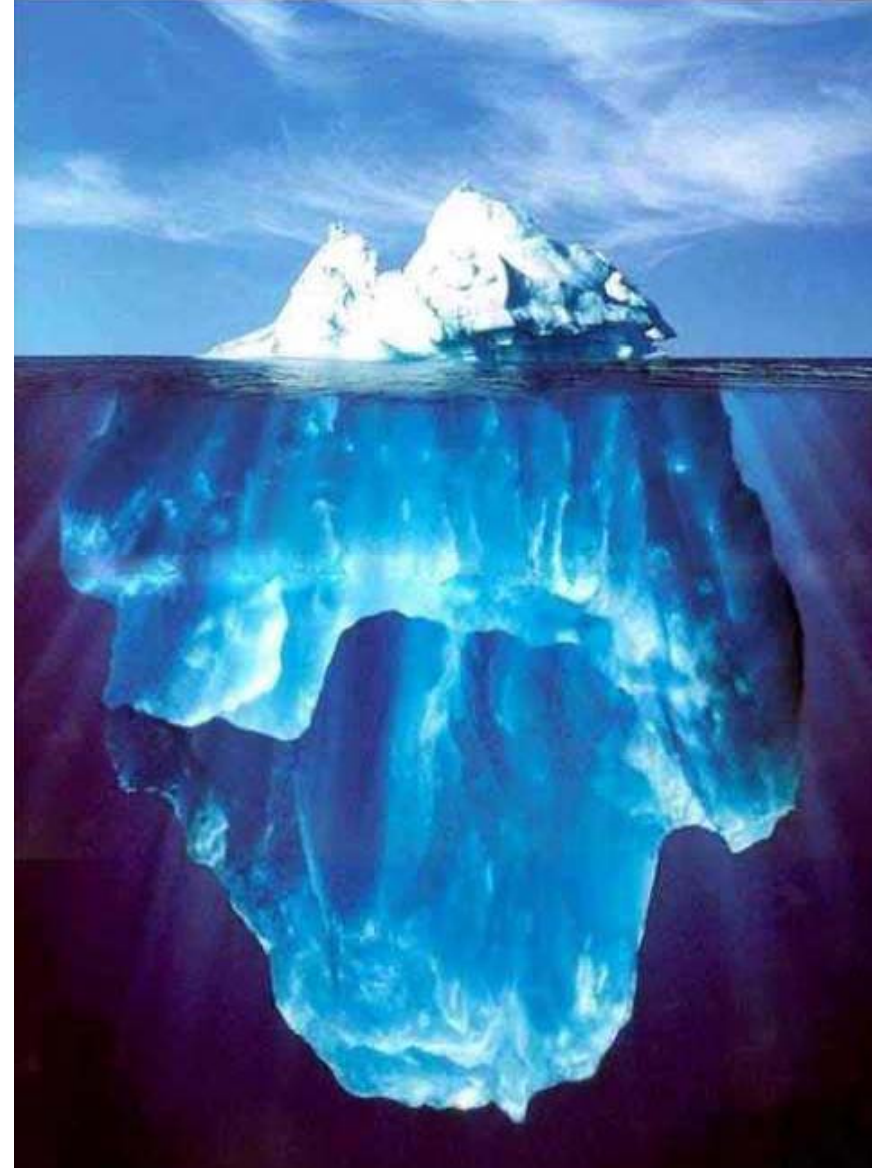




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Questions about
„Space-based Information“
from the user perspective



What information exists?

Where to find?

How to access?

What are the costs?

What is the timeliness?

What is the quality?



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UN-SPIDER: Mission and Mandate

On 14 December 2006 the United Nations General Assembly, established UN-SPIDER as a programme implemented by the United Nations Office for Outer Space Affairs (UNOOSA), with the following **mission statement**:

“Ensure that all countries and international and regional organizations have access to and develop the capacity to use all types of space-based information to support the full disaster management cycle.”

- Especially by 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

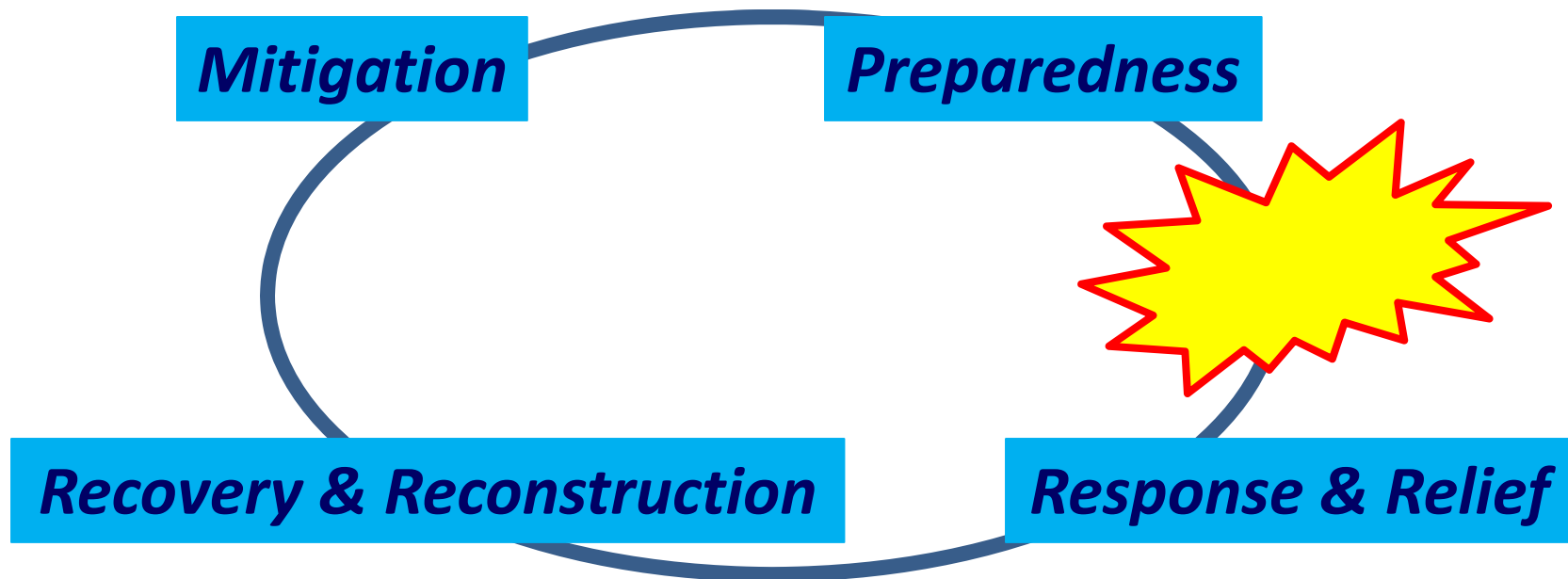
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The Disaster Management Cycle





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Network

- UN-SPIDER Team in 3 offices
- Network of 12 Regional Support Offices
- 42 National Focal Points

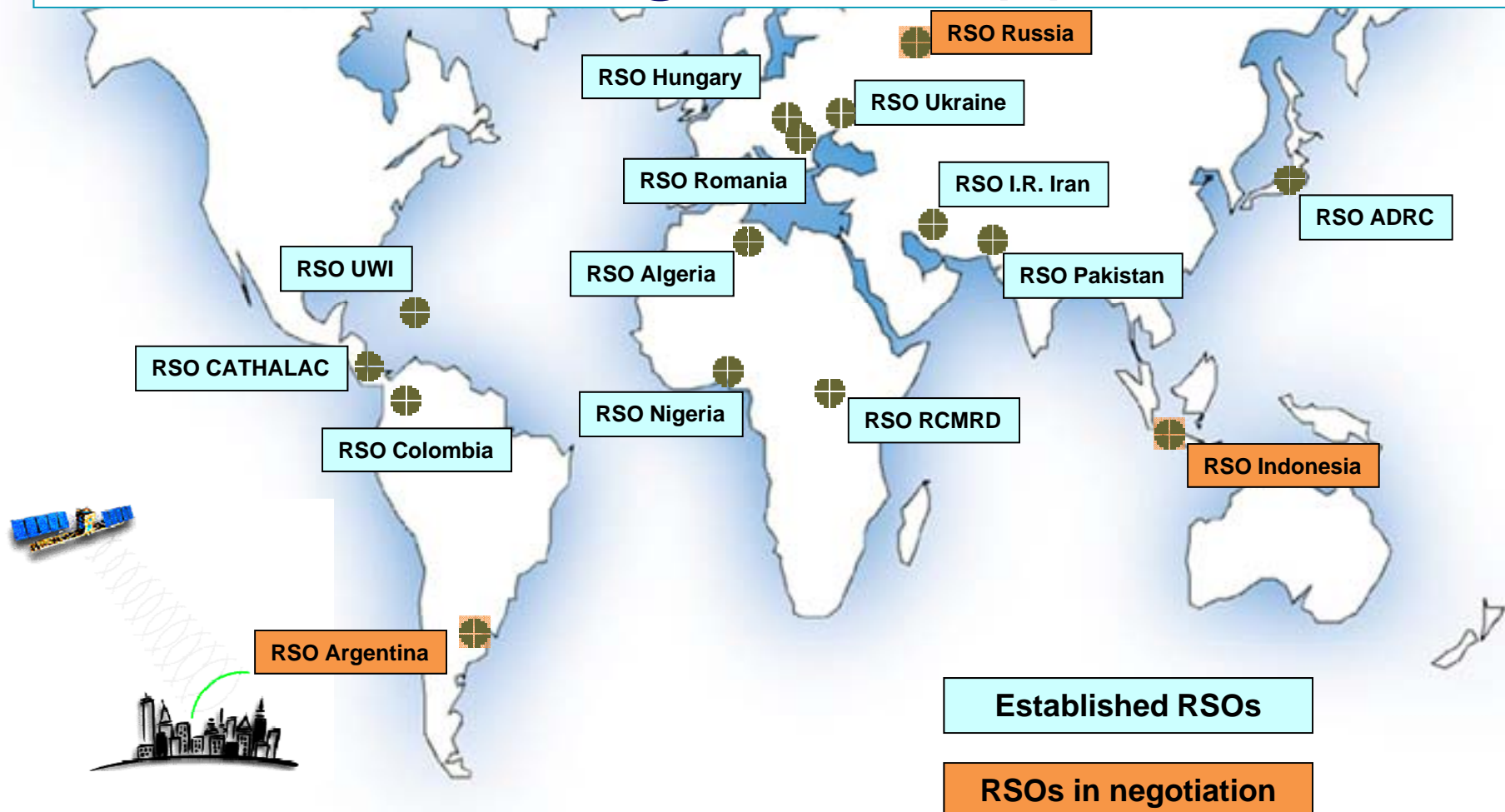




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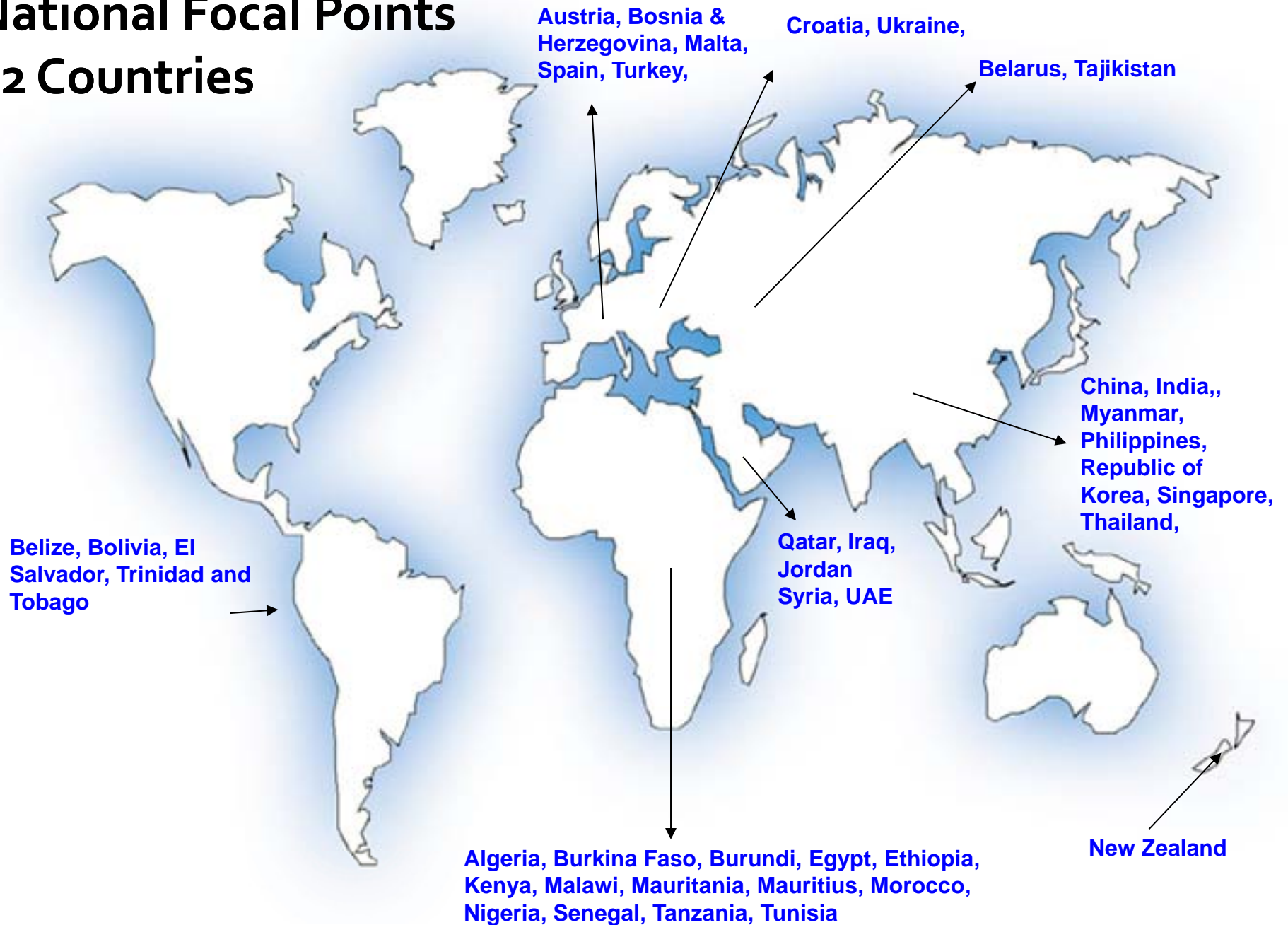
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UN-SPIDER Regional Support Offices



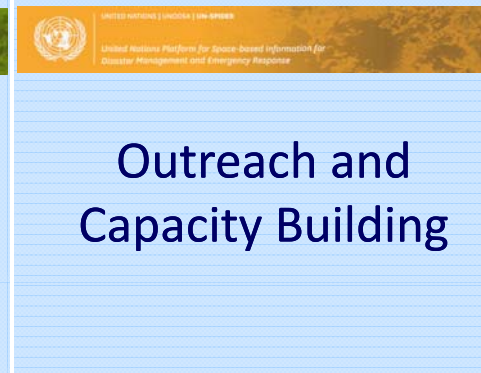
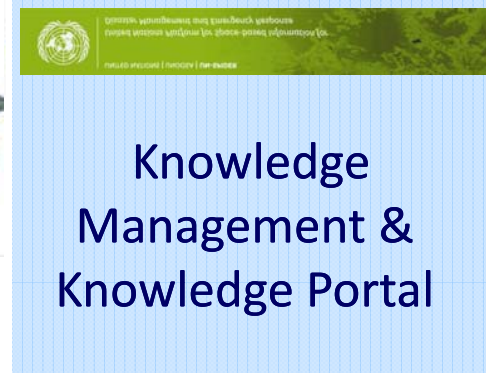
National Focal Points

42 Countries



<http://www.un-spider.org/network/national-focal-points>

How we work





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Knowledge Portal

A web portal for
information,
communication, and
process support. A
platform which
supports knowledge
management, capacity
building and technical
advisory support

www.un-spider.org

The screenshot displays the UN-SPIDER website interface. At the top, a green header features the United Nations logo and the text "UNITED NATIONS | UNOOSA | UN-SPIDER" and "United Nations Platform for Space-based Information for Disaster Management and Emergency Response". Below this is a blue navigation bar with a search box and links for "Contact", "Profile", and "Sitemap". A green "IN FOCUS" section highlights recent events, including the "3rd Annual Meeting of UN-SPIDER Regional Support Offices" and a "National Workshop on the use of space-based...". To the right, a "UN-SPIDER-WORLD" map shows global news and events. The "NEWS AND UPDATES" section lists articles such as "Disasters: Smart weather data can make a difference" and "Use space technology for food security: Former ISRO chief". The "SPACE APPLICATION MATRIX" section features a circular diagram and text about exploring space technologies for disaster management. The "NETWORK" section lists "Regional Support Offices" with logos for various organizations. The "WHAT IS UN-SPIDER" section explains the platform's mission. The "PUBLICATIONS" section includes a "VALID" button and a "PUBLICATION PROJECT: The Value of Geo-...". The "EVENTS" section lists upcoming events, including the "Fifth United Nations International UN-SPIDER Bonn Workshop on...".



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UN-SPIDER Knowledge Sources:

UN-SPIDER Network

Internet

Workshops, conferences,
expert meetings

Crowd sourcing activities

Publications

Joint projects

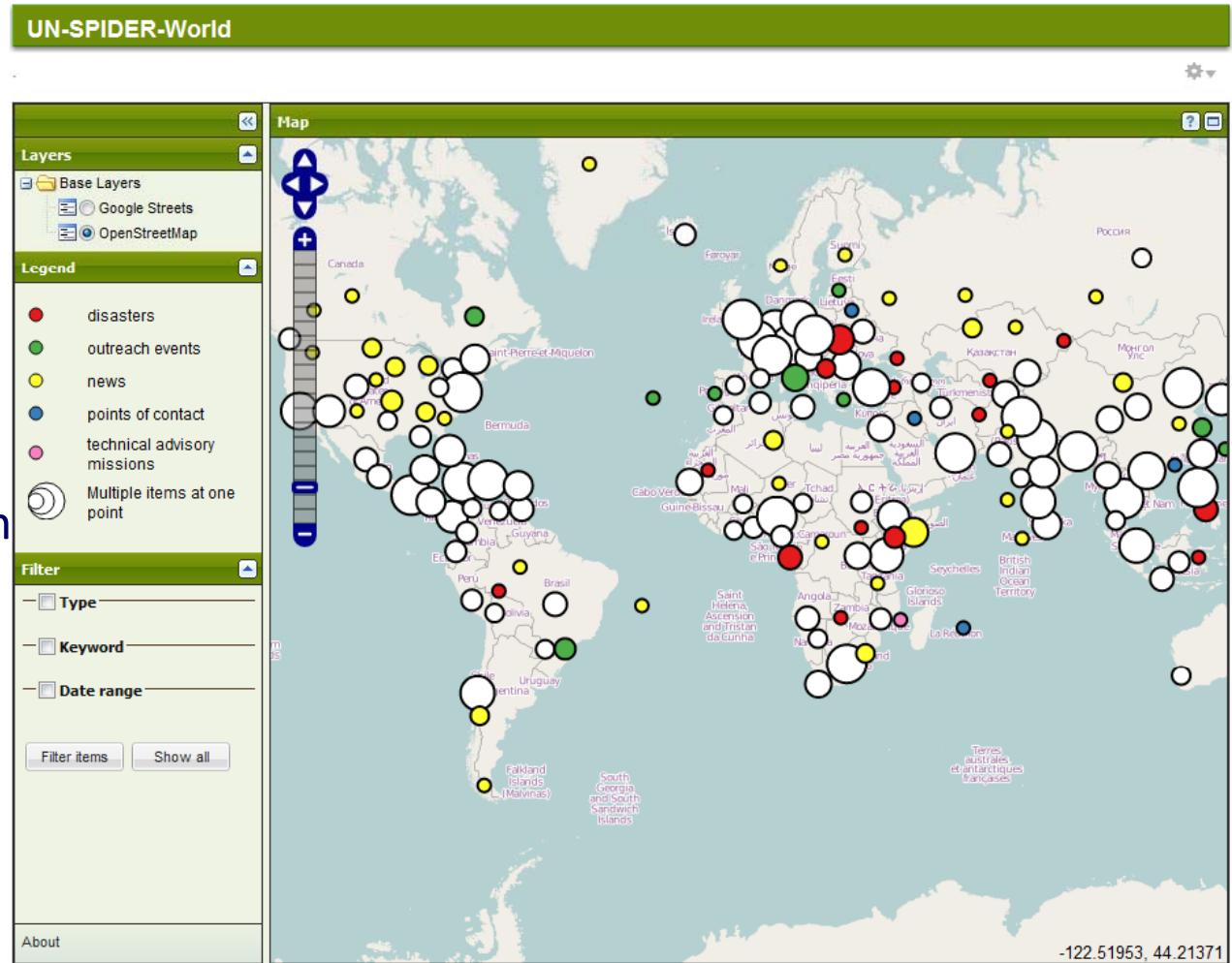


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UN-SPIDER World

Find all kind of news,
events, resources,
contact points about
what, where and with
whom we're working on
a single map



<http://www.un-spider.org/un-spider-world>



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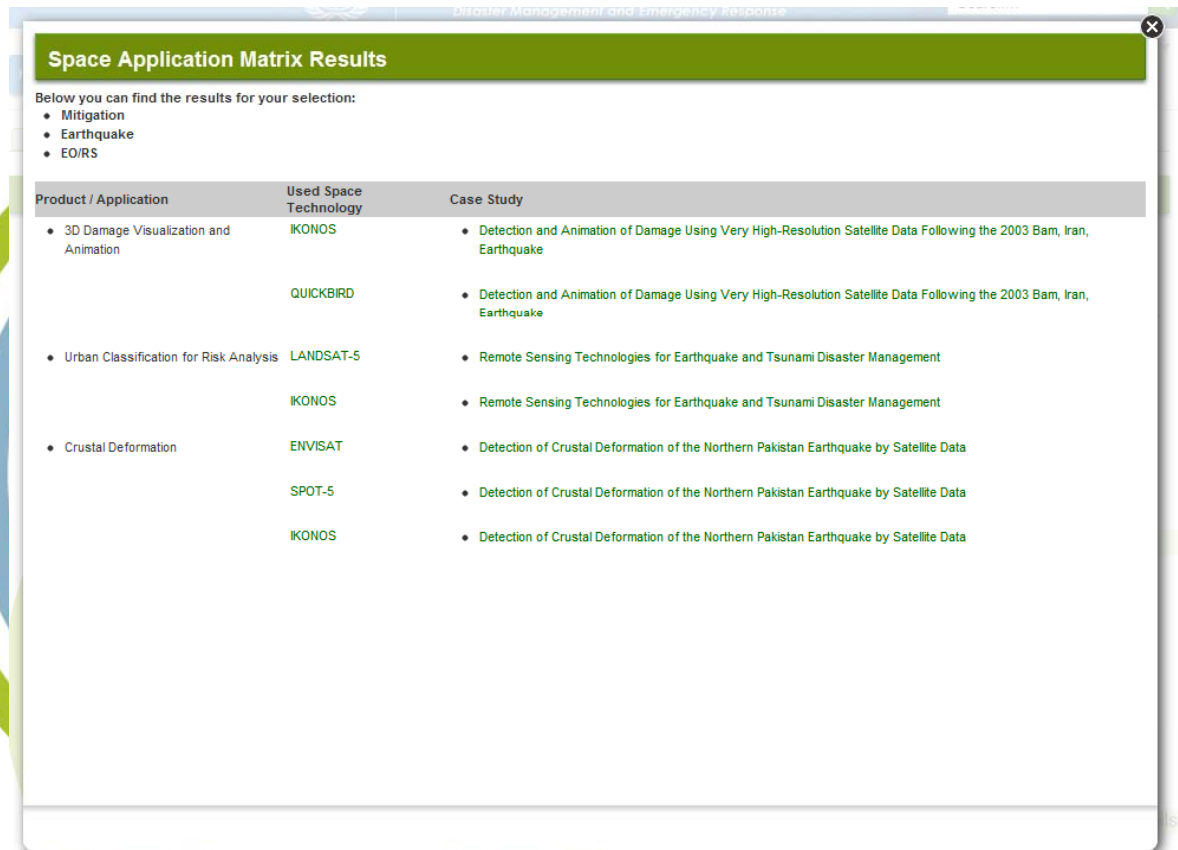
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Space Application Matrix

Search tool for case
studies on usage of
space-based technology

Usage:

1. Select disaster type
2. Select space technology
3. Select disaster management cycle phase



The screenshot shows a web application titled "Space Application Matrix Results". Below the title, it says "Below you can find the results for your selection:" followed by a list of selected filters: "Mitigation", "Earthquake", and "EO/RS". The main content is a table with three columns: "Product / Application", "Used Space Technology", and "Case Study".

Product / Application	Used Space Technology	Case Study
• 3D Damage Visualization and Animation	IKONOS	• Detection and Animation of Damage Using Very High-Resolution Satellite Data Following the 2003 Bam, Iran, Earthquake
	QUICKBIRD	• Detection and Animation of Damage Using Very High-Resolution Satellite Data Following the 2003 Bam, Iran, Earthquake
• Urban Classification for Risk Analysis	LANDSAT-5	• Remote Sensing Technologies for Earthquake and Tsunami Disaster Management
	IKONOS	• Remote Sensing Technologies for Earthquake and Tsunami Disaster Management
• Crustal Deformation	ENVISAT	• Detection of Crustal Deformation of the Northern Pakistan Earthquake by Satellite Data
	SPOT-5	• Detection of Crustal Deformation of the Northern Pakistan Earthquake by Satellite Data
	IKONOS	• Detection of Crustal Deformation of the Northern Pakistan Earthquake by Satellite Data

<http://www.un-spider.org/sam>



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Major Outreach Activities 2011

- Crowdsourcing Mapping for Preparedness and Emergency Response: Expert Meeting I, Vienna, Austria, 5 – 6 July
- Crowdsourcing Mapping for Preparedness and Emergency Response: Expert Meeting II, Geneva, Switzerland, 16 November
- Regional Training Activity, Ouagadougou, Burkina Faso, 26 – 30 September
- United Nations International Conference on Space-based Technologies for Disaster Risk Management: Beijing, China, 22 – 25 November
- Support to Regional Events





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Technical Advisory Support

- What **national capacity exists** to use space-based information?
- How are institutions **working together** to support disaster risk management through space-based information?
- Where are **constraints/gaps** which restrain the use of space-based information for disaster risk management

Technical
Advisory
Missions

Technical
Support

Facilitation of
direct
cooperation



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Technical Advisory Support (2010-2011)





Disasters Supported in 2010-2011

- Benin
- Burkina Faso
- Chile
- China
- Cook Islands
- Gaza oPt
- Guatemala
- Iran
- Japan
- Haiti
- Horn of Africa
- Kazakhstan
- Kenya
- Madagascar
- Moldova
- Myanmar
- Namibia
- Pakistan (3x)
- Panama
- Philippines
- Senegal
- Solomon Islands
- Sri Lanka
- South Sudan
- Tajikistan
- Thailand
- Tonga
- Turkey
- Uganda
- Ukraine (2x)



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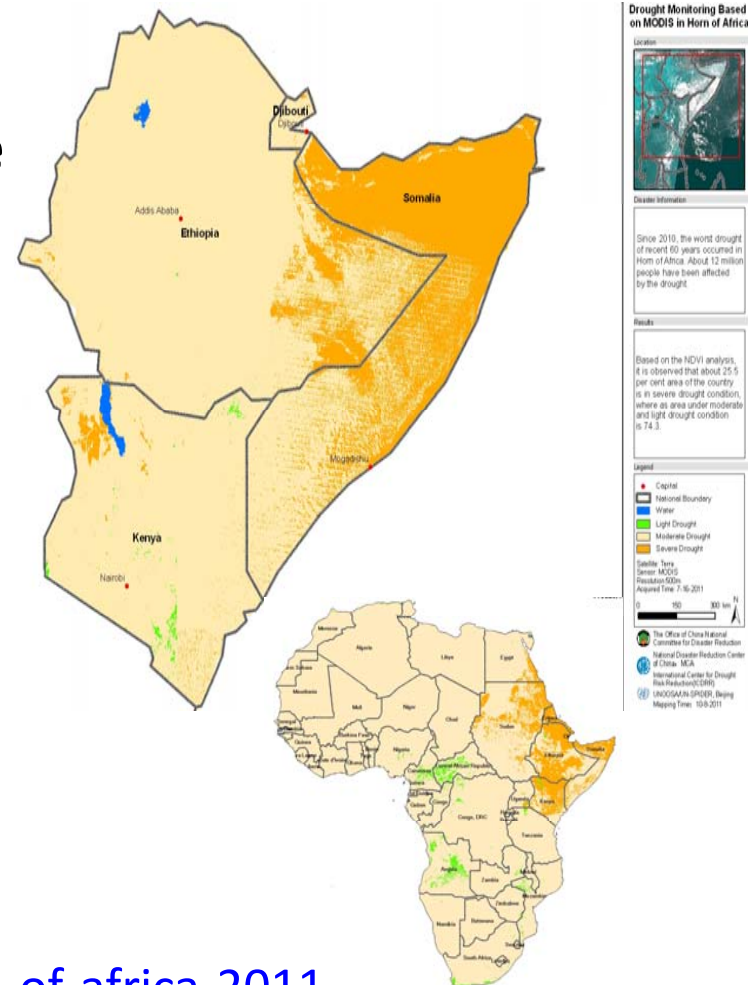
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Support to the Horn of Africa

Regions of Somalia, Kenya, Ethiopia and Djibouti are severely affected by extreme drought, forcing large numbers of people to migrate in search of humanitarian assistance.

Involvement of UN-SPIDER:

- Collaborated with major international and regional partners
- Established a resource page on the Knowledge Portal



<http://www.un-spider.org/horn-of-africa-2011>



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UN Office for Outer Space Affairs

Some information

- Established 1962
- ~40 staff members
- Main office in Vienna, branch offices of UN-SPIDER in Beijing and Bonn
- Part of UN Office in Vienna and the Secretariat (UNOV)
- Headed by Director Mazlan Othman (since 2007)



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UN Office for Outer Space Affairs

Work topics

- Promotes international cooperation in the **peaceful uses of outer space**
- Serves as the secretariat for the UN Committee on the Peaceful Uses of Outer Space (UN COPUOS)
- Maintains the UN Register of Objects Launched into Space

Involved in capacity building for

- Remote sensing
- Satellite navigation & meteorology
- Tele-education & basic space science



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Structure of the UN-SPIDER team

Interdisciplinary team (geography, international relations, biology, computer sciences, physics, political sciences)

- 4 posts of general budget
- 3 JPOs
- 4 staff seconded from other agencies
- 3 consultants
- 2-8 interns





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THANK YOU!

Luc.St-Pierre@unoosa.org



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