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

Promotion of Application of Space Technology into DRR

Asian Conference on Disaster Reduction 2010
(ACDR 2010)
17-19 January 2010
Kobe (Hyogo) - Japan



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United Nations Office for Outer Space Affairs - UNOOSA

The Office is responsible for promoting international cooperation in the peaceful uses of outer space, to support the achievement of development goals for the benefit of humankind

The Office implements the decisions of the United Nations General Assembly and of the Committee on the Peaceful Uses of Outer Space and its two Subcommittees, the Scientific and Technical Subcommittee and the Legal Subcommittee.

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Space Technologies for Disaster Risk Management

Satellite communications help warn people who are at risk, especially in remote areas. They help connect a disaster zone to the outside world. Also support telemedicine networks



Global navigation satellite systems enable us to obtain positional information on events that have to be mapped



Images from remote sensing satellites help assess the damage caused by disasters like earthquakes, volcano eruptions, oil spills and floods.



Photo Credit: UNHCR



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Haiti 12 January 2010



Haiti's presidential palace before (top) and after the earthquake Photo: AFP/GETTY



UN Mission HQ in Haiti

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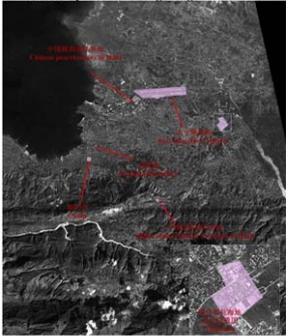
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Focus on emergency response



海地地震灾区遥感监测图 (2)
Haiti Earthquake Monitoring Using China-DMC-4



卫星型号 (Satellite): China-DMC-4
传感器类型 (Sensor): PAN
获取时间 (Data Acquired): 13/01/2010
分辨率 (Spatial resolution): 6m
投影 (Projection): UTM
坐标系 (Coordinate): WGS84

E-mail: unspider@unospider.org.cn
Phone: (86-10) 8354 7888

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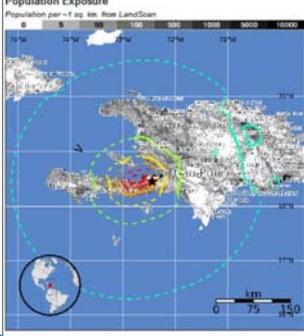
U.S. geologists presented a paper at the 18th Caribbean Geological Conference in Santo Domingo in 2008 concluding that Port-au-Prince, which had not been hit by a major seismic event since 1751, could face a 7.2 magnitude earthquake.

Estimated Population Exposed to Earthquake Shaking				
Est. Modified Mercalli Intensity	Est. Population Exposure	Perceived Shaking	Potential Structure Damage	
			Resistant	Vulnerable
IX	137k	Extreme	V. Heavy	V. Heavy
IX	101k	Violent	Heavy	V. Heavy
VIII	1,157k	Severe	Moderate/Heavy	Heavy
VII	2,023k	Very Strong	Moderate	Moderate/Heavy
VI	1,349k	Strong	Light	Moderate
V	6,604k	Moderate	V. Light	Light
IV	6,284k	Light	none	none
III	--*	Weak	none	none
I	--*	Not Felt	none	none

*Estimated exposure only includes population within calculated phase map area

Population Exposure

Population per 1 sq. km. from LandScan



Selected Cities Exposed

MMI City	Pop.
IX Petit-Goave	15k
IX Les Cayes	12k
IX Grand-Goave	5k
IX Gonaïves	4k
VIII Cap-Haïtien	442k
VIII Miragoâne	7k
VIII Port-au-Prince	1,235k
VIII Deshaies 73	25k
V Vanves	49k
IV Santiago de los Caballeros	55k
III Santo Domingo	2,202k

Shaking Intensity



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The Space-Community perspective...



© German Aerospace Center (DLR)



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UN-SPIDER Network

- UN-SPIDER Team
- Network of Regional Support Offices (RSOs)
- National Focal Points

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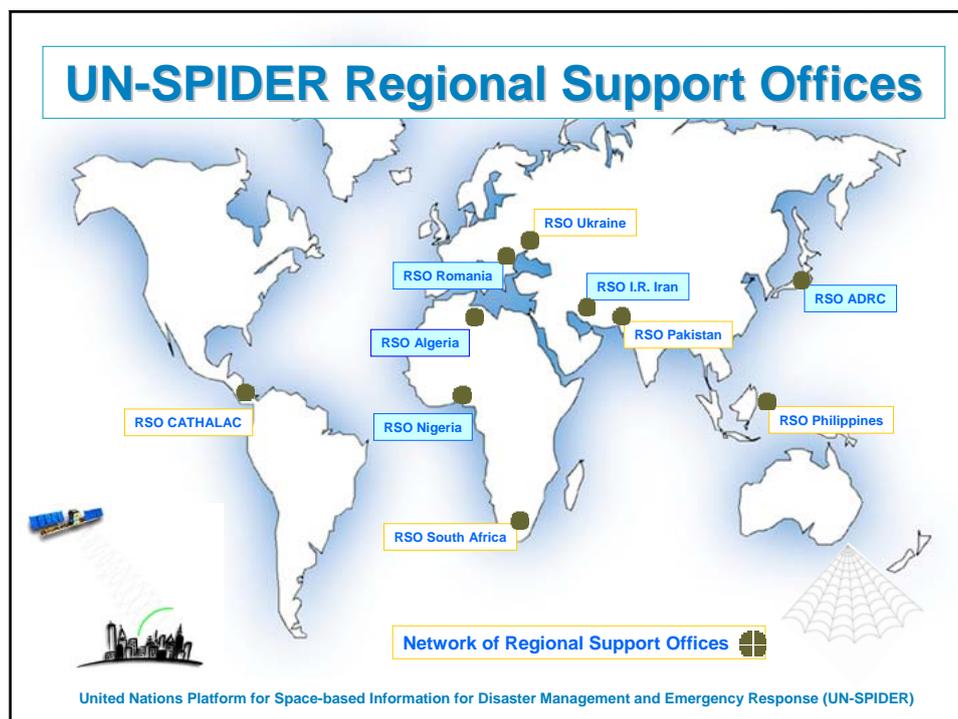
UN-SPIDER TEAM

UN-SPIDER in Vienna

UN-SPIDER Bonn Office

UN-SPIDER Beijing Office

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NFP – National Focal Points

- **UN-SPIDER supports all countries through National Focal Points (NFP). A NFP is a national institution, nominated by the Government of the respective country, representing the disaster management and space application communities**
- **Role: to work with UN-SPIDER staff to strengthen national disaster management planning and policies and implement specific national activities that incorporate space-based technology solutions in support of disaster management.**
- **Nominations received from: Algeria, Austria, Belarus, Belize, Bolivia, Bosnia & Herzegovina, Burundi, China, Egypt, El Salvador, Ethiopia, India, Iraq, Jordan, Kenya, Malawi, Malta, Mauritania, Mauritius, Morocco, Myanmar, New Zealand, Philippines, Qatar, Republic of Korea, Senegal, Singapore, Spain, Syria, Tanzania, Thailand, Trinidad and Tobago, Turkey, UAE, and Ukraine.**

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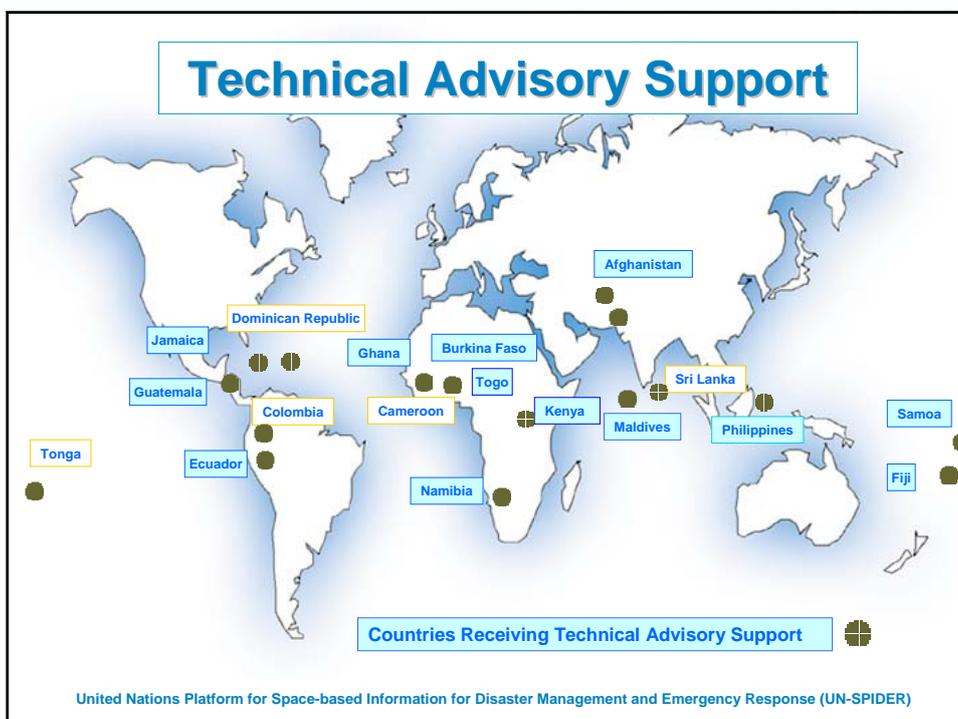
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Technical Advisory Support

Technical Advisory Support can range from a simple consultative phone call to full-fledged in situ technical support. It often materializes in any of the following three forms: 1. Technical Advisory Missions involving experts from various space and disaster management agencies and countries under the umbrella of one mission; 2. Technical advice to national institutions by means of meetings, teleconferences, video conferences, etc; 3. Facilitating direct cooperation between national institutions and satellite imagery providers.

Technical Advisory Support provides know-how on the latest disaster management practices involving space technology. Ensures access to international cooperation and regional opportunities, networking with regional institutions, and setting up disaster management plans. It also covers region-specific aspects such as trans-boundary issues, emergency response, risk assessment, GIS based disaster management systems, and disaster risk reduction.

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Namibia Seeks to Enhance Floods Management

By Patricia Simons

Advanced regions in the southern part, namely Erongo, Karas, and Kunene, are expected to be affected by the International Centre for Space and Major Disasters' for support on how the country can improve satellite usage to help respond to natural disasters, especially in the southern part of the country.

A year after floods devastated regions in the southern part, namely Erongo, Karas, and Kunene, the International Centre for Space and Major Disasters' for support on how the country can improve satellite usage to help respond to natural disasters, especially in the southern part of the country.

The satellite images will not only provide a general overview of the flood-prone areas, but will also help in assessing prevention and response plans.

On Friday, officials from the state government announced, the United Nations Office for Outer Space Affairs and the German Aerospace Establishment in the capital for a national consultation workshop and hands-on training on Remote Sensing Data Interpretation. Technical support for Flood Mapping is provided by the German Aerospace Establishment. Technical assistance in satellite imagery processing is provided by the German Aerospace Establishment.

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Technical Advisory Missions

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UN-SPIDER Knowledge Portal

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Advanced Search Visual Globe

WHAT IS UN-SPIDER

UN-SPIDER aims at providing universal access to all types of space-based information and services relevant to disaster management 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.

UN-SPIDER Promotional Video

DISASTER INFORMATION

Disaster	Region	Date
Earthquake	Haiti	12/01/2010
Floods	Bolivia	05/01/2010
Landslide	Philippines	05/01/2010
Cold Wave	Guatemala	05/01/2010
Cold Wave	Mexico	05/01/2010
Cold Wave	China	04/01/2010

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SPACE APPLICATION MATRIX (preview)

SPACE APPLICATION MATRIX

MITIGATION PREPARATION RESPONSE

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VISUAL GLOBE

Enter Visual Globe

Calendar

January 2010

S	M	T	W	T	F	S
27	28	29	30	31	1	2
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24	25	26	27	28	29	30
31	1	2	3	4	5	6

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Ensuring Horizontal Cooperation

§ **SPIDER Global Thematic Partnership** – established at the 2nd GPDRR. Working together to ensure access and use for disaster risk reduction.

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SpaceAid

Ensuring Access to Existing Opportunities

§ **SpaceAid** – A framework that ensures all countries and international and regional organisations are able to access and use all types of space-based information for humanitarian and emergency response. Work through Regional Support Offices, National Focal Points and local UN Agencies

- 24/7 Hotline for NFPs and UN (telephone, email or fax)

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SpaceAid Disaster Webpage

- Updated information on the disaster
- Updated information on available products
- Information on available pre- and post disaster images
- UN-SPIDER contact points
- Information on Satellite and Sensor Tasking
- Available geospatial data sets
- Other Space-based information
- Situation Reports and additional relevant links

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DISASTER

EARTHQUAKE IN HAITI

Author: peter.stumpf
Tagging: Earthquake Haiti Ouest Province
Date: 12/01/2010

On 1/12/2010 9:53:09 PM UTC an earthquake of **magnitude 7** and **depth 10km** has struck a very highly populated area in the **Ouest Province** (population: 2.2 million) in Haiti. GDACS estimates the **likelihood for need of international humanitarian intervention to be high** (Red alert).

This earthquake can have a **high humanitarian impact** since the affected region is **very highly populated** and has **medium resilience** for natural disasters.

The earthquake 15km from the city of Port-au-Prince. The nearest populated places are Bras Drot (11km), Au Silence (14km), Aboni (15km), Henry (2km), P_Jonville (18km), Bellevue (13km).It is a mountainous region with a maximum altitude of 2532 m.

Source: [GDACS](#)

On 1/12/2010 9:53:09 PM, an earthquake of magnitude 7 and depth 10km occurred in Haiti. This earthquake potentially affected 5.4 million people.

Source: [GLIDEnumber](#)

FORUM

▶ Earthquake in Haiti

PAGE

▶ UN-SPIDER Update: Haiti - Earthquake

Disaster Information

GLIDnumber: EQ-2010-000009-HTI

Region: Haiti

Occurance Date: 12/01/2010

SpaceAid: activated

Disaster Groups

- ▶ Cold Wave in Mongolia
- ▶ Earthquake in Haiti
- ▶ Flood in Bolivia
- ▶ Cold Wave in Mexico
- ▶ Cold Wave in Guatemala

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New forum topics

- ▶ Earthquake in Haiti
- ▶ Discussion Board - Tropical Cyclone Ketsana - Lao P. [Debyce Rep.](#)

Calendar

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10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

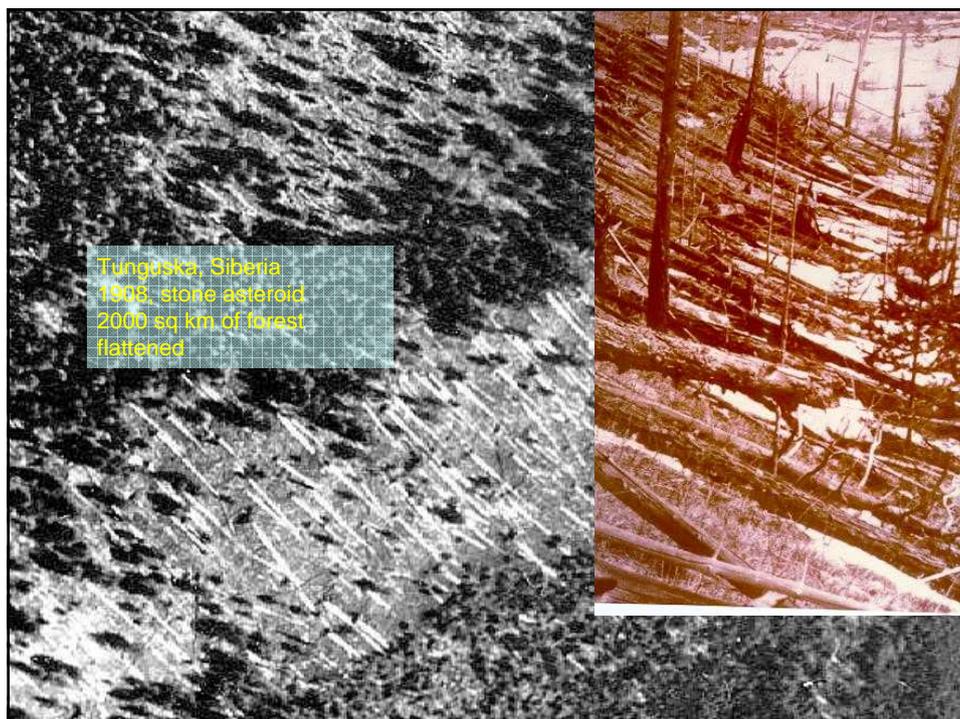
next events...
past events...

User login

Username: *

Password: *

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THANK-YOU

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