

31<sup>st</sup> Space Symposium, Colorado Springs, USA,  
16 April 2015

# Challenges in using Space based Information - Disaster Risk Reduction Perspective

**Shirish Ravan**

Head, UN-SPIDER Beijing Office

[shirish.ravan@unoosa.org](mailto:shirish.ravan@unoosa.org), [www.unoosa.org](http://www.unoosa.org)



UNITED NATIONS  
Office for Outer Space Affairs



- The UNOOSA implements the decisions of the **General Assembly** and of the **United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)**;
- Coordinates the **inter-agency coordination** within the United Nations on the use of space technology (**UN-Space**);
- Implements the United Nations **Programme on Space Applications**;
- Serves as Executive Secretariat for the **International Committee on Global Navigation Satellite Systems (ICG)**
- Is responsible for the implementation of the **United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER)** programme;







UNITED NATIONS  
Office for Outer Space Affairs



# UN-SPIDER Technical Advisory Missions



**Vietnam**



**Sri Lanka**



**Myanmar**





UNITED NATIONS  
Office for Outer Space Affairs



**Sudan**



**Solomon Island**

**UN-SPIDER  
connects disaster  
managers and  
Space Community**



**UN-SPIDER Annual Conference in Beijing**



## Lesson learned



**A tool in DAILY USE is the best  
tool during EMERGENCY**



**A tool in daily use  
is the best tool  
during emergency**



- Disaster Managers should use space technology on routine basis
- **Shifting focus – ‘Emergency Response’ to ‘Disaster Risk Reduction’**





UNITED NATIONS  
Office for Outer Space Affairs



## Third United Nations World Conference on Disaster Risk Reduction 14 to 18 March 2015, Sendai, Miyagi, Japan





## Sendai Framework on Disaster Risk Reduction 2015-2030

Building on the **Hyogo Framework for Action**, the present framework aims to achieve the following outcome over the **next 15 years**:

*The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.*

**7 Global targets**

**4 priorities**





## The seven global targets

- (a) Substantially reduce **global disaster mortality** by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared to 2005-2015.
- (b) Substantially reduce the **number of affected people** globally by 2030, aiming to lower the average global figure per 100,000 between 2020-2030 compared to 2005-2015.
- (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 through adequate and sustainable support to complement their national actions for implementation of this framework by 2030.
- (g) Substantially increase the **availability of and access to multi-hazard early warning systems and disaster risk information and assessments** to the people by 2030.



## The four priorities

### Sendai Framework for Disaster Risk Reduction 2015-2030

1. Understanding disaster risk;
2. Strengthening disaster risk governance to manage disaster risk;
3. Investing in disaster risk reduction for resilience;
4. Enhancing disaster preparedness for effective response, and to “Build Back Better” in recovery, rehabilitation and reconstruction.

### Hyogo Framework for Action 2005-2015

1. Ensure that disaster risk reduction is a national and local priority with a strong institutional basis for implementation;
2. Identify, assess and monitor disaster risks and enhance early warning.;
3. Use knowledge, innovation and education to build a culture of safety and resilience at all level;
4. Reduce the underlying risk factors;
5. Strengthen disaster preparedness for effective response at all levels.



UNITED NATIONS  
Office for Outer Space Affairs



# Special Session on Earth Observation and High Technologies



UN-SPIDER



UNOSAT  
satellite imagery for all  
www.unosat.org



Disaster Management Centre





UNITED NATIONS  
Office for Outer Space Affairs

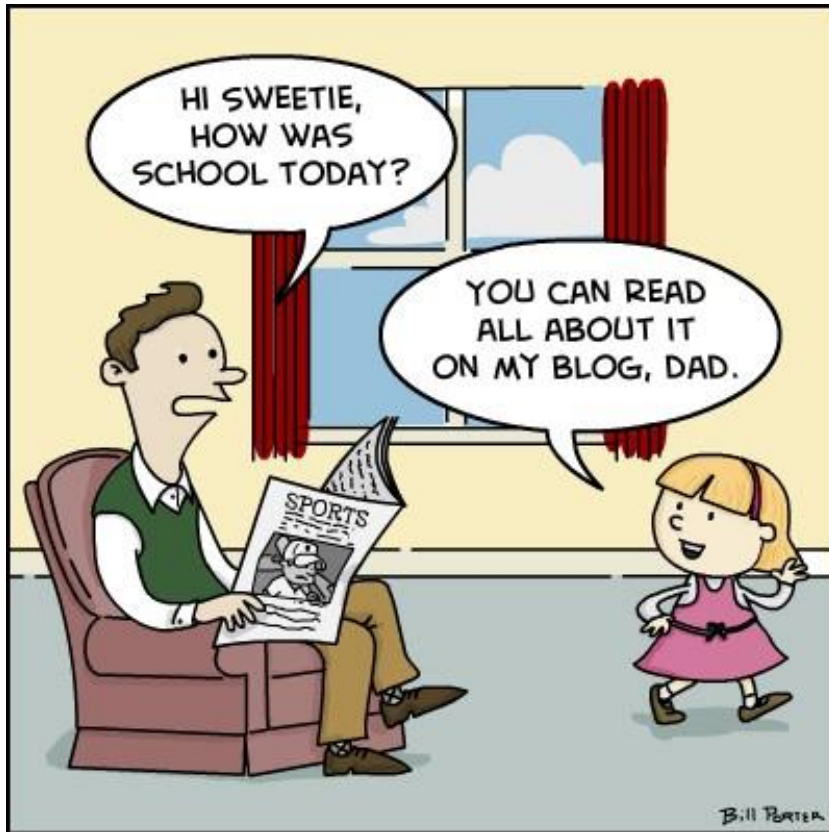


# Voluntary commitment and Global Partnership

A way forward to ensure role of space technology in  
Disaster Risk Reduction for next 15 years



## Major Challenge



Decision makers / End  
Users (Disaster managers)



Missing link



Providers of Space based  
and Geospatial  
Information



UNITED NATIONS  
Office for Outer Space Affairs



## Myanmar – on the background of 2008 Cyclone Nargis







UNITED NATIONS  
Office for Outer Space Affairs



**Why not prepare well in advance !!!**

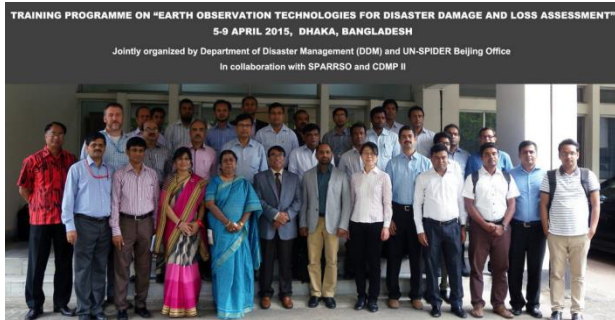




## Preparing well in advance needs partnership

# Where we need partnership

- Ensure Adequate availability and access to space based information during normal situation – *at affordable cost*
- Timely assistance during emergency – *with real data, not pdf*
- Assist on formulating policies at national/regional level - *SDI or Geospatial policies/ Data sharing*
- Assist in capacity building of the end users – *Involve in preparing proof of concepts/case studies*
- Advisory and Outreach to the end users – *Be part of UN-SPIDER advisory mission and outreach activities*



**Capacity  
Building  
April 2015**

**Bangladesh – supported by DigitalGlobe**



**Bhutan – supported by AIRBUS**

## Upcoming events

- United Nations/Germany International Conference on Earth Observation – Global solutions for the challenges of sustainable development in societies at risk – **26-28 May 2015, Bonn, Germany**
- East Asia Summit (EAS) workshop on Application of Space Information Technology in Major Natural Disaster Monitoring and Assessment - **1-5 June 2015, Hangzhou, China**
- United Nations International Conference on Space Technology for Disaster Risk Management, **September 2015, Beijing, China**
- Special event in Delta State University – **September 2015, Cleveland, USA**





UNITED NATIONS  
Office for Outer Space Affairs



**Effective Public and Private partnership  
is needed to save lives and assets at risk**

[shirish.ravan@unoosa.org](mailto:shirish.ravan@unoosa.org)