



UNITED NATIONS | UNOOSA | UN-SPIDER

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

Role of space based information in light of the Post 2015 Framework for Disaster Risk Reduction: UN-SPIDER Interventions

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Context



COPUOS

**Committee for Peaceful
Uses of Outer Space**



UN-SPIDER

**Hyogo Framework
for Action (HFA)**





The HFA in Brief



International Strategy for Disaster Reduction

HFA



Hyogo Framework for Action 2005 - 2015: Building the Resilience of Nations and Communities to Disasters

Every year, more than 200 million people are affected by droughts, floods, cyclones, earthquakes, wildfires, and other hazards. Increased population densities, environmental degradation, and global warming adding to poverty make the impacts of natural hazards worse.

The past few years have reminded us that natural hazards can affect anyone, anywhere. From the Indian Ocean tsunami to the South Asia earthquake, from the devastation caused by hurricanes and cyclones in the United States, the Caribbean and the Pacific, to heavy flooding across Europe and Asia, hundreds of thousands of people have lost their lives, and millions their livelihoods, to disasters caused by natural hazards.

"Time is running out. We have less than 8 years left to achieve the goals set in the Hyogo Framework for Action. While some progress has been made, the cruel reality is that – helped by short sighted policies and practices – the vulnerability of our societies continues to grow. I urge all Governments, and regional and local authorities, to make disaster risk reduction a real priority and to accelerate practical steps to make communities safer from disasters. This will mean the investment of human and financial

- The World Conference on Disaster Reduction January 2005, Kobe, Hyogo, Japan
- Political commitment of 168 Governments
- Paradigm shift from **Emergency Response** to **Risk Reduction**

Consultation process for Post 2015 Framework for DRR is in full swing



HFA – Priority Actions

Priority Actions: to guide the implementation of HFA and translate political commitment into action

Priority 1: Ensure that disaster risk reduction is **a national and local priority** with a strong institutional basis for implementation.

Priority 2: **Identify, assess and monitor disaster risks** and enhance **early warning**.

Priority 3: Use **knowledge, innovation and education** to **build a culture of safety** and **resilience** at all level.

Priority 4: Reduce the **underlying risk factors**.

Priority 5: **Strengthen disaster preparedness** for effective response at all levels.



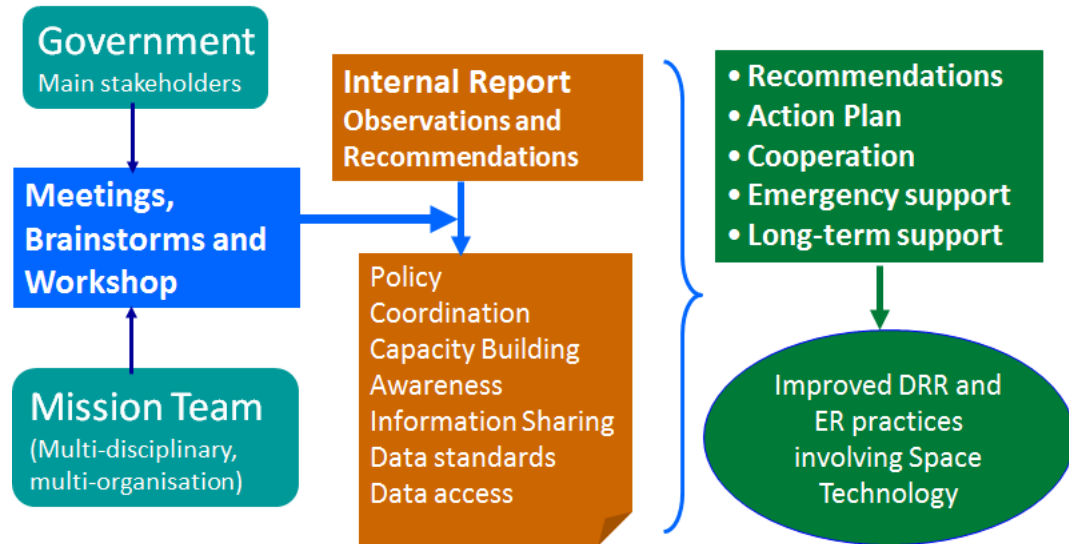
HFA Priority 1

Disaster risk
reduction - national
and local priority
with a strong
institutional basis for
implementation.



UN-SPIDER Contribution

UN-SPIDER Technical Advisory Support & Missions





UN-SPIDER Technical Advisory Support

ASIA

1. Bangladesh
2. India
3. Indonesia
4. Lao PDR
5. Myanmar
6. Sri Lanka
7. Vietnam

Pacific

1. Fiji
2. Samoa
3. Solomon Islands
4. Tonga
5. Vanuatu

Africa

1. Burkina Faso
2. Burundi
3. Cameroon
4. Cape Verde
5. Chad
6. Congo
7. DR Congo
8. Gabon
9. Ghana
10. Kenya
11. Malawi
12. Mozambique
13. Nigeria
14. Sudan



**Support offered to more
than 25 countries**





HFA Priority 2

HFA Priority 2 & 3

Identify, assess and monitor disaster risks and enhance early warning.

Use knowledge, innovation and education to build a culture of safety and resilience



UN-SPIDER Contribution

Follow-up of Advisory Mission outcomes

Capacity building

Knowledge management
(www.un-spider.org)



UN-SPIDER Capacity Building Efforts



National training programmes in 2013

Sri Lanka
Myanmar
Bangladesh

Mozambique
Cameroon
China

International training programmes in 2013

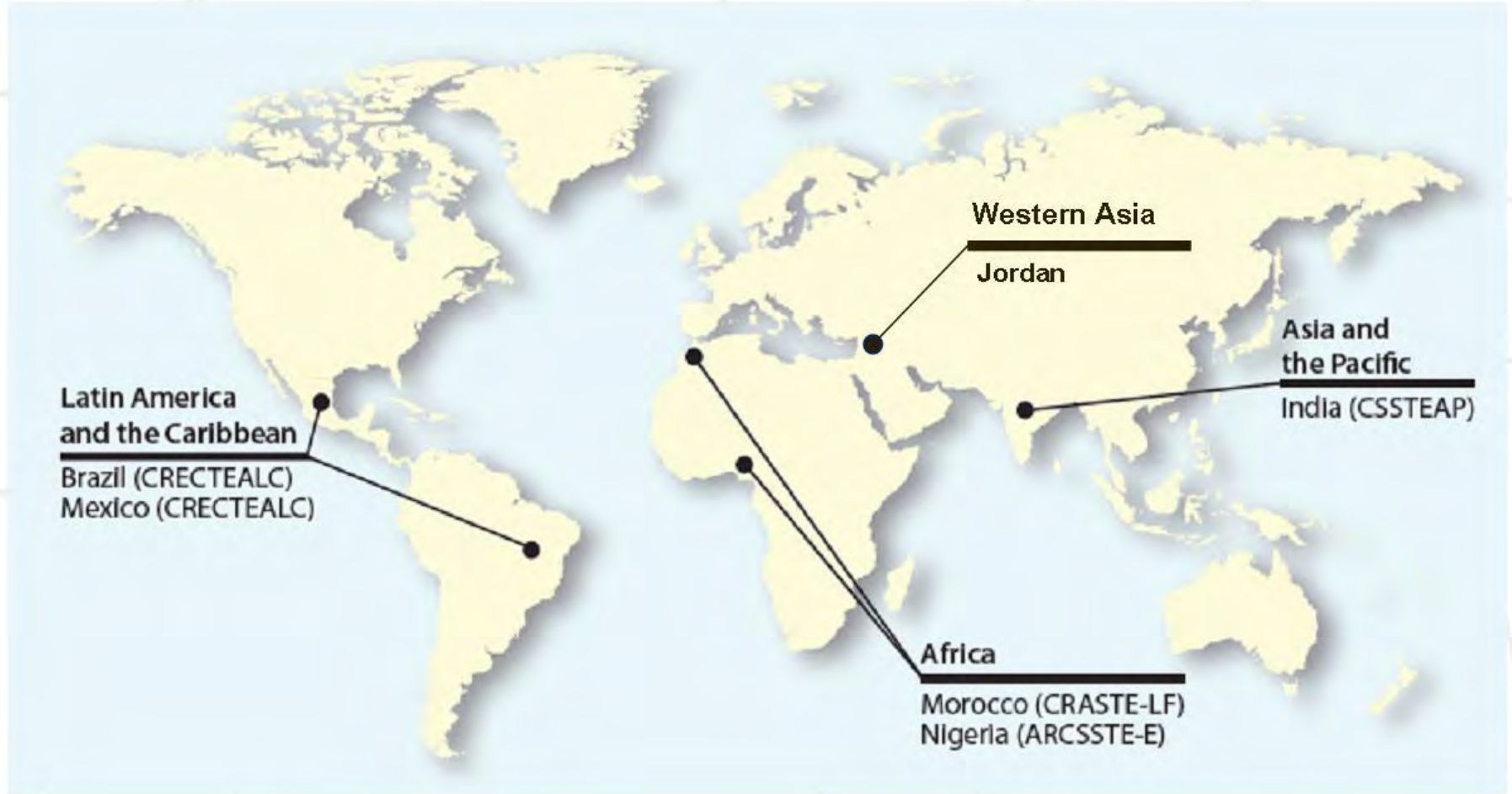
China- with NDRCC and APSCO

UN Affiliated Regional Centre in India (With ESCAP and IWMI)





Centres for Space Science and Technology Education (affiliated to the United Nations)



Regional Centres offers training in wide range of space applications



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Joint publications – UN-SPIDER and JBGIS



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HOME

SPACE APPLICATION

ADVISORY SUPPORT

KNOWLEDGE BASE

NETWORK

PROJECTS

ABOUT US



IN FOCUS



Repository of free geospatial
data and products...



China: Interactive training
for disaster risk...



Indonesia: Stakeholder
Meeting for disaster...

Free Data Sources

Earth Observation data and data products provide crucial
information for disaster risk management...

[Read more](#)

The Value of Geoinformation for Disaster and Risk Management (VALID)

Benefit Analysis and Stakeholder Assessment



International Council
for Science - GeoUnions

Joint Board of Geospatial
Information Societies

United Nations Office
for Outer Space Affairs



Joint Board of Geospatial Information Societies

United Nations Office for Outer Space Affairs

Geoinformation for Disaster and Risk Management *Examples and Best Practices*



www.un-spider.org



HFA Priority 4

HFA Priority 4

Reduce the
underlying risk
factors



UN-SPIDER Contribution

UNOOSA covers wide range of thematic areas of space applications

- + Disaster Management
- + Natural Resources Management
- + Environmental Monitoring (Climate Change)
- + Tele-health/Tele-medicine
- + GNSS
- + COSPAS-SARSAT
- + Space Law
- + Socio-Economic Benefit



HFA Priority 5

HFA Priority 5

Strengthen disaster preparedness for effective response at all levels.



UN-SPIDER Contribution



UN-SPIDER

**Regional Support
Offices**

**Partner
Organisations**



Post 2015 Framework for DRR

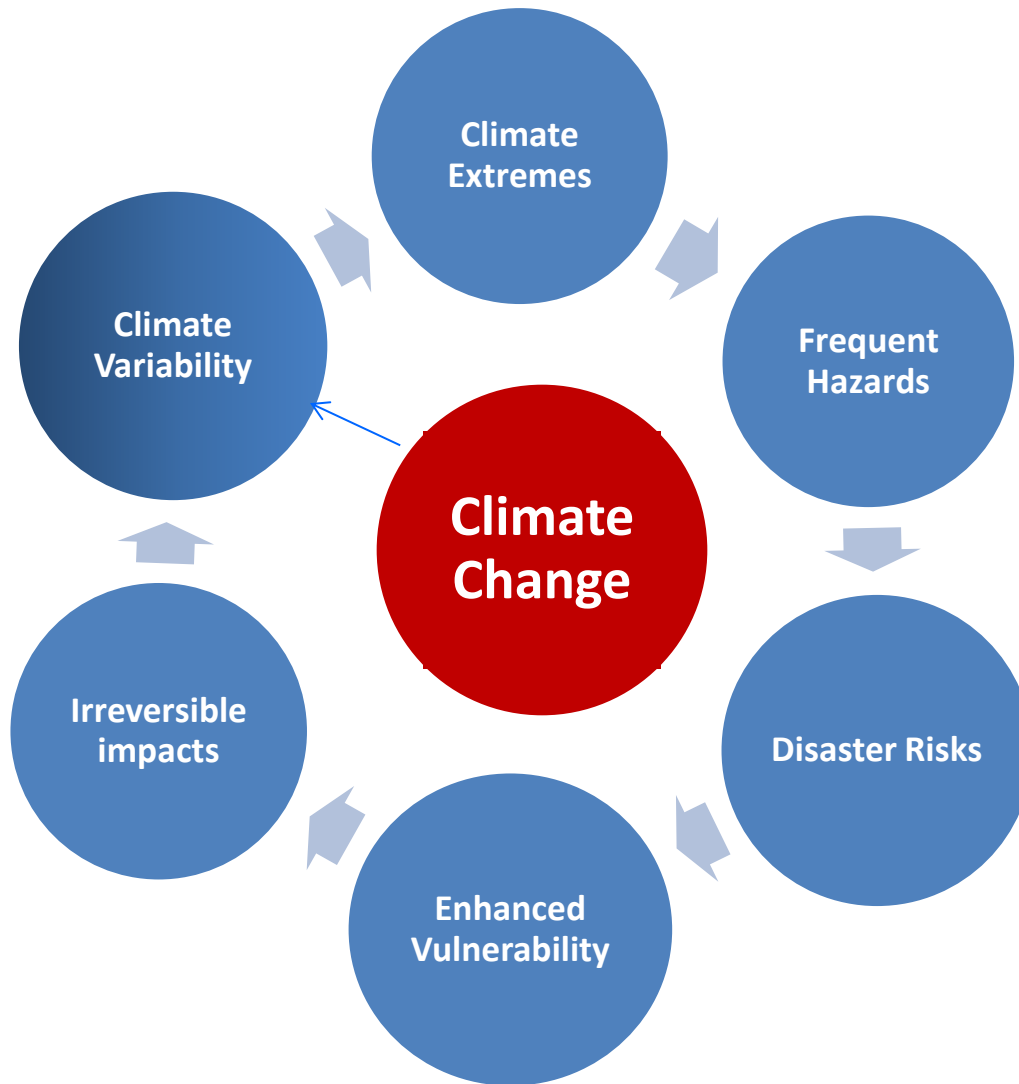


Post 2015 Framework for DRR refers to integrating DRR in

- **Climate Change Adaptation**
- **Sustainable Development**
- **Environmental Conservation**



Climate Change and Disasters

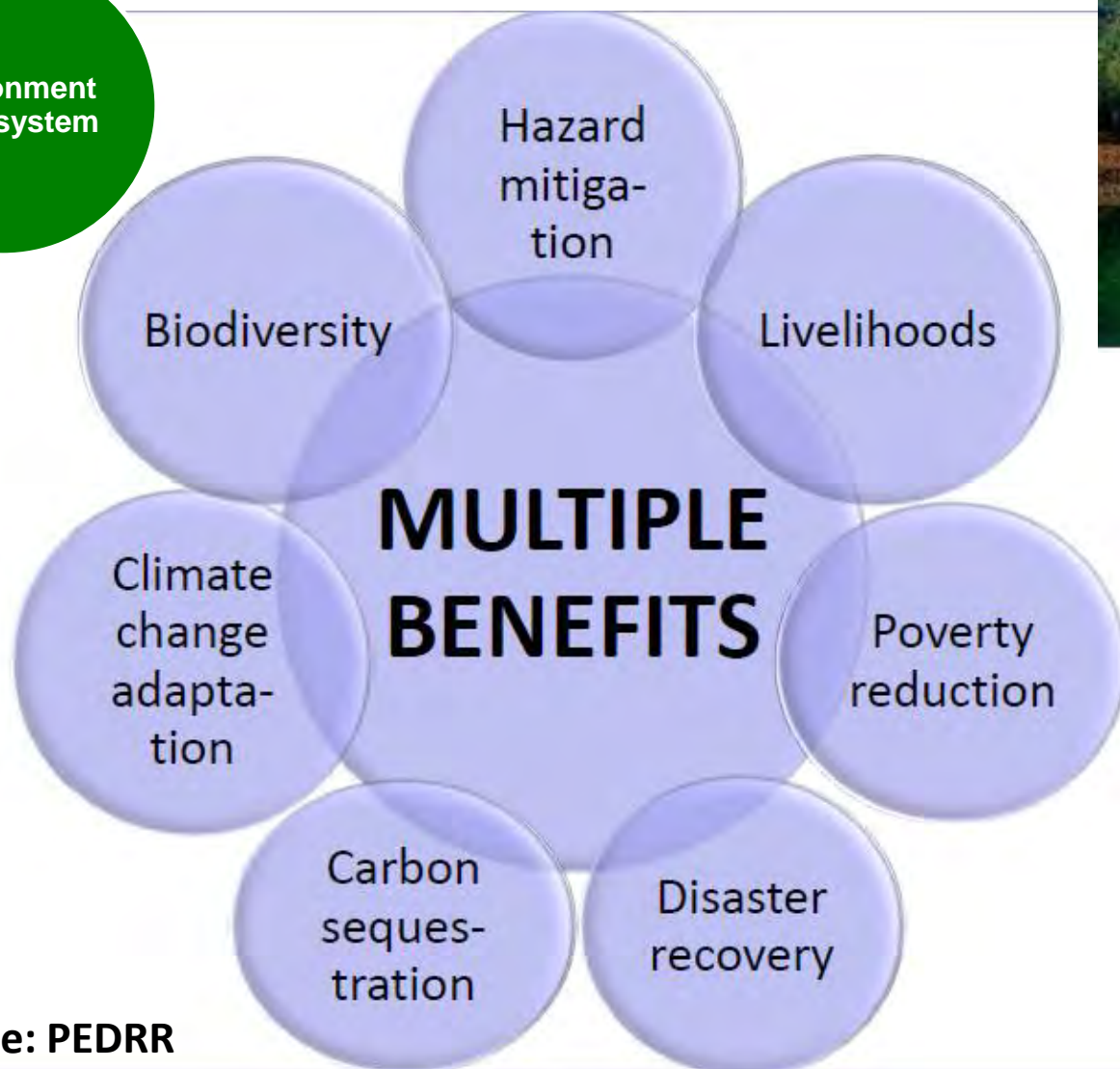


Additional risks due to climate change should not be analyzed or treated in isolation, but instead integrated into broader efforts to reduce the risk of natural disasters.



Environment, Ecosystem and DRR

Environment
& Ecosystem





Sustainable Development and DRR

Development

Disaster risk reduction is an integral part of social and economic development, and is essential if development is to be sustainable for the future.

- Disasters can derail hard-earned development plans and progress
- DRR as an instrument for sustainable development
 - UN Conference on Sustainable Development (Rio+20)
 - Link between MDGs and DRR

**Uttarakhand Floods
June -2013**

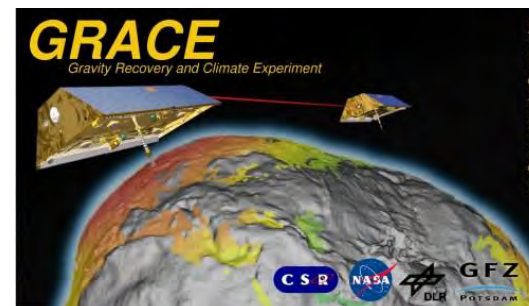
by
Venu Gopal



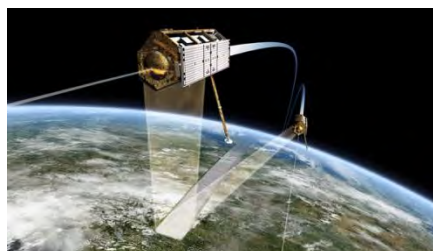
'Space' in monitoring climate change

Examples: Monitoring Himalaya

- **Remote sensing** based Inventory of glaciated area serves as the baseline - ICIMOD Report
- The US team measured the Earth's **gravitational pull** to detect changes in mass on the Earth's surface
- The France–Norway team analysed **laser signals** sent by the **Ice, Cloud and Land Elevation Satellite** (ICESat) to the Earth's surface between 2003 and 2008.



Global Precipitation Measurement (GPM)



TanDEM-X



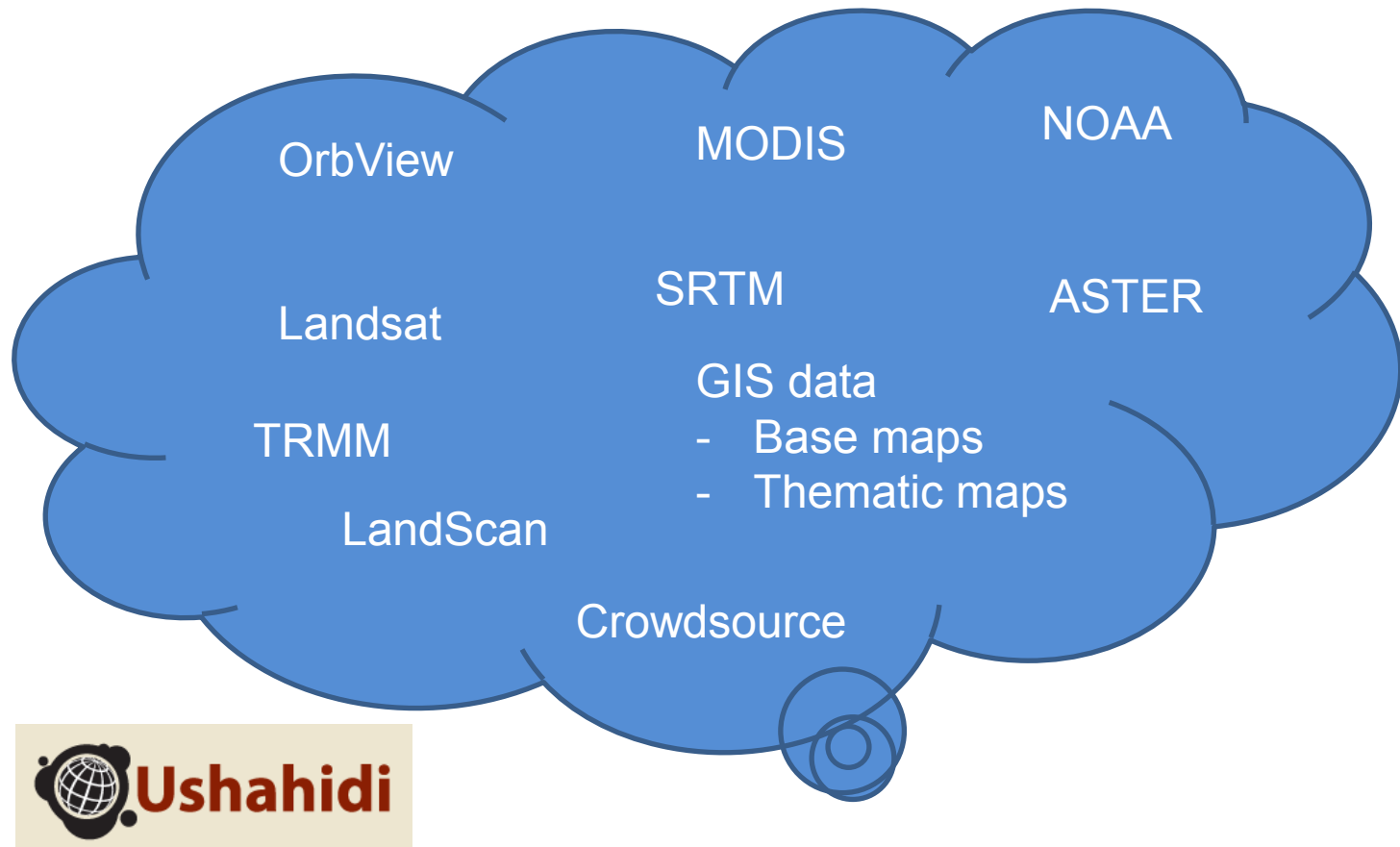


Geospatial information products – Changing Dynamics

GLCF



NOAA



- Predictions of weather extremes
- Early warning
- Monitoring of disasters and risks



'Space' in Disaster Risk Management



Global scale



Local scale



Mitigation & Preparedness Planning

- Vulnerability and risk assessment
- Modelling impact
- Early warning

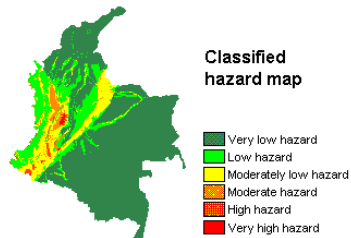
Emergency Response

- Specific event
- Rapid provision
- Map information
- Support crisis management

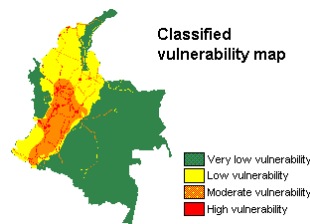
Recovery & Rehabilitation

- Situation maps
- Time series
- Monitoring

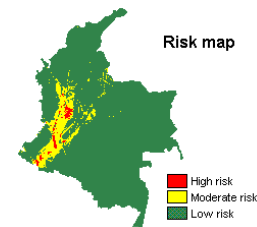
Life Saving Products



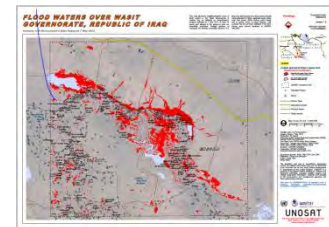
Hazard maps



Vulnerability maps



Risk maps



Response maps



Advanced Earth
Observation
systems provide
accurate '*Spatial
Information*'

Accurate
information
leads to better
understanding of
the '*Facts*'

Strategies based
on '*Facts*' lead to
precise *action
plan*

**Post 2015
Framework
for DRR**

'Space' will play critical role in Post 2015 Framework for DRR

The UN-SPIDER Programme

- UN-SPIDER Team
- Network of Regional Support Offices (RSOs) (15)
- National Focal Points (45)



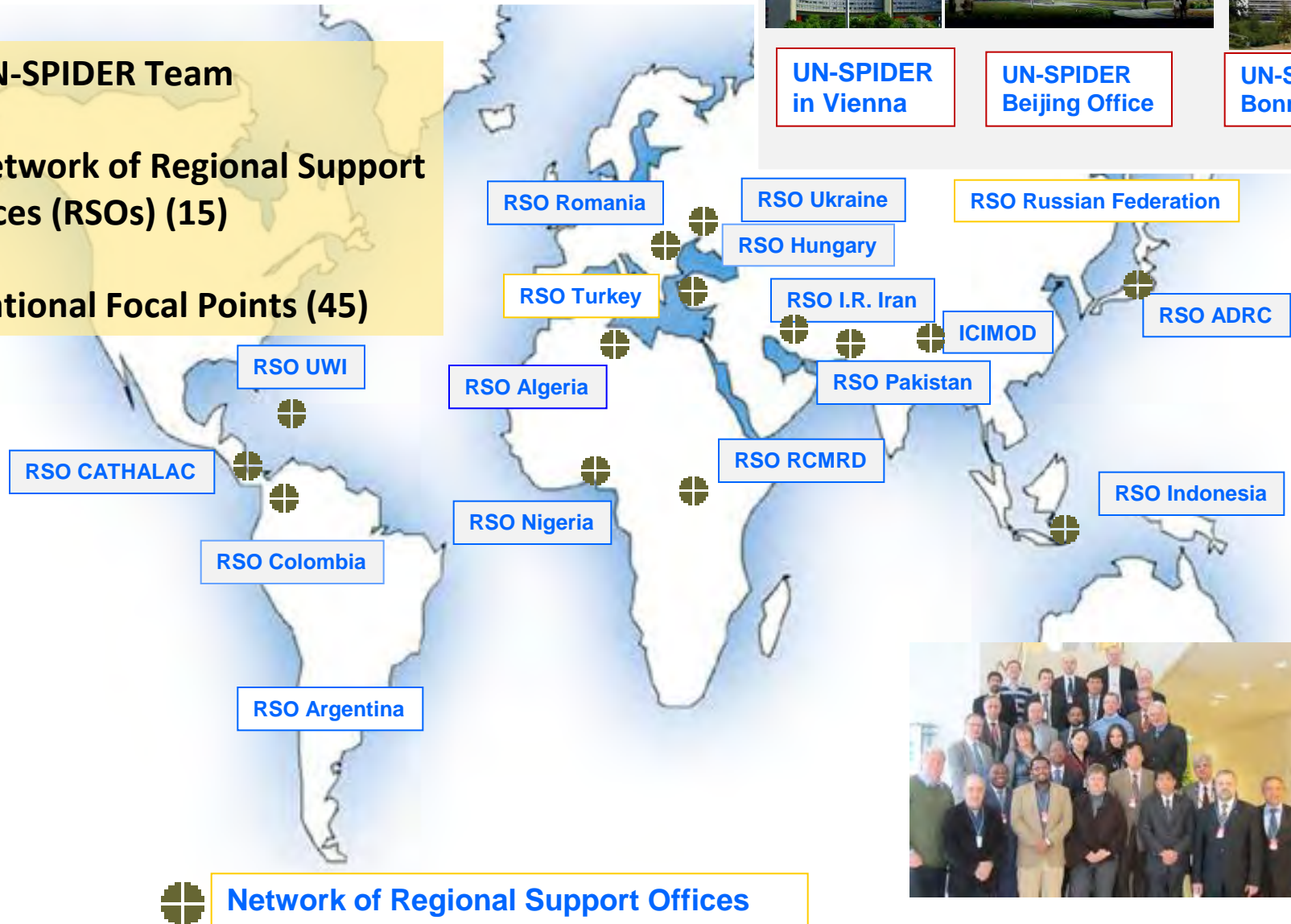
UN-SPIDER
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UN-SPIDER
Beijing Office



UN-SPIDER
Bonn Office





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Bringing benefits of the space to humanity

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