



UNITED NATIONS | UNOOSA | UN-SPIDER

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

HFA Priorities and relevance of space based/geographic information – UN-SPIDER Interventions

Shirish Ravan

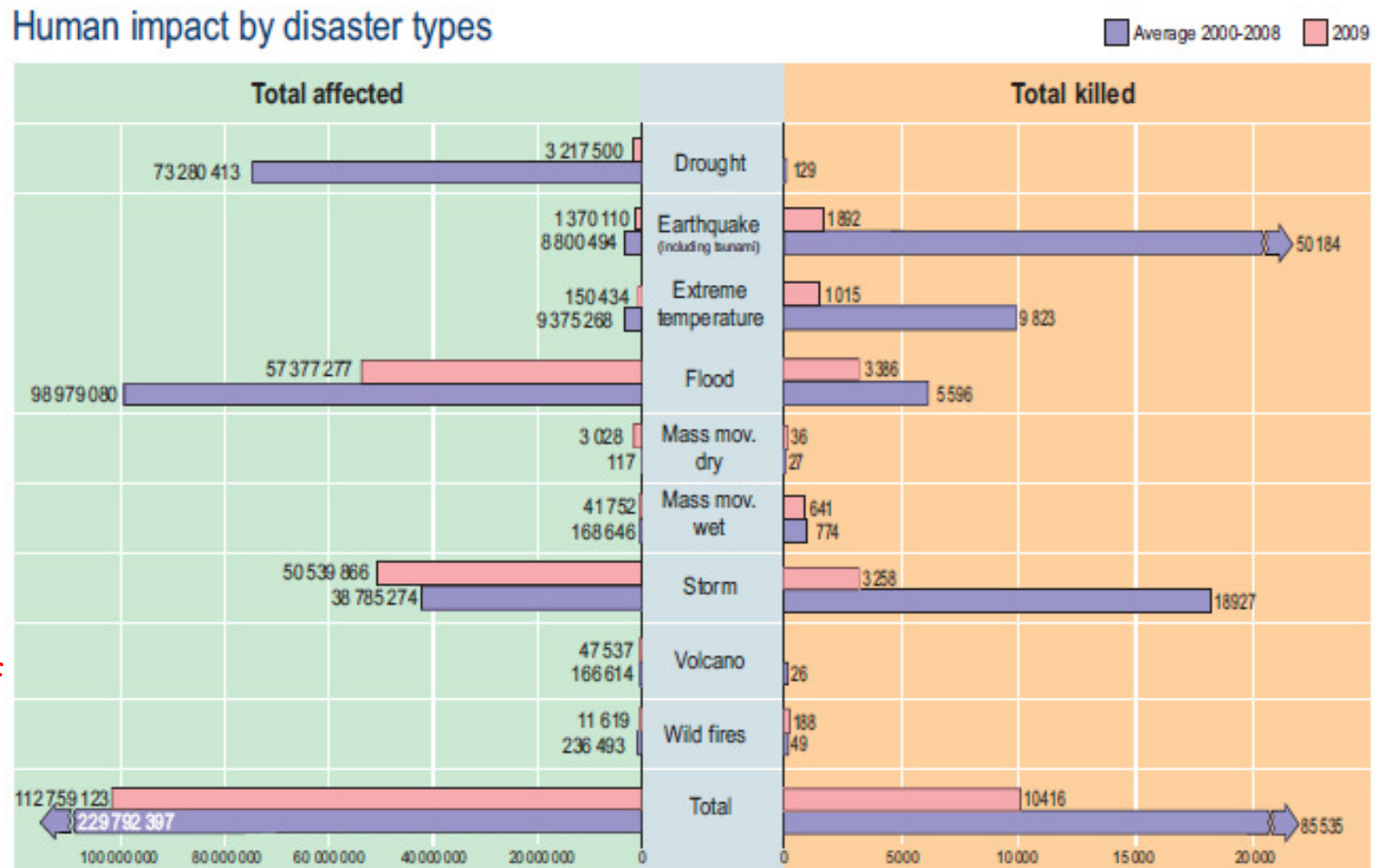
UN-SPIDER Beijing Office

UN Office for Outer Space Affairs



Human impact by disaster type

- Flood causes largest impact
- Earthquake causes highest number of deaths
- Reasons: lack of preparedness and reliable early warning





Asia- the most affected



Figure I.II Global and Asia-Pacific disaster fatalities, 1970-2011



Source: Asia Pacific Disaster Report 2012


We make ourselves vulnerable



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

- Every year, 200 million people affected by droughts, cyclones, earthquakes, wildfires, and other hazards
- Increased population densities, environmental degradation and global warming adds to impacts
- Few realise that devastation can be prevented through disaster risk reduction initiatives
- Hyogo Framework assists efforts of nations and communities to become more resilient



How far we succeeded?



Pakistan Floods (2010, 2011, 2012)
-1600 died
-12 million affected



Japan Tsunami (March 2011)
-28,500 died or missing
-Nuclear emergency



Bangkok Floods (2011)



Typhoon Bopha,
Philippines, Dec 2012

\$294 billion economic losses – representing 80 per cent of global losses due to disasters in 2011 (Source: Asia Pacific Disaster Report, 2012)



HFA – Priority Actions

Priority Actions: The WCDR and members countries adopted five 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.

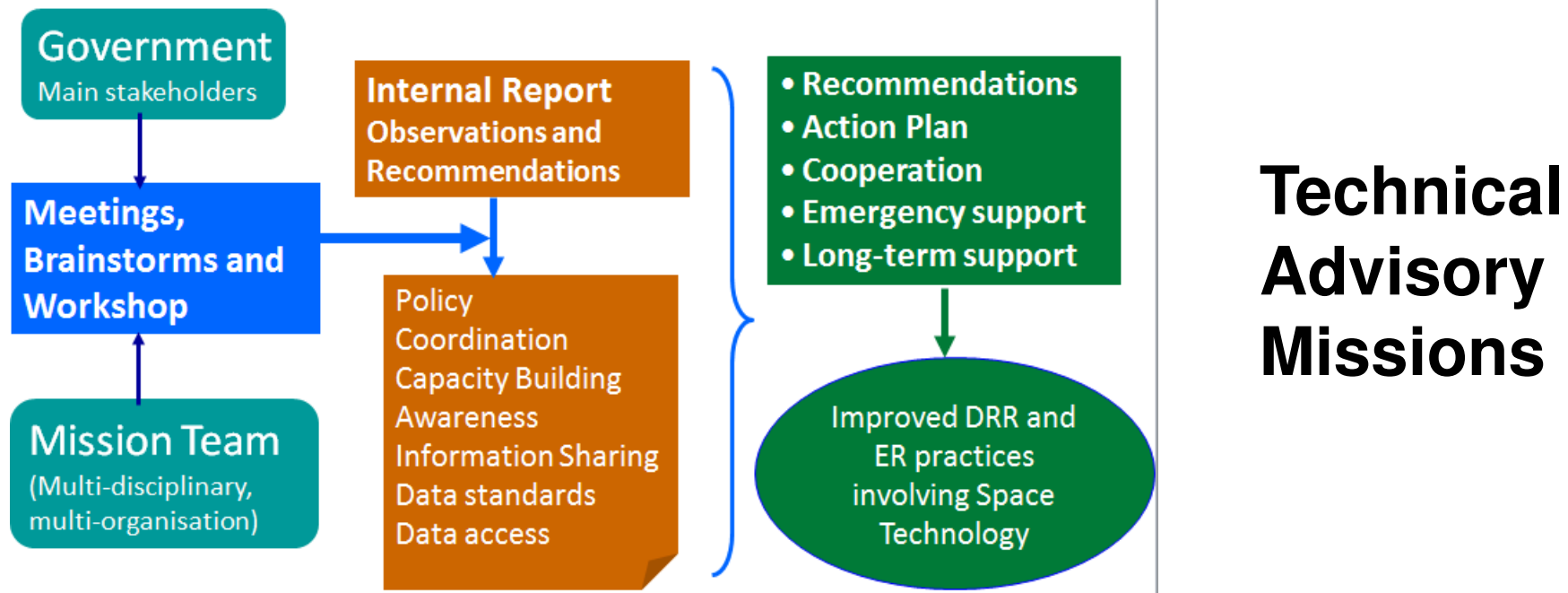
Priority 5: Strengthen disaster preparedness for effective response at all levels.



HFA Priority 1

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


- policy, legislative and institutional frameworks
- for disaster risk reduction
- track progress through specific and measurable indicators.






2012-Technical Advisory Support

- Technical Advisory Support to *26 countries*
- Technical Advisory Missions (TAM) to 6 countries (*Cape Verde, Mozambique, Myanmar, Solomon Islands, Tonga and Vanuatu*)

 UNITED NATIONS
Office for Outer Space Affairs

United Nations Platform for Space-based Information
for Disaster Management and Emergency Response
(UN-SPIDER)



**Report of the
Technical Advisory Mission
to
Myanmar**

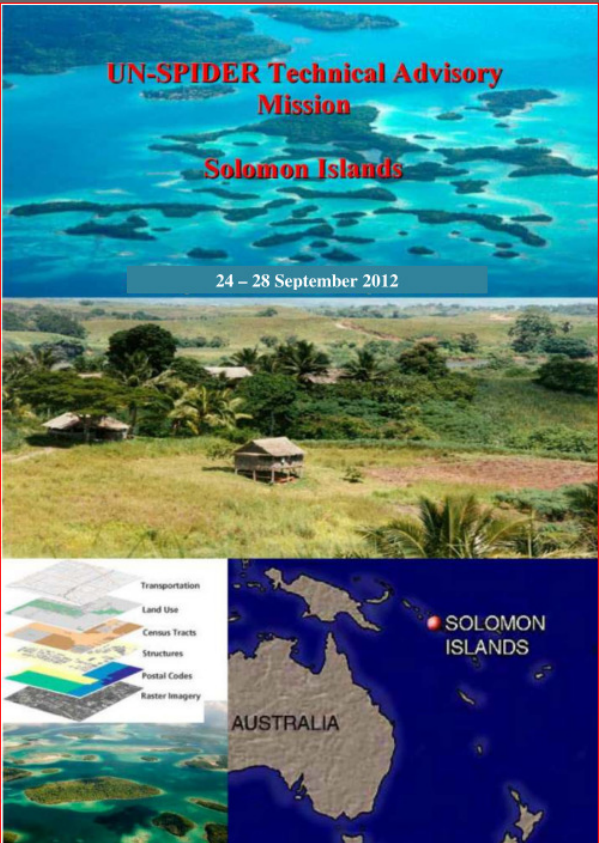
19 – 23 March 2012

UN-SPIDER Technical Advisory Mission
Mozambique
8 October - 12 October 2012



**UN-SPIDER Technical Advisory
Mission**
Solomon Islands

24 – 28 September 2012



Transportation
Land Use
Census Tracts
Structures
Postal Codes
Raster Imagery

SOLOMON ISLANDS
AUSTRALIA



2012 - 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



Sri Lanka



Myanmar

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



Solomon Islands



HFA Priority 2

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

- knowledge of the hazards
- physical, social, economic and environmental vulnerabilities
- action taken on the basis of that knowledge.

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

- collection, compilation and dissemination of relevant knowledge and information on hazards, vulnerabilities and capacities

**UN-SPIDER
Technical Advisory Missions**



**Follow up actions
(Capacity Building)**



2012- Capacity Building Efforts

- **Continuing support to 11 countries** supported in previous biennium (*Bangladesh, Burkina Faso, Cameroon, Fiji, Ghana, India, Malawi, Nigeria, Samoa, Sri Lanka and Sudan*)
- **Support to 9 new countries** (*Burundi, Chad, Congo, DR Congo, Gabon, Indonesia, Kenya, Lao PDR and Vietnam*).



Training programmes

Sri Lanka

Myanmar

Cameroon

India

CSSTEAP – UN Affiliated Regional Centre

Beijing - Jointly with NDRCC



HFA Priority 4

Priority 4: Reduce the underlying risk factors.

- Disaster risks related to changing social, economic, environmental conditions and land use,
- impact of hazards associated with geological events, weather, water, climate variability and climate change,
- development planning and post-disaster situation.

Thematic Areas	2013
Natural Resources Management	Pakistan (11-15 March)
Environmental Monitoring (Climate Change)	Indonesia (2-4 September)
Tele-health/Tele-medicine	-
Socio-Economic Benefit	-
UN/IAF	China (20-22 September)
GNSS	Croatia (20-25 April)
BSTI	UAE (14-20 October)
HSTI	China (16-20 September)
ISWI	-
COSPAS-SARSAT	-
Disaster Management	China (24-25 October)
Space Derived Data Analysis	Austria (17-20 September)
Space Law	-

UNOOSA covers wide range of thematic areas



CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION IN ASIA AND THE PACIFIC (CSSTEAP)

(Affiliated to The United Nations)



Member Countries



.....On a Mission of Capacity Building, under the initiative of the United Nations, for Asia and the Pacific Region in Space Science and Technology, Through Excellence in Education, Training, and Research.



NEW 18th RS & GIS PG Course
Jul 1, 2013-Mar 31, 2014
Last date of receiving applications
extended till February 28, 2013.

NEW 9th SATCOM PG Course
Aug 1, 2013-Apr 30, 2014

NEW Hyperspectral RS Short Course
Jun 3, 2013 to Jun 28, 2013

NEW NAVSAT Short Course
Jun 17, 2013-Jul 12, 2013

NEW Small Satellite
Missions Short Course
Oct-Nov 2013

Ongoing Courses

Future Courses

Guidelines for M.Tech

CSSTEAP Alumni Meets



CSSTEAP News Room

Ongoing Course

- Seventeenth Post Graduate course in RS & GIS at IIRS, Dehradun
- Eight Post Graduate Course in Space & Atmospheric Science.
- Eight Post Graduate Course in Satellite Meteorology & Global Climate.



Post graduate Diploma and M.Tech.

Satellite Remote sensing

Satellite Meteorology

Satellite Communication and Navigation

Basic Space Science and Technology

Several short courses

Navigation

Disaster Risk Management

Hyperspectral remote sensing

Microwave remote sensing

Small satellite missions

- **Travel support**
- **Subsistence allowance**
- **State of art facilities**
- **Beautiful campus with international hostel**



HFA Priority 5

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

- authorities, individuals and communities in hazard-prone areas need to be well prepared and ready to act
- they should be equipped with knowledge and capacities for effective disaster management.

- **Availability of space based information**
- Arrangements for **acquisition**
- Mechanism to **collect coordinates** of affected area
- **Geo-spatial data covering socio-economic** as a backdrop
- **Use inputs from space based information to update** disaster preparedness and contingency plans and policies at all levels



Preparing for effective response

- **Support during Emergencies to 5+2 countries** (*China, Costa Rica, Guatemala, Iran, and Fiji*) + *Palau and Philippines in December 2012*
 - *Charter activation*
 - *Support through **bilateral** cooperation*

Earthquake in Yunan, China on 7 Sept 2012

Satellite/Sensor	Date of acquisition	Number of scenes	Data Source	Download date and time	Download channel
IRS Cartosat-1	8 Sept 2012	9	National Remote Sensing Centre (NRSC), ISRO	9 Sept 2012 8:00	UN-SPIDER-FTP
IRS P5	8 Sept 2012	6	National Remote Sensing Centre (NRSC), ISRO	10 Sept 2012 17:30	NRSC/ISRO-FTP
IRS Cartosat-2	8 Sept 2012	7	National Remote Sensing Centre (NRSC), ISRO	10 Sept 2012, 22:30	UN-SPIDER-FTP
Worldview	8 Sept 2012	22	DigitalGlobe	9 Sept 2012 21:00	DigitalGlobe-FTP
Worldview	19 Feb 2010	12	DigitalGlobe	10 Sept 2012 16:00	DigitalGlobe-FTP
TOTAL		56			





Planned Activities- 2013

- **Technical Advisory Missions**
 - Vietnam (25-29 March)
 - Indonesia (Sept 5-6)
 - Vanuatu (under consideration)
 - Gabon (May)
 - Malawi (Between July to Sept)
 - Ghana (Between July to Sept)
- **Follow up activities (Capacity Building)**
 - Bangladesh – April 21-25 (Partners - APSCO, CDMP, IWMI, ICIMOD, NDRCC)
 - Sudan – Mid-May (Partners – RCMRD and NDRCC)
 - India – July 29-31 (Partners – IWMI, NIDM, SIG, DST)
 - Mozambique - July to Sept
 - Beijing (international participants)
 - CSSTEAP, India (international participants)



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Planning of 2014 in progress

The UN-SPIDER Programme

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



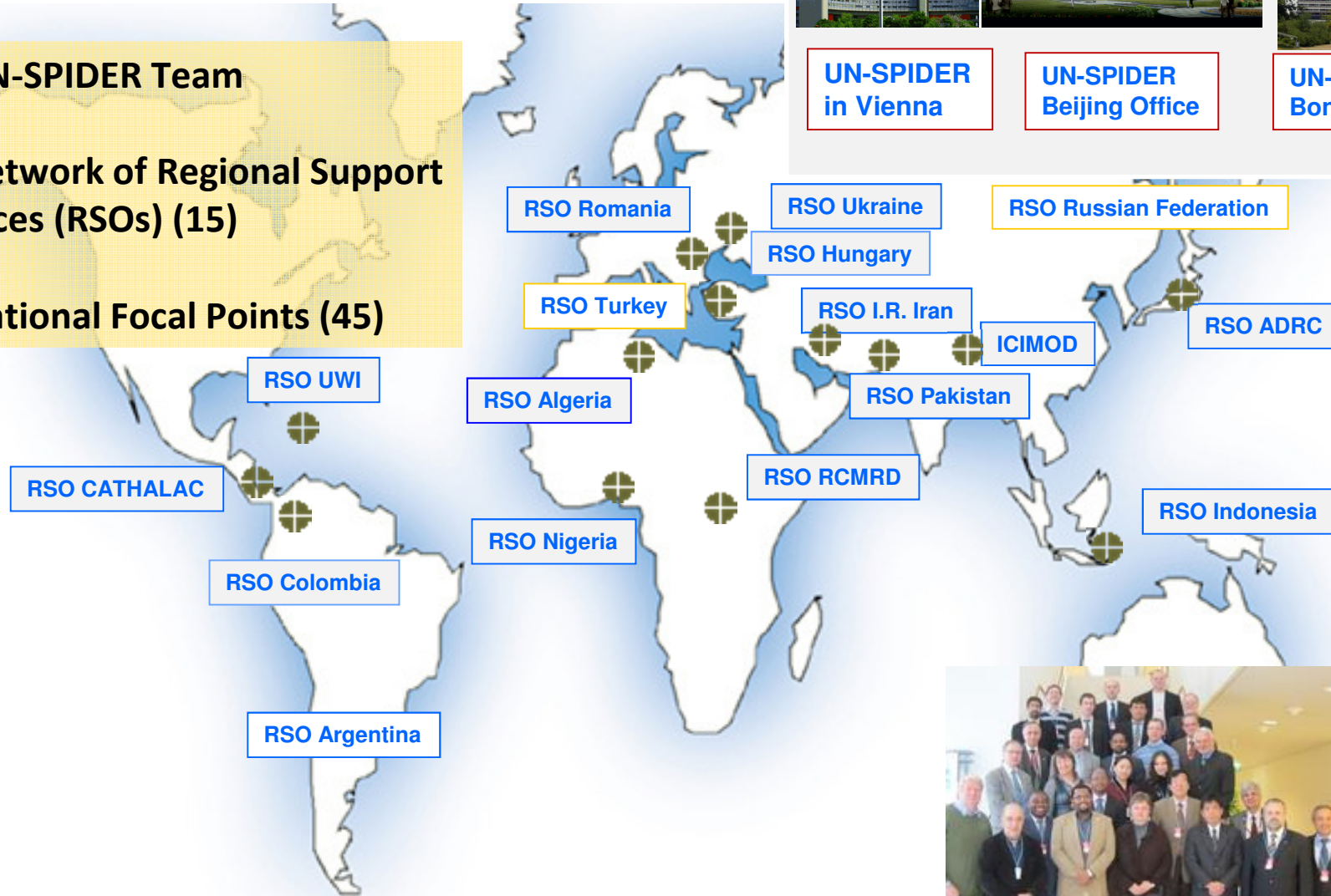
UN-SPIDER in Vienna



UN-SPIDER Beijing Office



UN-SPIDER Bonn Office



 Network of Regional Support Offices





Planned Publications

With UN-SPIDER Regional Support Offices

- 1. ADRC** - 'Considerations for effective use of space based information to assess Tsunami impact - Lessons learned from recent Tsunami in Japan'
- 2. SUPARCO** - 'Considerations for effective use of space based information to monitor massive flood disaster and its impact- Lessons learned from Pakistan floods in 2010'
- 3. Iranian Space Agency** - 'Considerations for effective use of space based information to assess drought at national level - Experiences from Iran'
- 4. LAPAN Indonesia** – “Space based information for Forest Fire Monitoring – An Indonesian Experience”



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We build a community



Conference and capacity building programme in Beijing, Nov 2012

2013 UN-SPIDER Conference – 23-25 October 2013



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When **I** is replaced by **We**, even **Illness** becomes **Wellness**.

Thanks

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