

Progress and Updates of IRDR CHINA

Report on Activities: December 2017– April 2018

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IRDR CHINA Established October, 2010

IRDR Science Committee Meeting, Beijing, China, April 2018



A group photo of the 3rd IRDR CHINA

- Established on October 8, 2010;
- To coordinate disaster scientists/organizations nationwide to address disasters in an integrated approach and support the IRDR Plan.

- Chair: Prof. Guo Huadong
- 40** members from research institutions, universities, media, state agencies...
- 15** nation-wide scientific associations
- Top experts** in main areas of disaster risk reduction research, atmospheric sciences, economists, public health, psychologists, and policy.
- Work plan** for 2015-2017

Main activities of IRDR CHINA (December 2017 - April 2018)

1

Strategic Support on DRR
for the “Belt and Road”

2

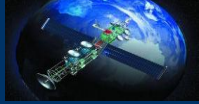
Linking Science & Technology
and Policy in China

3

Capacity Building for DRR



Social-economic



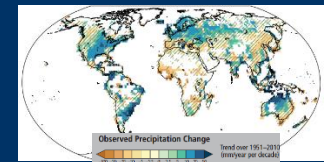
Satellite



Navigation



In-situ



Environmental Change



Disaster



Unbalanced Development

A COMMON VISION

TO ADVOCATE FOR ADVANCED TECHNOLOGY
IN

DESIGN AND PLANNING OF ALL DEVELOPMENT, ENVIRONMENTAL
PROTECTION AND RESOURCE MANAGEMENT ACTIVITIES
AT

MULTIPLE SCALES UNDERTAKEN WITHIN THE B&R INITIATIVE.





The Belt and Road Forum (BRF) for International Cooperation opens in Beijing, China, **May 14, 2017**. A total of **29** heads of state and government leaders are attending the forum. Other delegates include officials, entrepreneurs, financiers and journalists from over **130** countries, and representatives of key international organizations.



COMMENT

GEOLOGY Long line of triumph and failure – the hunt for Earth's magnetic heart **p.28**

NEUROSCIENCE Antonio Damasio's argument for emotions, appraised **p.30**



PUBLIC HEALTH Study the risk of yellow fever in Asia-Pacific **p.31**

PSYCHIATRY Pamela Sklar, pioneer of mental-health genomics, remembered **p.32**

YACIN WITEN / WELLS / GETTY



Many developing countries, such as Mongolia, have rural economies, so projects that can provide farmers with up-to-date agricultural information are crucial.

Steps to the digital Silk Road

Sharing big data from satellite imagery and other Earth observations across Asia, the Middle East and east Africa is key to sustainability, urges **Guo Huadong**.

Focus on five priority areas

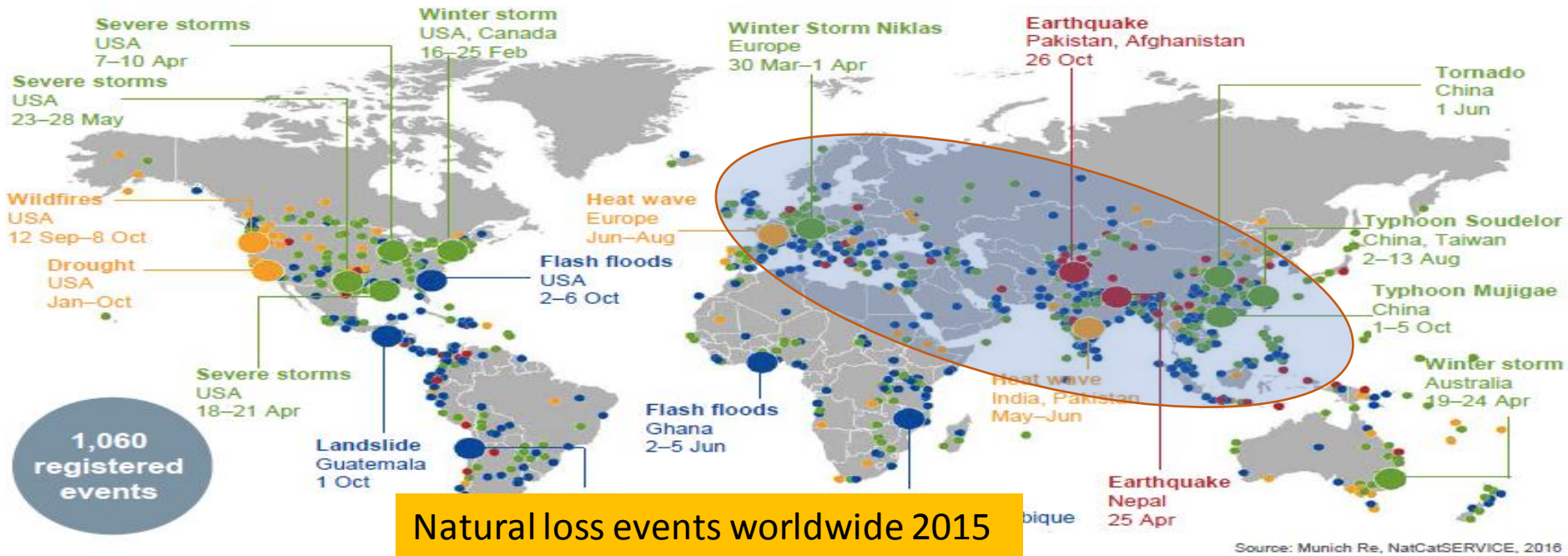
Guo Huadong. Steps to the digital Silk Road. *Nature*, 554 (1 February 2018): 25-27.

Steps to the digital Silk Road

Sharing big data from satellite imagery and other Earth observations across Asia, the Middle East and east Africa is key to sustainability

The screenshot shows the Nature.com website interface. At the top, there is a navigation bar with the 'nature.com' logo and a 'MENU' dropdown. To the right are icons for Search, E-alert, Submit, and Login. Below the navigation bar, the main content area features a large article preview for 'Steps to the digital Silk Road' by Guo Huadong, dated 30 January 2018. The article's abstract is visible: 'Sharing big data from satellite imagery and other Earth observations across Asia, the Middle East and east Africa is key to sustainability, urges Guo Huadong.' To the right of this article are two other article previews: 'Science behind bars: How a Turkish physicist wrote research papers in prison' and 'A rude awakening from tumour cells'. At the bottom right, there is a 'nature' magazine cover for the issue dated 25 January 2018, featuring the headline 'CELL BREAKOUT' and other articles like 'REPLICATING STRAIN', 'DANGER OUT OF THE AIR', and 'UPSIDE TRACKS'. A 'Contents' and 'Subscribe' button is located at the bottom of the page.

High occurrences of hazards along the Belt and Road



○ Loss events

○ Selection of catastrophes
Overall losses ≥ US\$ 1,500m

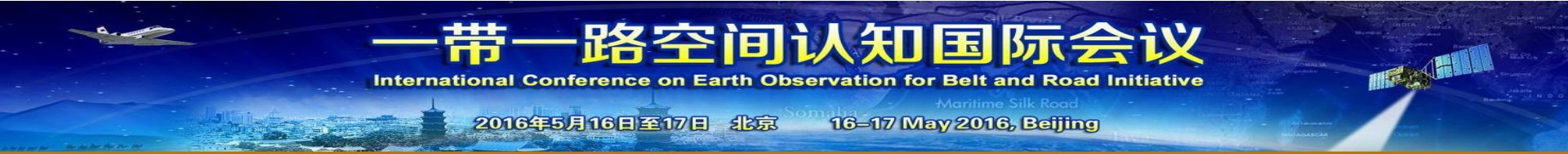
● Geophysical events
(Earthquake, tsunami, volcanic activity)

● Meteorological events
(Tropical storm, extratropical storm, convective storm, local storm)

● Hydrological events
(Flood, mass movement)

● Climatological events
(Extreme temperature, drought, wildfire)

85% of major natural hazards occurred in the **Asia** region. More than **80%** of natural hazards are earthquakes, flooding, draught, and storm surges. Investing **\$6 billion** a year for a disaster risk management strategy would produce a total revenue of **\$360 billion** in terms of risk mitigation.



Initiated at EOBAR, to be given full support by more than 20 countries

Beijing Declaration on Earth Observation for Belt and Road

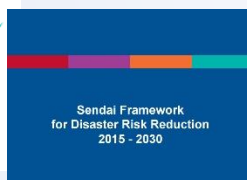
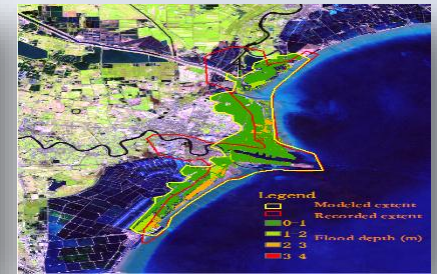
May 17, 2016

We, scientists, researchers, academics, engineers, educators and administrators from more than 20 countries, and representatives of international organizations, met in Beijing, China, at the International Symposium on Earth Observation (EO) for Belt and Road (EOBAR), co-hosted by the Division of Earth Sciences of the Chinese Academy of Sciences (CAS) and related ministries, commissions, and international organizations, on 16 and 17 May 2016.

Background



- International Science Program
- Promotes EO cooperation among the Belt and Road countries
- Smart use of Big Earth Data



FINANCING FOR DEVELOPMENT
13-16 JULY 2015 · ADDIS ABABA · ETHIOPIA
TIME FOR GLOBAL ACTION



SUSTAINABLE DEVELOPMENT GOALS



DBAR in Numbers

3 Continents

8 SDG Goals

10 Years

7 Working Groups

2 Task Forces

48 Partners

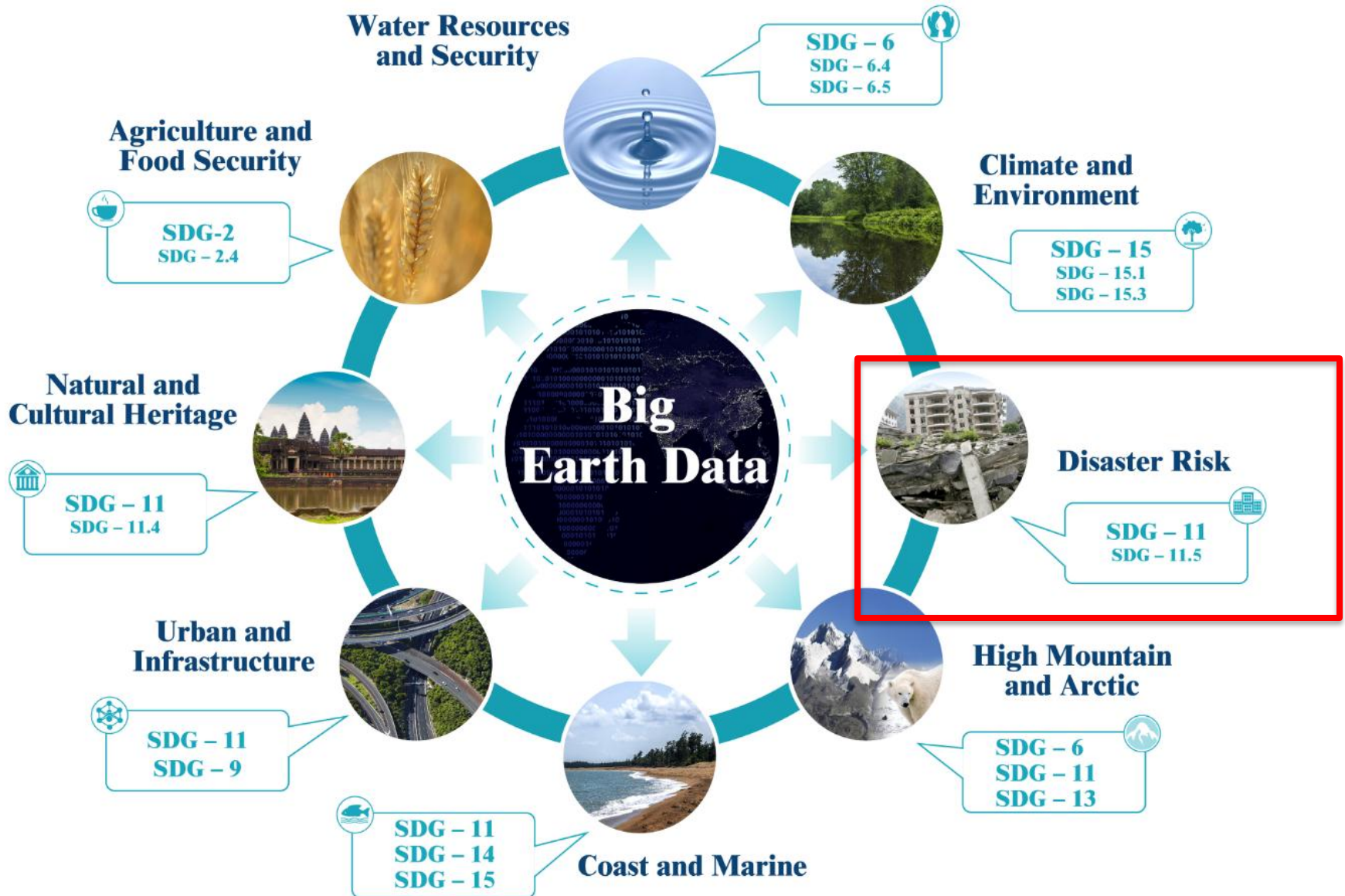
8 International Centers
of Excellence

1 Big Earth Data Platform

DBAR Work Flow



DBAR Foci



DBAR DRR Working Group (Big Earth Data)

Jointly Implemented by:

“Digital Belt and Road” Initiative (DBAR)

Integrated Research on Disaster Risk (IRDR)

International Programme Office (IPO),

IRDR China National Committee (IRDR CHINA)

International Society for Digital Earth (ISDE)

Institute of Remote Sensing and Digital Earth (RADI)

CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM)



- DRR Seminar
- DRR Report
- DRR Training
- DRR Network



WG Meeting, Sanya 2016



WG Meeting, Sanya 2017

17 WG members from 13 countries

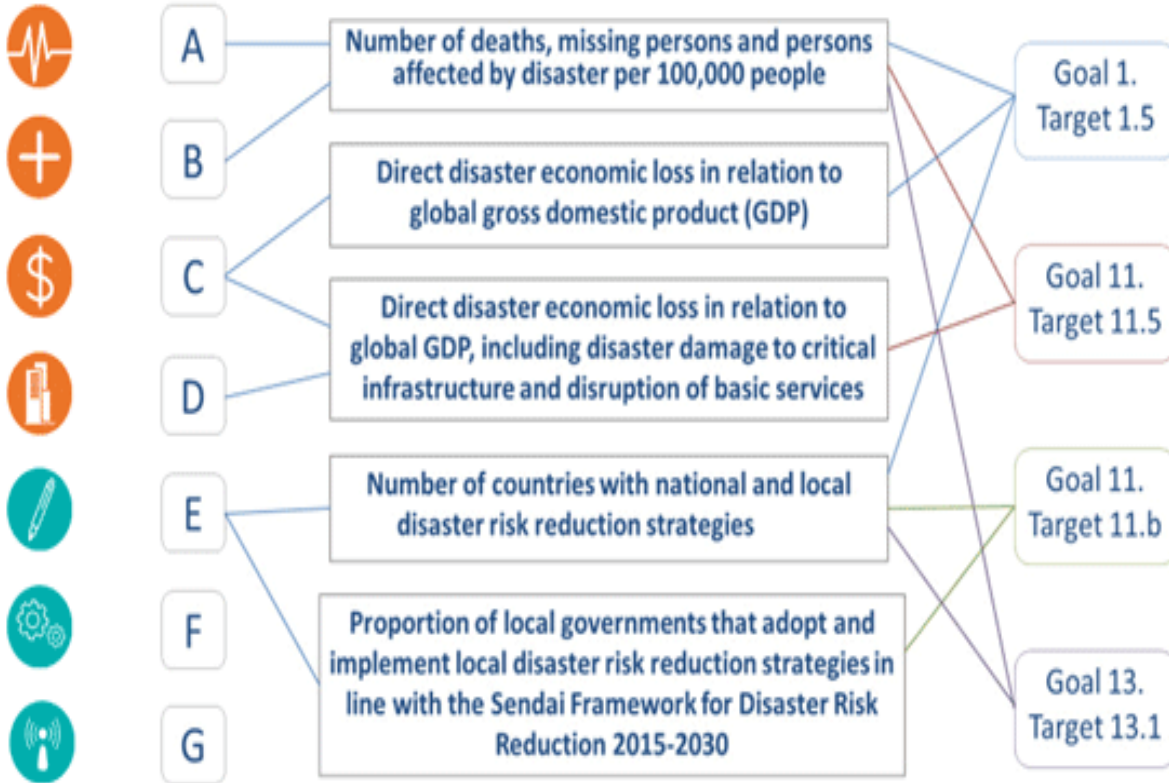
Specific Objectives

1. To undertake **innovative, implementation oriented research** in the field of DRR through collaboration and partnership
2. To **strengthen national research capacities** to enable informed decision-making in different aspects of disaster risk reduction
3. To foster the **development of young professionals** and researchers through training and capacity building programs


Sendai Framework Indicators in the B&R

Sendai Framework
for Disaster Risk Reduction
2015-2030

SUSTAINABLE DEVELOPMENT GOALS



United Nations A/RES/70/276

 **General Assembly** Dist. - General
13 February 2017

Seventy-first session
Agenda item 19 (c)

Resolution adopted by the General Assembly on 2 February 2017
[without reference to a Main Committee (A/71/L.54 and Add.1)]

71/276. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction

The General Assembly,
Recalling the outcome of the Third United Nations World Conference on Disaster Risk Reduction, entitled "Sendai Framework for Disaster Risk Reduction 2015-2030", contained in annex II to its resolution 69/281 of 9 June 2015, and the

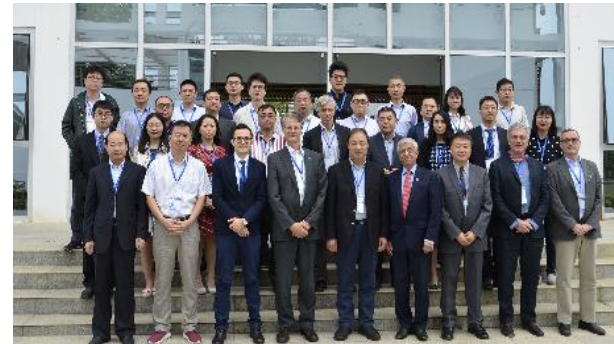
| Compound indicator | Methodology Available | Data Available | Indicator Category |
|---|-----------------------|----------------|--------------------|
| Category I (Global application) indicators for which a methodology exists, or has been proposed, and for which data are already widely available in a significant number of countries | Y | Y | 1 |
| Category II (National application, potential migration to global level): indicators for which a methodology exists, or has been proposed, but for which data are not easily available | Y | N | 2 |
| Category III (Require long term development): indicators for which a methodology has not yet been developed nor is data easily available | N | N | 3 |

DBAR 2017 in Hong Kong



Dec. 6-8, 2017

Workshop on Big Earth Data for Disaster Risk Reduction in Asia



Dec. 14, 2017



DRR Workshop in Thailand



Feb. 27-28, 2018

IRDR CHINA 2018 Meeting



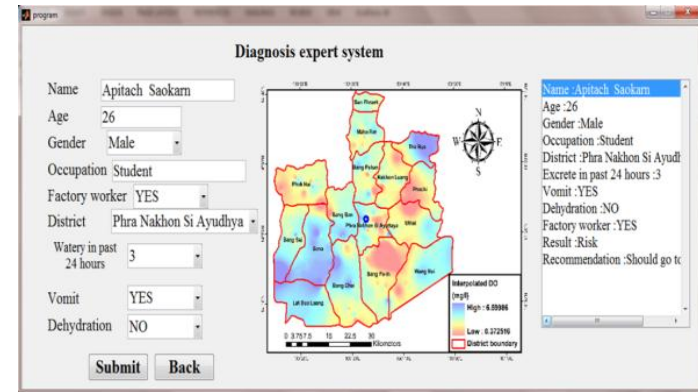
March 27, 2018

DRR Application Systems and platforms

Drought Watch



Floods Assessment System



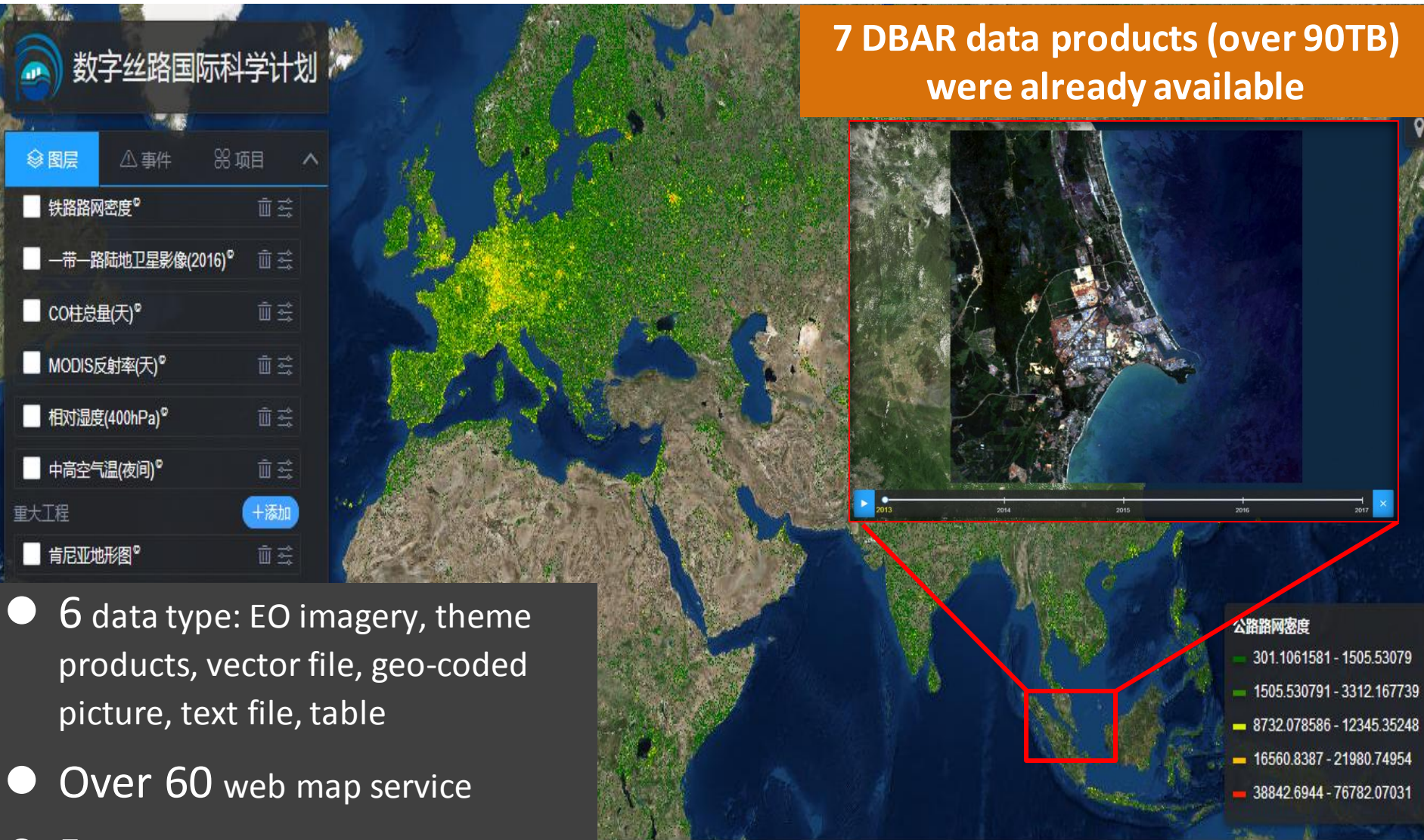
Water Monitoring System



PDA Survey System



7 DBAR data products (over 90TB)
were already available



- 6 data type: EO imagery, theme products, vector file, geo-coded picture, text file, table
- Over 60 web map service
- 5 web processing service

Linking Science & Technology and Policy in China

Establish a Number of Interdisciplinary Working Groups

WG on Earthquake and Geo-hazard Risk

Co-chairs: CUI Peng and WANG Xiaoqing



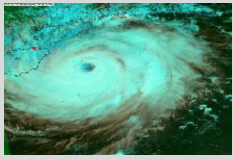
WG on Drought and Floods Risk

Co-chairs: CHENG Xiaotao and XIA Jun



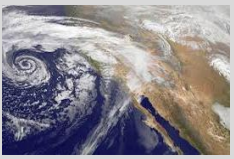
WG on Severe Storm Risk

Co-chairs: DUAN Yihong and LI Jianping



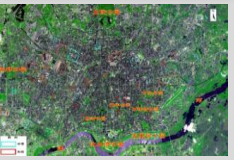
WG on Climate Change Driven Disaster Risks

Co-chairs: JIA Gensuo and FENG Qiang



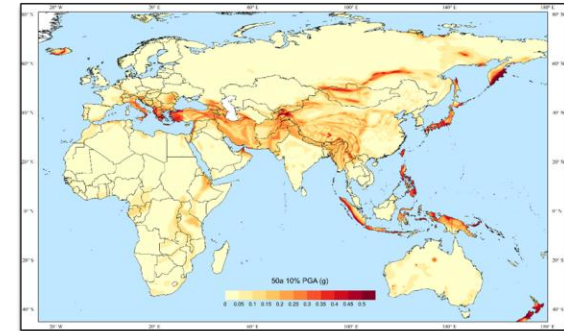
WG on Disaster Risk in Urban Areas

Co-chairs: PAN Jiahua



WG on Assessment of Integrated Research on Disaster Risk in China

Co-chairs: CHEN Fang and XUE Lan

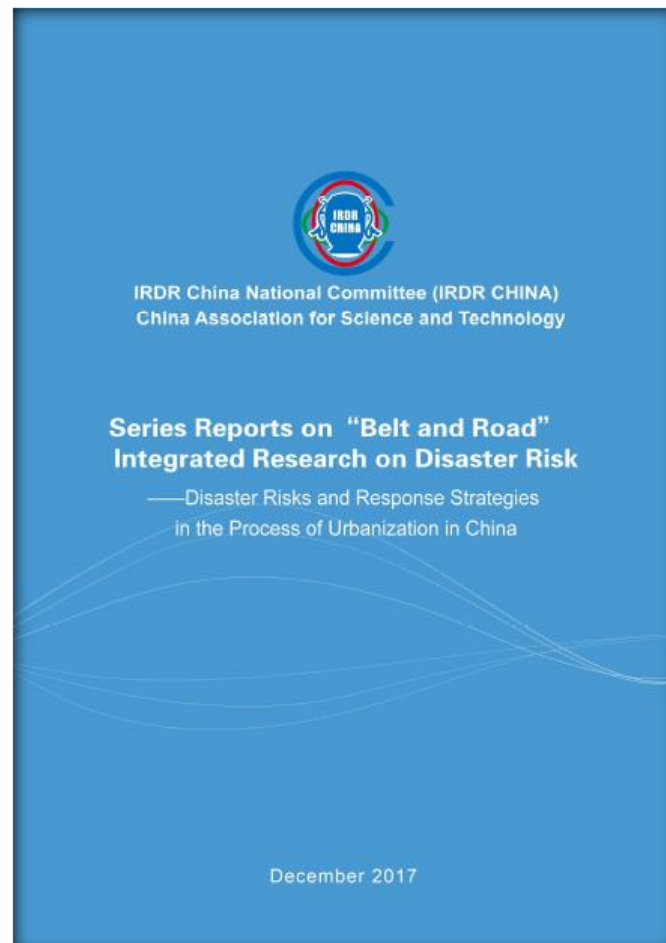


DRR Data Products



Science Report & Seminar

IRDR CHINA Science Report for DRR in B&R



International Training Facilities




Sanya(2013)



Beijing(2014)



Sanya(2017)



Sanya (2016)

Kashi(2014)



Qingdao(2015)



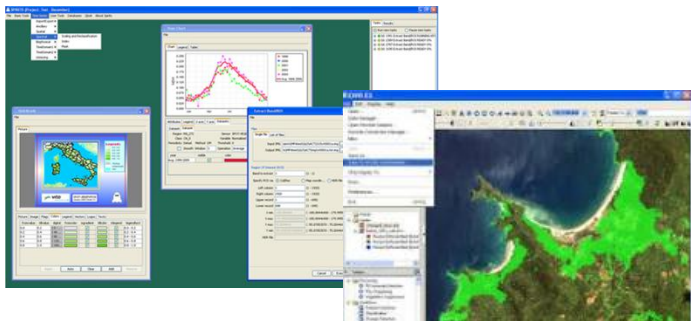
Sanya (2015)

International Training Workshop on Integrated Risk Assessment Methods Using Spatial and Social Vulnerability Data for Disaster Risk Reduction

11 December - 15 December, 2017
Sanya, China



International Training Workshop on Integrated Risk Assessment Methods Using Spatial and Social Vulnerability Data for Disaster Risk Reduction
Digital Belt and Road Initiative (DBAR) – Disaster Theme





Thank you !