IRDR NC
Integrated Research on Disaster Risk
National Committee

Progress and Updates of IRDR CHINA

Report on Activities: June – October 2019

IRDR CHINA Established October, 2010

IRDR Science Committee Meeting, Xiamen, China, October 2019

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IRDR CHINA

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.

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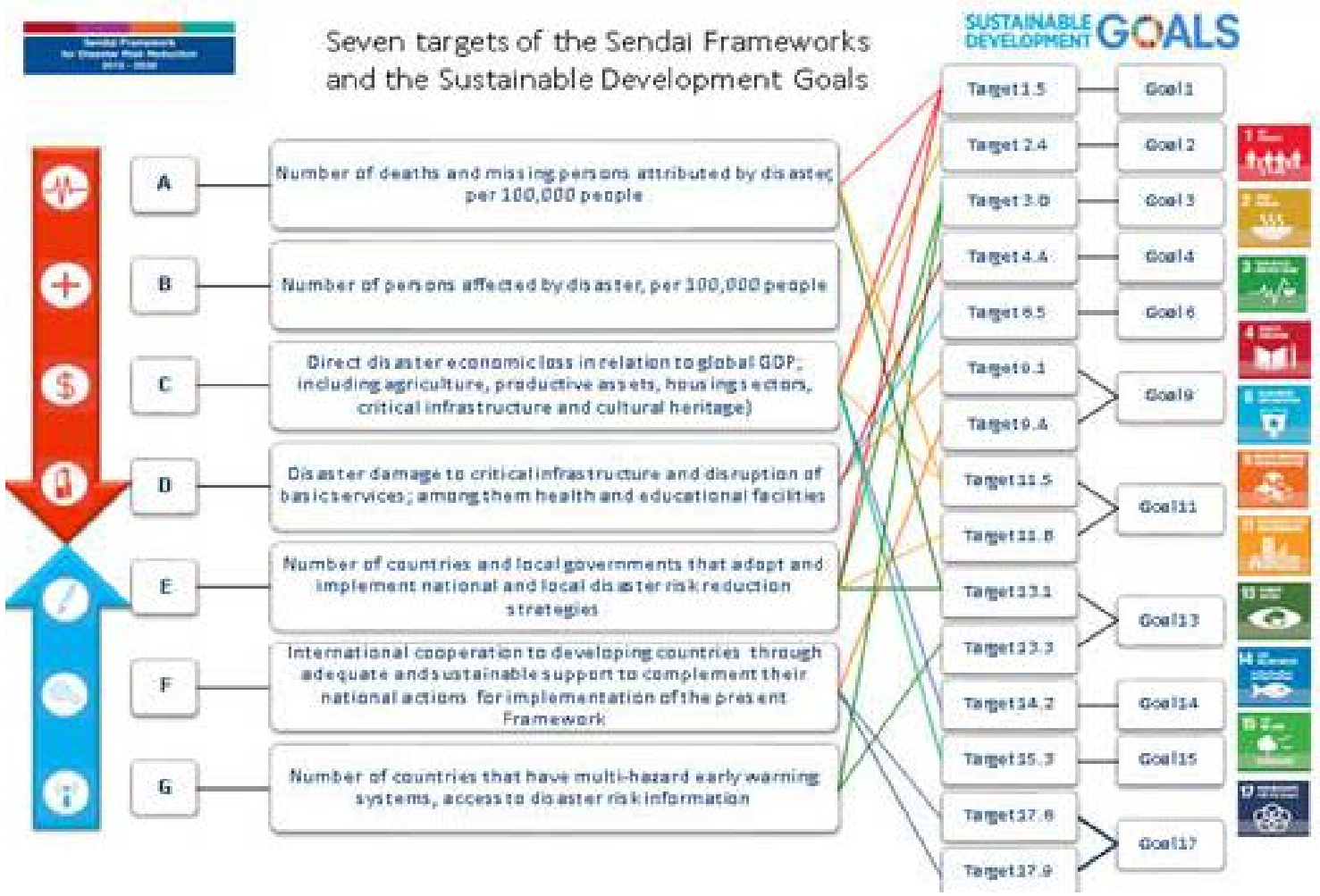
Main activities of IRDR CHINA (June – October 2019)

1. Strategic Support on DRR for the "Belt and Road"
2. Undertaking Innovative, Implementation Oriented Research in China
3. Capacity Building for DRR

Integrated monitoring of the global targets of the Sendai Framework and the Sustainable Development Goals



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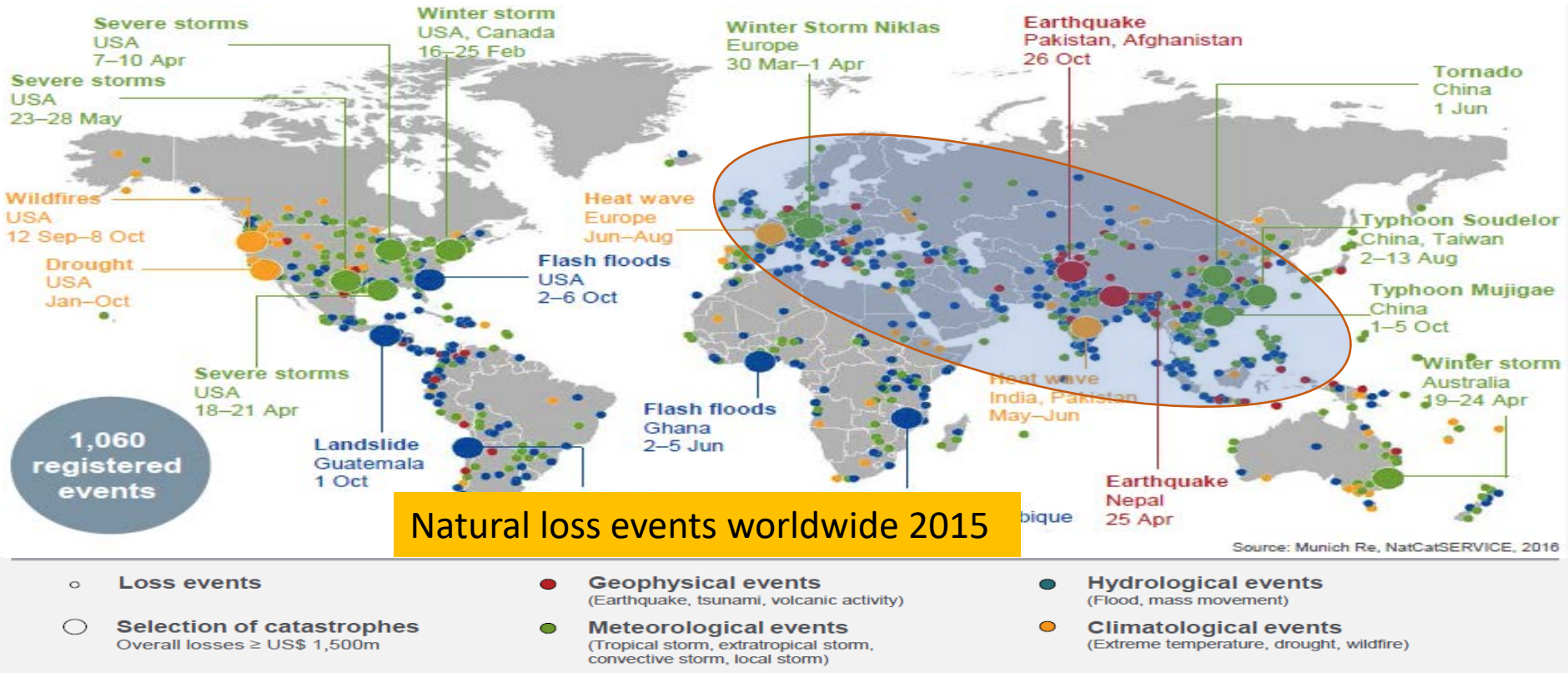
Natural Hazards

High occurrences of hazards along the Belt and Road



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.

DBAR DRR Working Group (Big Earth Data)

Jointly Implemented by:

"Digital Belt and Road" Program (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

WG Meeting, Tengchong 2018

17 WG members from 13 countries

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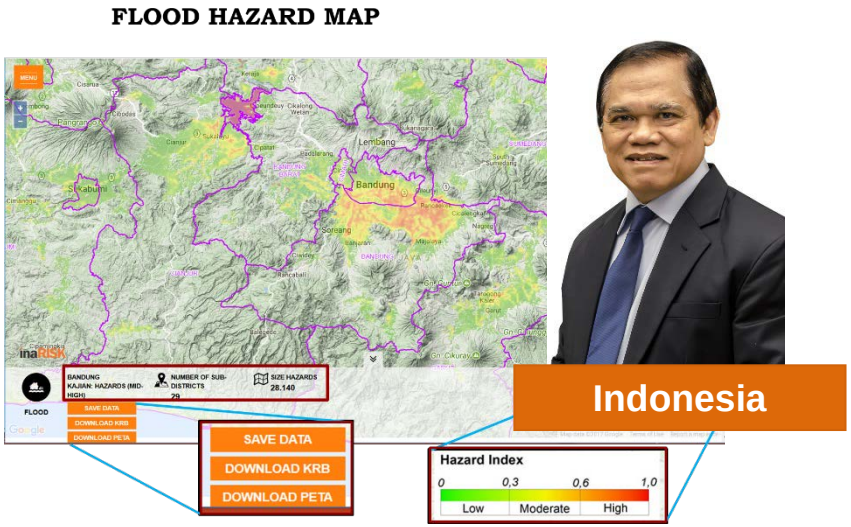
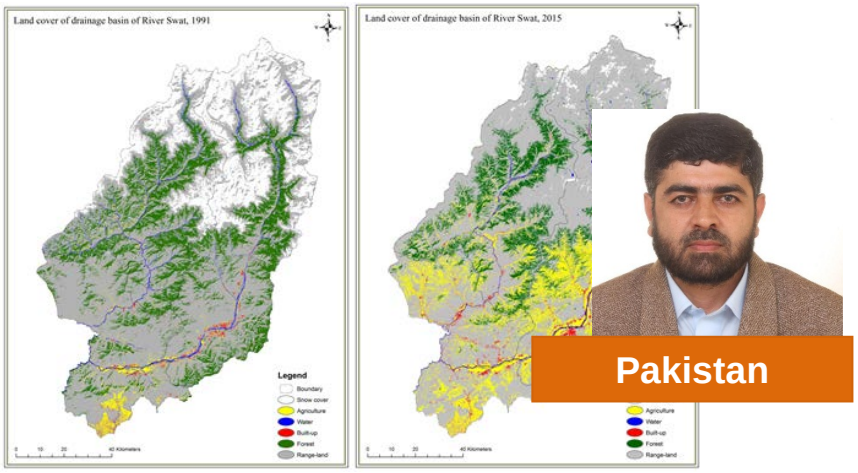
Regional Research Initiative

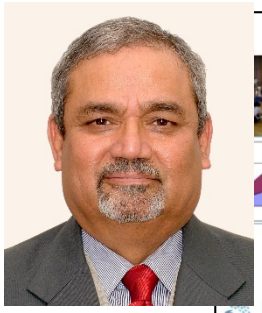
- *Bangladesh, Nepal, Pakistan, Sri Lanka, Thailand, Indonesia…*



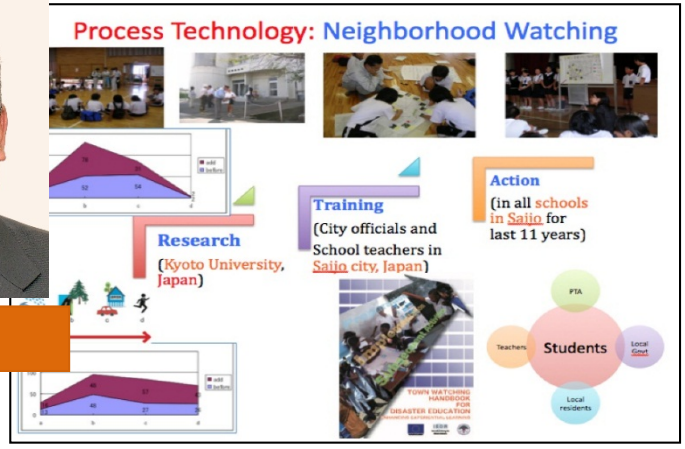
Indonesia

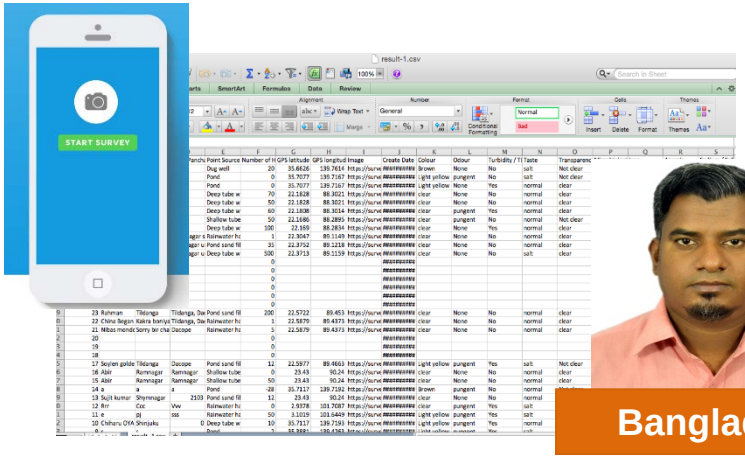


Pakistan



Nepal





Bangladesh

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Undertake innovative, implementation oriented research

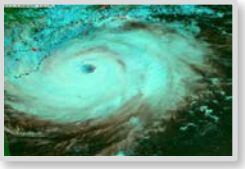
Establish a Number of Interdisciplinary Working Groups

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

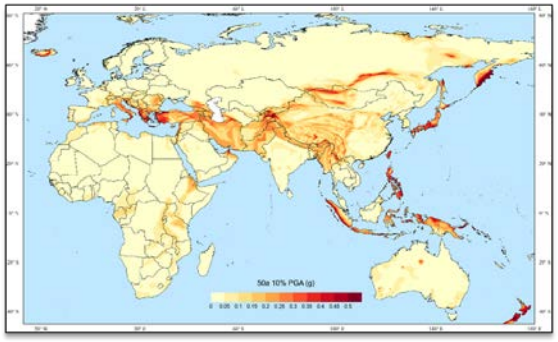
Co-chairs: JIA Gensuo and FENG Qiang

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

Big Earth Data Platform for Belt and Road: Tech Goals

BAR
Digital Belt and Road

- **Manage huge amount of Big Earth Data at scale**
  - Multi-source data integration(ETL)
  - Multi-dimentional modelling
  - Data quality control and metadata compiling
  - Data access in distributed enviroment with APIs

- **Process Big Earth Data at scale**
  - Image processing algorithms at cloud computing platform
  - Feature data processing algorithms
  - Machine learning(Deep learning)
  - Algorithm access with restful APIs

- **Web-based application system**
  - User session control
  - Report generation

Big Earth Data Platform for Belt and Road

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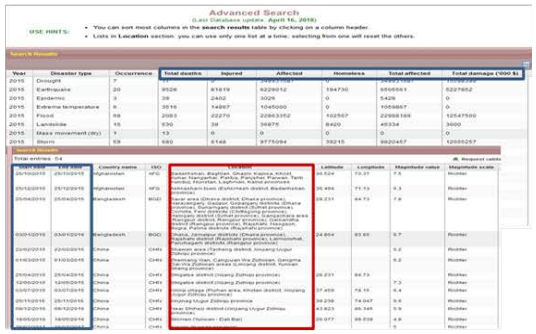
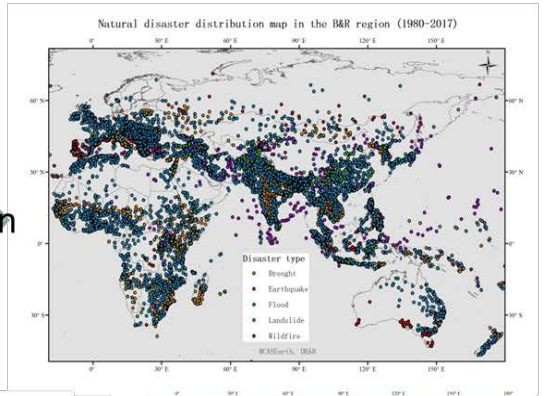
Undertake innovative, implementation oriented research

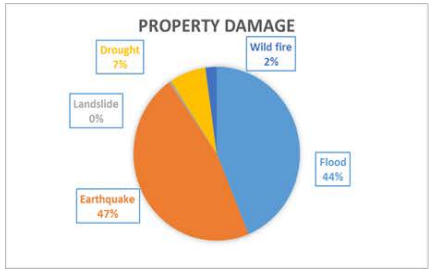
DRR Data analysis based on Big Earth Data

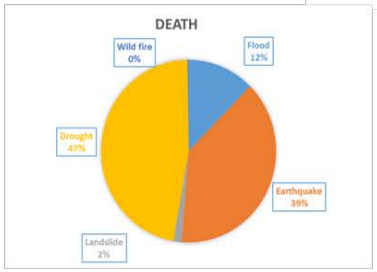
EM-DAT (8046 records) → **Location field** → **Semantic Analysis Model** ← **Google map**

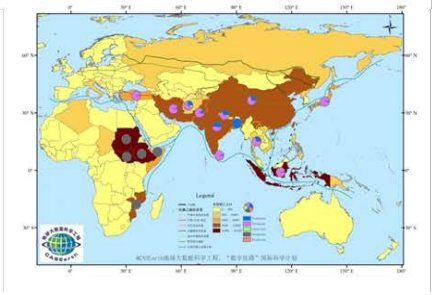


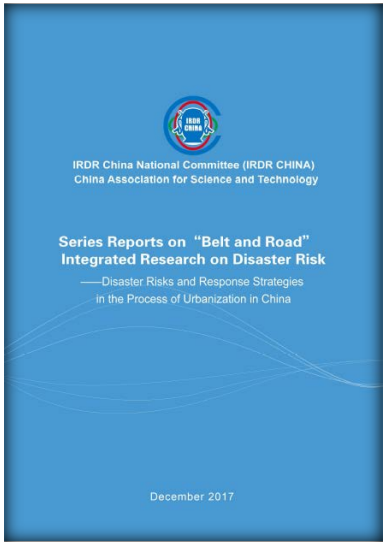
geolocation











GAR
Global Assessment Report on Disaster Risk Reduction
2019
Contributing Paper

Undertake innovative, implementation oriented research

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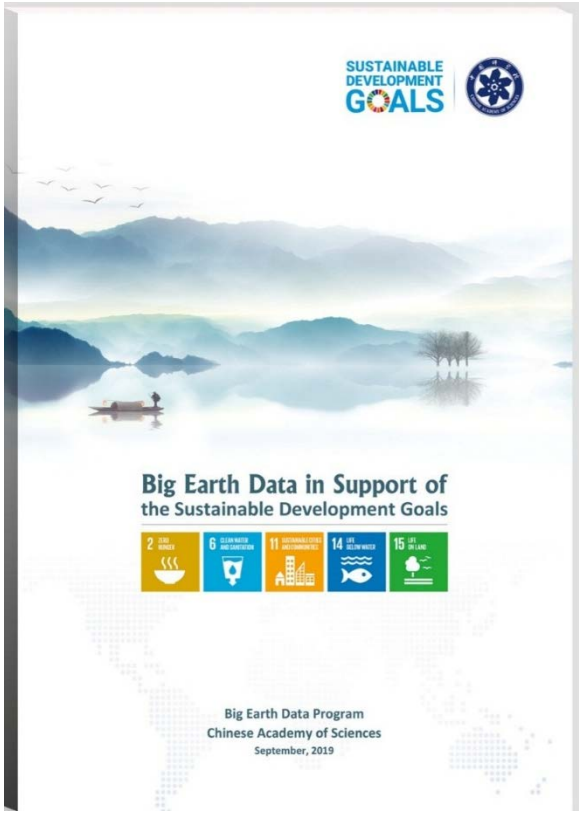
UN Sustainable Development Summit 2019



Ministry of Foreign Affairs, China

CH:https://www.fmprc.gov.cn/web/ziliao_674904/zt_674979/dnzt_674981/qtzt/2030kcxfzyc_686343/
EN:https://www.fmprc.gov.cn/mfa_eng/topics_665678/2030kcxfzyc/P020190924800116340503.pdf

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Capacity Building for DRR

Sanya(2013)

Beijing(2014)

Kashi(2014)

Qingdao(2015)

Sanya (2015)

Beijing (2018)

Sanya (2016,2017)

International Training Facilities

DRR Training in Thailand

(August 2019)

NRCT

Ramkhamhaeng University

Asian Institute of Technology

Prince of Songkla University

DBAR
Digital Belt and Road

The 4th Digital Belt and Road Conference

17-19 December, 2019 Shenzhen, China

Find out more on the conference website

http://dbar2019.csp.escience.cn

Hosted by:

DBAR Digital Belt and Road Digital Belt and Road Program

Co-Hosted By:

Big Earth Data Science Engineering Project (CASEarth)

Organized by:

SIAT

Shenzhen Institutes of Advanced Technology
Chinese Academy of Sciences

Sponsored By:

RADI · ISDE · IRDR · SIDIM · LDE · DIGITAL SILK ROAD ALLIANCE (DSRA)

Thank you !