

**18th Integrated Research on Disaster Risk (IRDR)
Science Committee Meeting**

**Tokyo, Japan
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**Report from
Integrated Research on Disaster Risk (IRDR)
International Centre of Excellence (ICoE)- Taipei**

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- **IRDR International Centre of Excellence (ICoE) - Taipei** has been established since November 2010 at Academia Sinica and become the first ICoE established under IRDR.
- IRDR ICoEs serve as **international platforms** for 1) conducting integrated research on disaster risk from both the natural and social science perspectives and 2) building a partnership network of disaster reduction research
- IRDR ICoE – Taipei indeed has been working as a comprehensive platform for international collaborations in **a broad spectrum** of disaster reduction relevant issues.

Taiwan provides an excellent natural laboratory for studying.....



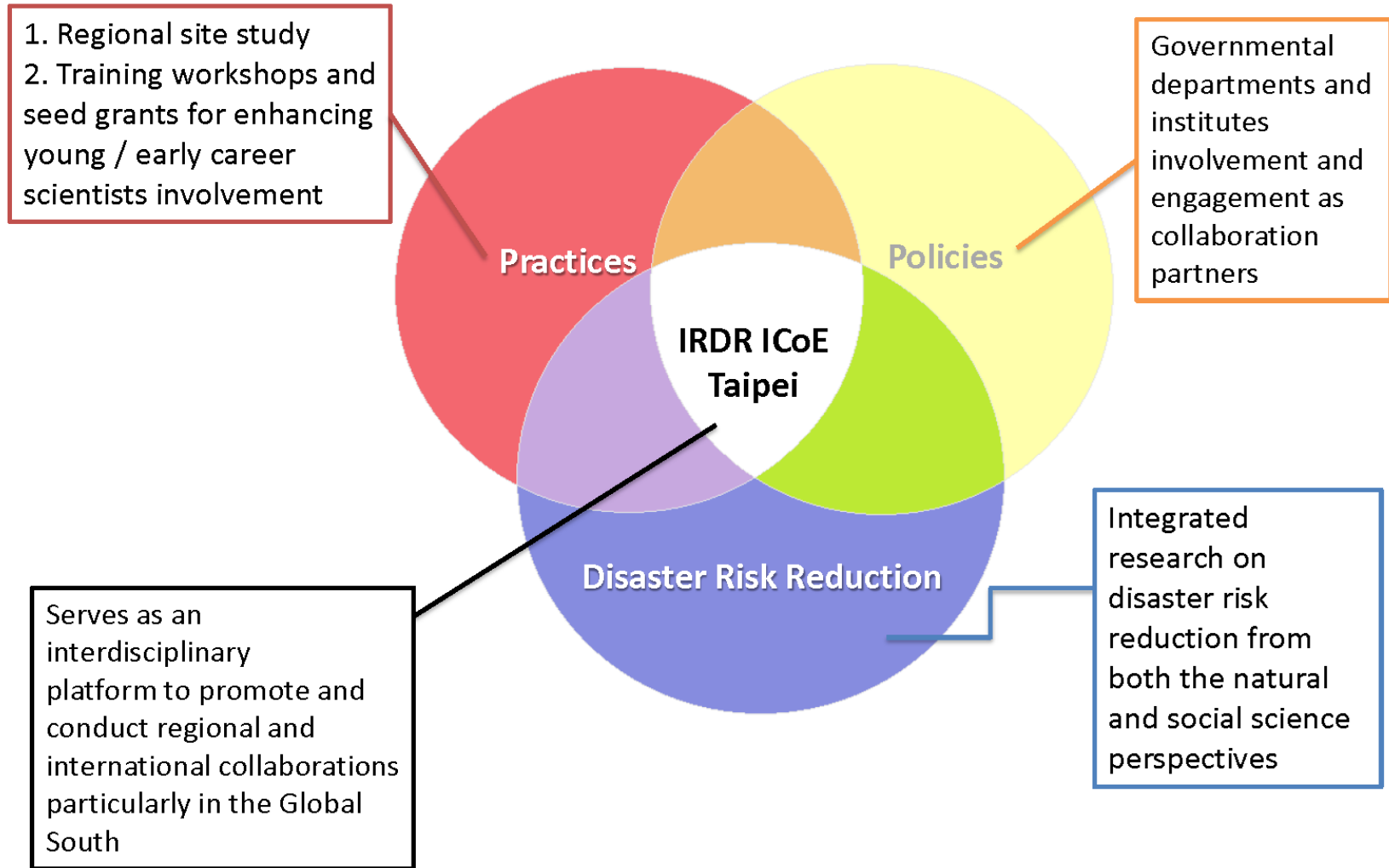
Natural Hazards

- Large earthquake
- Tsunami
- Landslide
- Mud/debris flow
- Flood

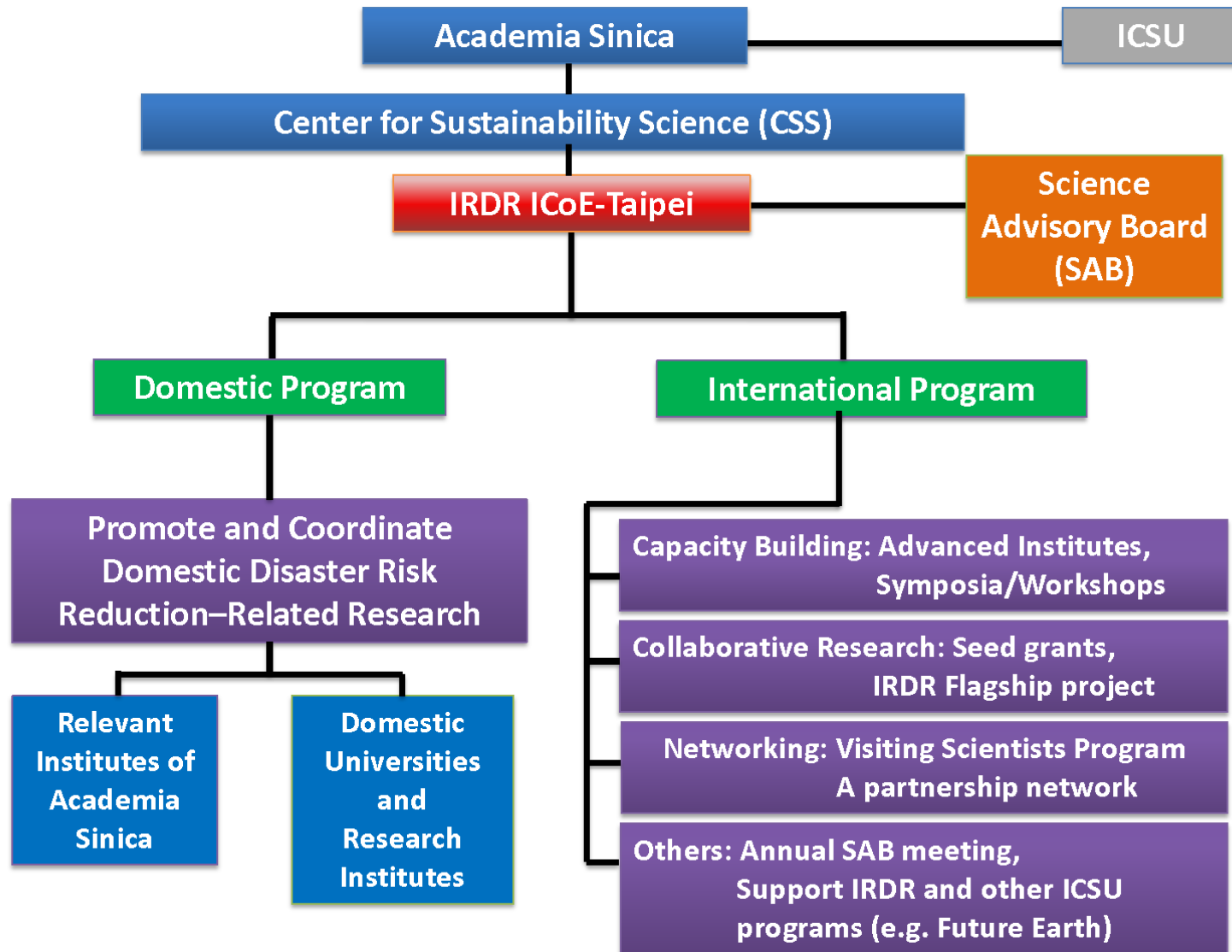


Study of Hazards and Mitigation

ICoE-Taipei' s Role



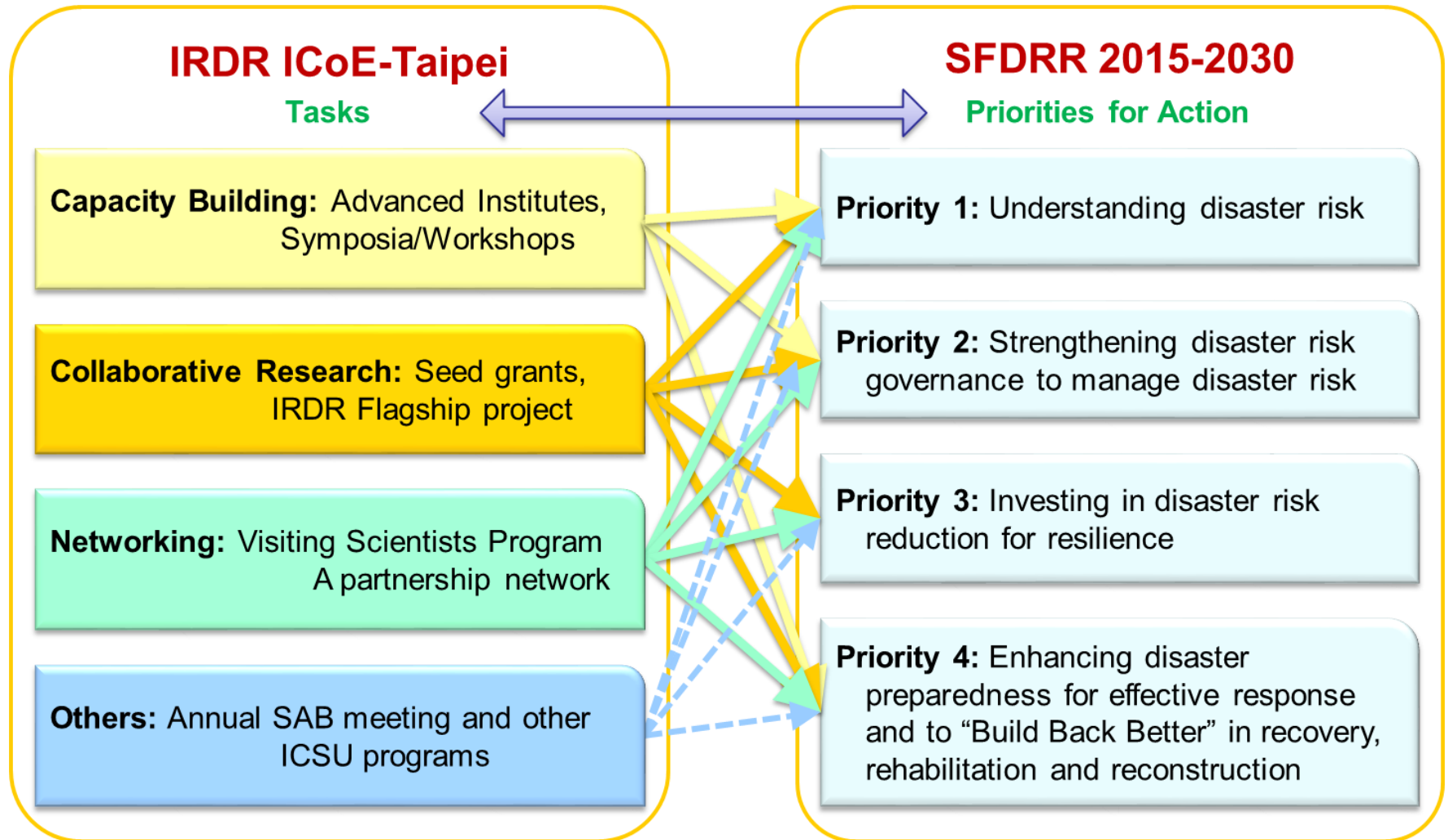
Structure of ICoE-Taipei



Mission Statement of ICoE-Taipei

- The center shall promote and implement **integrated multi-disciplinary approach** from the perspectives of both natural and social sciences
- Tasks:
 - Exchange of scholars between research institutes
 - Exchange of ideas and information
 - Collaborative research and regional site study
 - Education and training for young scientists
 - Establish a partnership network of disaster reduction research

Mission Statement of ICoE-Taipei



Research Projects

➤ Sustainability Science Research Program

- Academia Sinica has initiated an interdisciplinary Sustainability Science Program in September 2012 with the establishment of the Center for Sustainability Science, CSS (IRDR ICoE-Taipei was incorporated into CSS in 2012)
- There are 6 theme fields :
 1. Earth System Science
 2. Green Energy
 3. Natural Disaster Reduction and Adaptation
 4. Food Security and Safety
 5. Health-Related Issues
 6. Human-Dimension of Sustainability Science

Research Projects

In 2013-2017, there are 40 integrated projects including 131 sub-projects conducted and supported by the center. More than 200 experts from governmental institutes, universities and research organizations participated in projects

	2013	2014	2015	2016	2017	
Climate Change and Human Well-being	3	0	3	2	1	9
Natural Disaster Reduction and Adaptation	2	0	0	1	0	3
Green Energy	4	3	1	1	2	11
Aging Society	0	2	0	0	0	2
Food Security and Safety	3	1	0	0	2	6
Human Dimensions of Sustainable Development	5	1	2	1	0	9
Projects sum	17	7	6	5	5	40

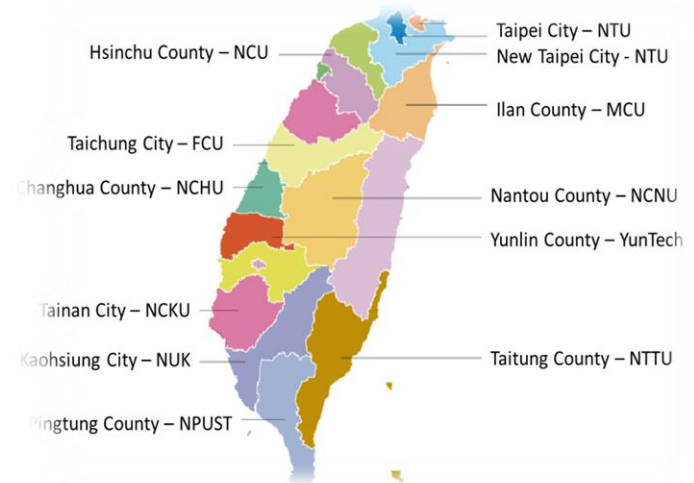
Collaborative Research

Flagship Project: Disaster Risk and Loss Reduction

– Integrated Research, Policy, and Practice

- The Flagship Project is led by the National Science and Technology Center for Disaster Reduction (NCDR) with the collaboration of IRDR ICoE-Taipei
- Focus on the Implementation of integrated science and technology to empower local governments on disaster risk reduction and emergency preparedness

- Expected outcomes:
 - To build up an **information sharing mechanism** to understand disaster risks better;
 - To **enhance DRR planning** focusing on local characteristics;
 - To **strengthen efficiency of emergency response**
- **International experience transfer** through PARR fellowship program



The flagship project engages one university as a partner of each local government for the science-policy collaboration. 12 pairs of partners between the university and local government have been built up.

International Activities (2011-2017)



Young Scientists' Conference on Integrated Research on Disaster Risk, Future Earth, and Sustainability



World Social Science Fellows Seminar Sustainable Urbanization - Transformations to Sustainability in Urban Contexts (WSS-ISSC Seminar)



Advanced Institute on Disaster Risk Reduction with Systems Approach for Slow-Onset Climate Disasters (AI-SOCD) Air Pollution, Sensors, and Big Data - with seed grants projects

International Activities conducted/ co-organized by IRDR ICoE - Taipei	
APR, 2011	Cities at Risk: Building Adaptive Capacities for Managing Climate Change Risks in Asian Coastal Cities (CAR II)
MAR, 2012	Advanced Institute on Forensic Investigations of Disasters – Southeast Asia (AI-FORIN)
OCT, 2012	Advanced Institute on Data for Coastal Cities at Risk (AI-DATA) IRDR Working Group - Disaster Loss Data & Impact Assessment (DATA) 1st Expert Meeting
APR, 2013	Brainstorming Session on “Future Asia”
OCT, 2013	Young Scientists' Conference on Integrated Research on Disaster Risk, Future Earth, and Sustainability
MAY, 2014	Forum on Future Earth in Taiwan
OCT, 2014	Future Earth in Asia: Regional Networking
NOV, 2014	World Social Science Fellows Seminar Sustainable Urbanization - Transformations to Sustainability in Urban Contexts (WSS-ISSC Seminar)
DEC, 2014	Pan-Asia Risk Reduction (PARR) Fellow Program seminar International Workshop on Post-Disaster Psychological Aid in the Asia-Pacific Region
APR, 2015	Advanced Institute on Disaster Risk Reduction and Loss Mitigation (AI-DRR & LM) - with seed grant projects
FEB-MAR, 2016	Future Earth Asian Perspective Symposium on Air Pollution Transdisciplinary Collaboration
JUN, 2016	The 23rd Pacific Science Congress - "Science, Technology, and Innovation: Building a Sustainable Future on Asia and the Pacific"
AUG, 2016	The 1st Workshop to Strengthen Scientific Advisory Capacities for Disaster Risk
SEP, 2016	The International Training Workshop on Natural Disaster Reduction - Natural Disaster Risk Modeling and Applications Pan-Asia Risk Reduction (PARR) Fellow Program seminar
NOV, 2016	The 5th Workshop on Psychological Intervention after Disaster (PIAD)
APR, 2017	Advanced Institute on Knowledge-based Actions for Disaster Risk Reduction (AI-KBA) - with seed grant projects*
JUL, 2017	Advanced Institute on Disaster Risk Reduction with Systems Approach for Slow-Onset Climate Disasters (AI-SOCD) Air Pollution, Sensors, and Big Data - with seed grants projects*



Advanced Institute on Forensic Investigations of Disasters – Southeast Asia (AI-FORIN)



Advanced Institute on Data for Coastal Cities at Risk (AI-DATA)



Advanced Institute on Disaster Risk Reduction and Loss Mitigation (AI-DRR & LM) - with seed grant projects



Advanced Institute on Knowledge-based Actions for Disaster Risk Reduction (AI-KBA) - with seed grant projects

Highlights of past activities connected to IRDR

- 2012 Advanced Institute – Forensic Investigation of Disasters (FORIN)
 - ICoE/NCDR published a 37-page FORIN report on “Forensic Investigation of Typhoon Morakot Disaster” on May 2014.
- 2012 Advanced Institute on Data for Coastal Cities at Risk
- 2013 Young Scientists’ Conference on Integrated Research on Disaster Risk, Future Earth, and Sustainability
- 2015 Advanced Institute on Disaster Risk Reduction & Loss Mitigation
- 2016 The 23rd Pacific Science Congress. Two sessions:
 - Plenary Speech by Dr. Gordon McBean: “Integrated research for reducing disaster impacts for a sustainable future earth”
 - “Regional and local efforts on implementation of the Sendai Framework for disaster risk reduction”.

Highlights of past activities connected to IRDR

- 2016, 2017 The 1st and 2nd Workshops to Strengthen Scientific Advisory Capacities for Disaster Risk
- 2016 The International Training Workshop on Natural Disaster Reduction – Natural Disaster Risk Modeling and Applications
- 2016 The 5th and 6th Workshop on Psychological Intervention after Disasters (PIAD)
- 2017 Advanced Institute on Knowledge-based Actions for Disaster Risk Reduction
- 2017 Advanced Institute on Systems Approach for Slow Onset Climate Disasters :Air Pollution, Sensors, and Big Data

Activities: Awards and Seed Grants

- Awards for 2013 “Young Scientists’ Conference on Integrated Research on Disaster Risk, Future Earth, and Sustainability”
10 awards were granted for the most outstanding presentation in both paper and poster categories at the end of the event.
- Seed Grants for 2015 “AI on Disaster Risk Reduction & Loss Mitigation, AI-DRR & LM”
4 regional interdisciplinary projects were selected
(2015-2016, 15K USD max for each project)
- Seed Grants for 2017 “AI on Knowledge-based Actions for Disaster Risk Reduction, AI-KBA)”
4 regional interdisciplinary projects were selected
(2017-2018, 15K USD max for each project)
- Seed Grants for 2017 “AI-DRR-Systems Approach for Slow Onset Climate Disasters, AI-SOCD”
Net yet send out the call for proposals, plan to select 4 regional interdisciplinary projects (2017-2019, 15K USD max for each project)

Future Plan: being an active part of the ICoE family

Share Taiwan's Integrated DRR knowledge, technologies, and experiences with countries mainly in Asia

- Following the agreement between **Academia Sinica and ICSU**.
- **Enhancing capacity** in integrated DRR research and practice in Asia, with a global perspective
- Facilitating integrated DRR **knowledge transfer** and collaboration among scientists from different disciplines, practitioners, and policy-makers.
- Providing solutions for problems encountered in one of the four phases of disaster management.

Future Plan:

Being an active part of the ICoE family

- Work closely with governmental agencies and institutes (Academia Sinica, NCDR, CWB, NCREE etc.) and **strengthens the capability in engagement as collaboration partners in regional site studies**
- Concentrate on **younger/ early career scientists'** training and providing them with seed grants for initiating regional DRR theme projects especially within the Global South
- IRDR ICoE – Taipei will build close partnerships with ICoEs, ICSU ROAP, START, and other international organizations **for implementation as “action network”** rather than simply research-based collaborations

Thank you