

# Southeast Asia Disaster Prevention Research Initiative (SEADPRI – UKM)



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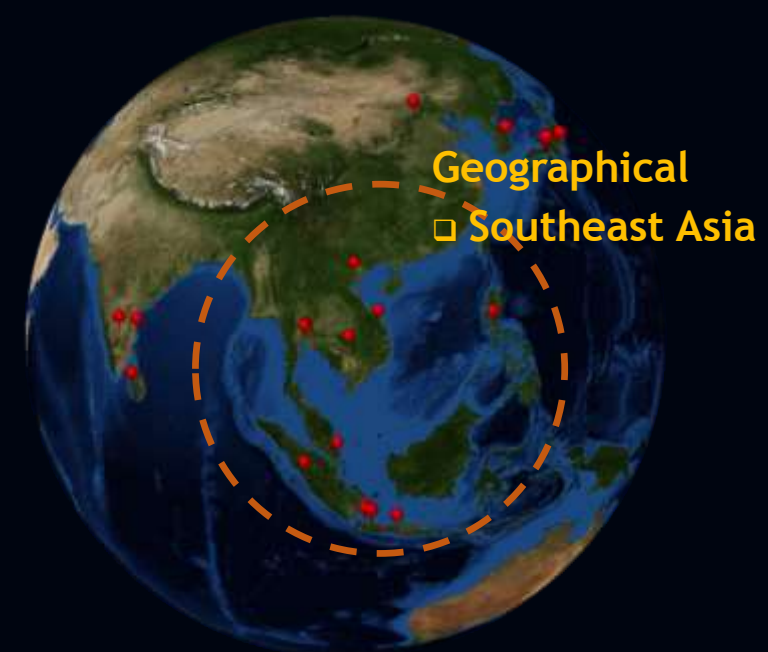
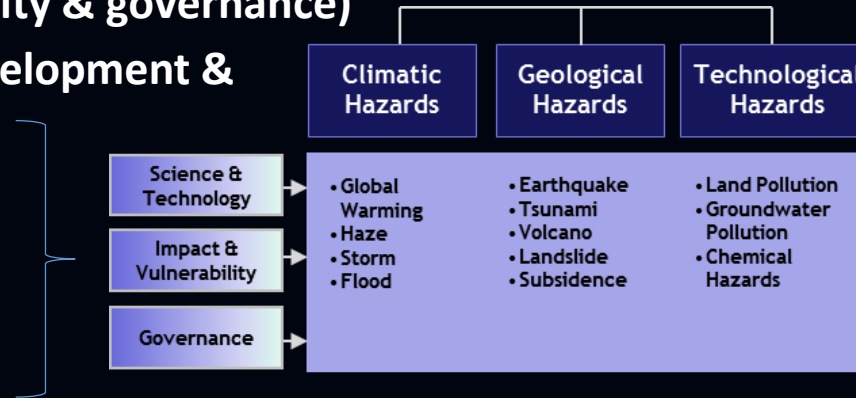


# 1. Core Academic Expertise (subject and geographical)

Holistic and integrated approach (science, technology, impact, vulnerability & governance)

Multidisciplinary research development & training to reduce risk of:

- ❑ Climatic Hazards
- ❑ Geological Hazards
- ❑ Technological Hazards



## Past & Ongoing Projects:

- Enhancing **Local Level Climate Change Adaptation** in Southeast Asia -ASEAN-India Green Fund
- **ASEAN Pilot initiatives on Climate Extremes for Disaster Prevention**
- Indicators for **Climatic Hazards and National Security**
- Establish the Asian Network on **Climate Science and Technology (ANCST)** - Cambridge (CMEDT)
- Integrating **CCA, DRR and L+D** to Address Emerging Challenges Due to Slow Onset Processes -APN
- Strengthening Capacity for **Policy Research on Mainstreaming Adaptation** - APN
- **Adaptation Roadmap** for Malaysia -UNITEN/NRE
- Assessing Community **Risk Insurance** Initiatives and Identifying Enabling Policy and Institutional Factors for Maximizing Climate Change Adaptation and Disaster Risk Reduction Benefits of Risk Insurance - IGES
- Viral, Angry Birds: Fostering **Climate Resilience** through Entertaining Games -USAID

- **Disaster Resilient Cities: Forecasting Local Level Climate Extremes and Physical Hazards** for Kuala Lumpur - Newton Ungku-Omar Fund
- **Future Cities: Science to Action** for **Building Resilience** of Urban Communities to **Climate Induced Hazards** - Newton Ungku-Omar Fund
- Build capacity on integrating risks of **seismic-induced geohazards** into development planning & **tsunami** modelling - ITB
- **Policy and Planning Responses for Earthquake and Tsunami Hazards** in Malaysia - ASM
- Large-scale **Landslide & Debris Flow** in highland areas - MOSTI
- **Landslide** mechanisms and human-induced landslides - MOHE
- Estimation for **Flood Disaster** Damage and Losses in area of Kajang, Selangor Malaysia - Global Change System for Analysis, Research and Training (START)
- **Floods and Migration** in ASEAN
- **Community Based DRR**

- Investigation of Organic Quantum Cells Automata (QCA) Transduction for Multiple **Biohazards Detection** Based on Novel **DNA Biosensors**
- Developing a Rapid Dengue **Virus Biosensor** Early Warning System for Potential Mapping of High Risk Dengue Outbreak Zones in Malaysia -MOSTI
- Creating Silicon Nanostructure Platforms Integrated with **Nano-Biosensors for the Rapid Determination** of Biohazards to Ensure Food Safety - MOSTI
- A DNA Biosensor with Dry-Reagent for **Rapid Detection of Biohazards** Vibrio Cholera in **Flood Disaster Zones** - MOSTI
- Development of Solid-state **DNA Optosensor** for Visual Detection of Dengue Virus - UKM
- Transportation and Management of **Hazardous Chemicals**

## 2. Training and Professional Partnerships

### Education and Training

- Postgraduate Masters and Doctoral program (MA, MSc, PhD)
- Professional/ Specialised Training

### Workshop and Courses

### Applied Research

- Knowledge generation
- Co-researcher

### Policy Advisor to Government & Stakeholders

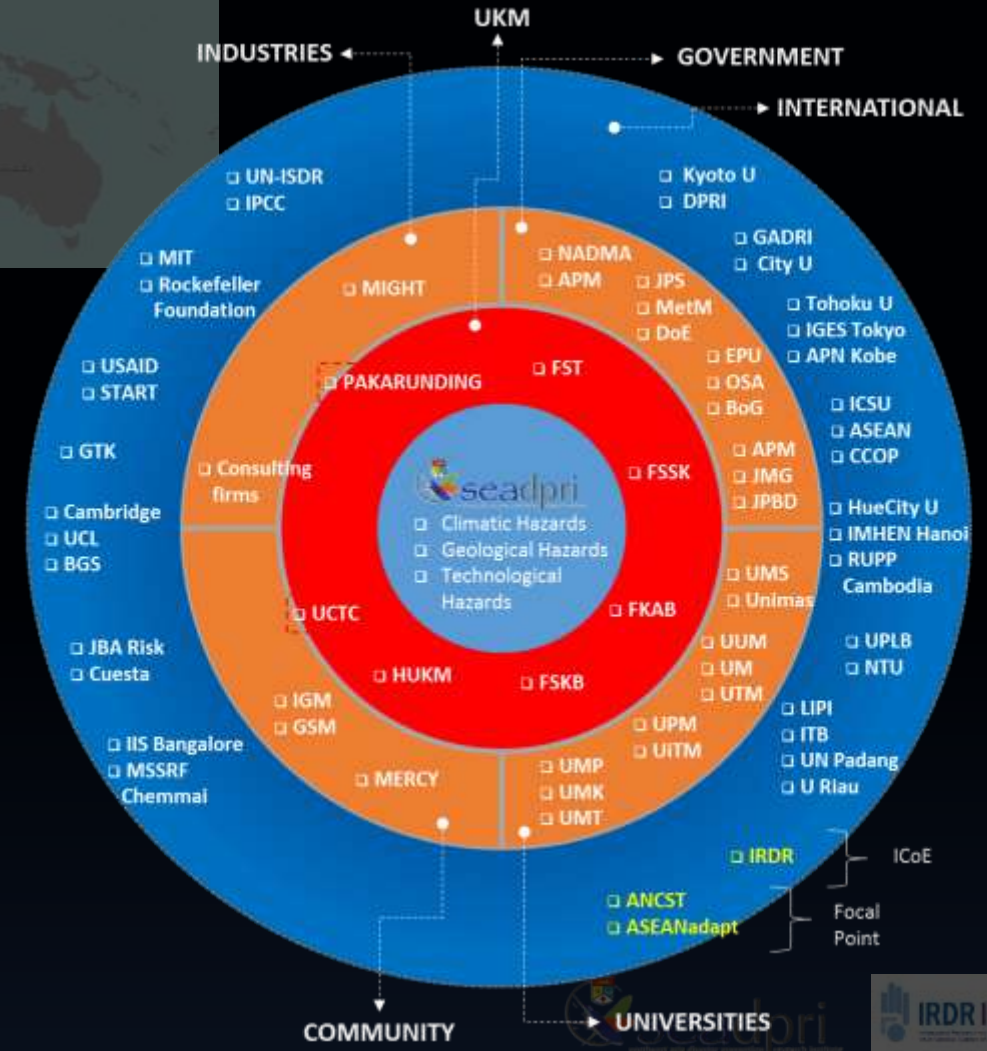
### Outreach and Networking

### Focal Points

- Technical support for National Disaster Management Agency - SFDRR indicators & monitoring
- ANCST
- ASEANadapt
- Malaysia Window-to-Cambridge (MW2C@UKM)

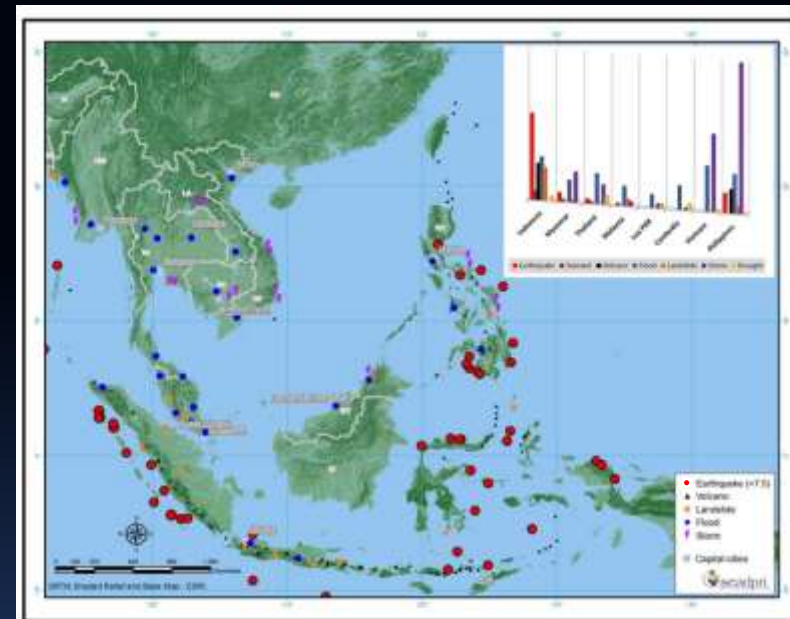
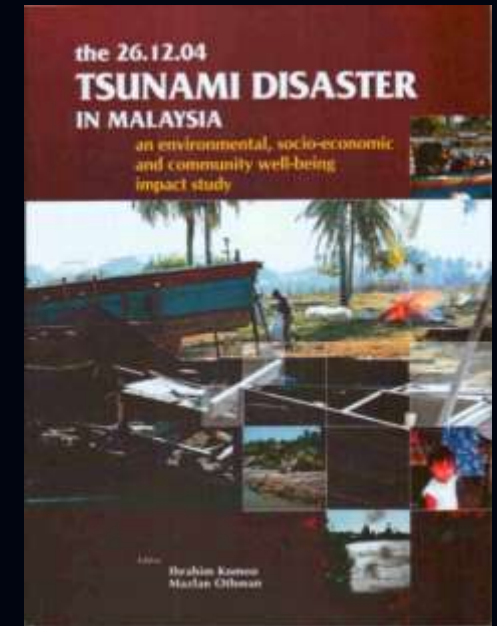
No	Int. Partners
1	IGES Tokyo
2	DPRI & Kyoto Uni
3	GADRI
4	APN Kobe
5	ADRC HQ
6	AMCDRR Korea
7	China
8	UPLB Manila
9	HueCity Univ
10	IMHEN Hanoi
11	RUPP Cambodia
12	CCOP
13	APAN
14	UChi
15	NTU
16	Yogyakarta
17	ITB
18	LIPI
19	ASEAN
20	IPB Bogor
21	Padang
22	IIS Bangalore
23	ADRC Colombo
24	MSSRF Chennai
25	Cambridge, MIT
26	IPCC
27	ICSU
28	UNISDR
29	kfW Hamberg
30	GTK Finland

**MALAYSIA:**  
 NADMA, JMG,  
 JPBD,  
 MetMalaysia,  
 APM, NRE, ASM,  
 NAHRIM, MERCY  
 Malaysiaetc.



### 3. Potential Connections to IRDR Research Projects (RIA, FORIN, DATA, AIRDR)

- ❑ Risk Interpretation and Action (RIA)
- ❑ Forensic Investigations of Disasters (FORIN)
- ❑ Disaster Loss Data (DATA)
- ❑ Assessment of Integrated Research on Disaster Risk (AIRDR)



Korban Gempa 7.6 M, Padang Indonesia, 31 September 2004  
(The Victims of the 7.6 M Earthquake, Padang, Indonesia, 31 September 2004)

Walaupun korban gempa Padang, yang merupakan bagian dari gempa bumi tektonik 7.6 M, yang melanda kawasan Pantai Padang, Sumatera Barat, Indonesia, pada tanggal 30 September 2004, jumlah korban jiwa yang meninggal dunia akibat gempa ini diperkirakan mencapai 100 orang. Jumlah korban jiwa yang meninggal dunia akibat gempa ini diperkirakan mencapai 100 orang. Jumlah korban jiwa yang meninggal dunia akibat gempa ini diperkirakan mencapai 100 orang.

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## 4. Highlights of IRDR ICoE Branded Activity

### SEADPRI-ICSU-ANCST WORKSHOP ON NATURAL HAZARDS AND RISK IN ASIA PACIFIC

- ❑ 28 March 2017 at Danau Golf Club, UKM Bangi
- ❑ ICSU-ROAP Steering Group Committee on Natural Hazards and Disaster Risk (SGNHDR)  
Prof. James Terry, Prof. James Goff, Prof. Gensuo Jia, and Dr. Vena Pearl Bongolan shared their work on coastal Hazards, tsunami potential in the research on submarine landslides and palaeo-tsunami research in the region
- ❑ Jointly organised by SEADPRI-UKM, ICSU-ROAP and ANCST

### ASEANadapt

- ❑ Collaboration, knowledge sharing and communication between experts in ASEANmember countries via ASEANadapt. Enhanced Linkages and Outreach & Capacity Building and Stakeholder Consultation
- ❑ Country Scoping Studies - Key vulnerable ecosystems and regions in ten AMS: Adaptation needs and priorities | Potential impacts on resources and implications for regional security; Inputs from national and sub-national stakeholders; Good practices, CCA constraints and capacity building through local scenarios



## 5. What you want to gain from being an active part of the ICoE family

- ❑ **Technical expertise** drawn from ICOE family esp. on **Climate-driven disasters**
- ❑ **Disaster Risk Reduction** as the first step to climate change adaptation for the region
- ❑ **Common guidance** for:
  - ❑ identification of susceptible areas, exposed assets and vulnerable communities;
  - ❑ area and context specific recognition of cascading and slow onset hazards;
  - ❑ matching of scale of science information to scale of decision-making;
- ❑ **Synchronisation of scientific inputs** to local administrative processes
- ❑ **New models of risk sharing and social protection**

## 6. What you feel next steps should be that you could contribute to grow/realise the ICoE family

- ❑ **Linking the global IRDR community to Asian researchers on climate change (via ANCST) and the scientific community in ASEAN (via ASEANadapt). This will be useful for promoting and exchanging scientific findings to enhance awareness, advance risk informed decision-making and strengthen adaptive management to build disaster resilience in the changing climate**
- ❑ **Facilitate to advance disaster risk reduction as a first step to climate change adaptation at the local level by engaging national and sub-national governments via ASEAN. This approach can also be advanced to the private sector in ASEAN, to promote transformation in corporate decision-making and introduce measures that facilitate disaster resilience**
- ❑ **The proposed IRDR ICoE can draw on the collective knowledge and experience of the greater IRDR community, to be adapted based by relevant stakeholders in the ASEAN Member States based on their priorities and national circumstances**
- ❑ **In partnership with ASEAN, facilitate localized inputs to advance the integrated approach to disaster risk reduction through a variety of capacity building research and regional scientific activities. A community of DRR and climate change adaptation researchers and practitioners in ASEAN Member States will be strongly engaged and linked to the global IRDR community**

**For further information, kindly contact:**

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**Thank You**