



**Asia-Pacific
Economic Cooperation**

2019/EPWG/DIA/013

Agenda Item: 9A

Association of Pacific Rim Universities Multi- Hazards Program

Submitted by: Japan



**APEC Resilience Week
Taipei, Chinese Taipei
30 September - 2 October 2019**



Association of Pacific Rim Universities (APRU) Multi-Hazards Program

Takako Izumi (Associate Profess of Tohoku University,
Director of the APRU Multi-Hazards Program)



APRU

The Voice of
Knowledge &
Innovation

We bring together thought leaders, researchers, and policy-makers to exchange ideas and collaborate on effective solutions to the challenges of the 21st century.

Established as **an advisory body** in 1997 to APEC, international organizations, governments and business **on the development of science and innovation** as well as on **the boarder development of higher education.**

Membership

- 
- Australia**
Australian National University
The University of Melbourne
The University of Sydney
UNSW Sydney
- Canada**
The University of British Columbia
- Chile**
University of Chile
- China & Hong Kong SAR**
The Chinese University of Hong Kong
Fudan University
Nanjing University
Peking University
Tsinghua University
The Hong Kong University of Science and Technology
The University of Hong Kong
University of Science and Technology of China
University of Chinese Academy of Sciences
Zhejiang University
- Chinese Taipei**
National Taiwan University
National Tsing Hua University
- Indonesia**
University of Indonesia
- Japan**
Keio University
Nagoya University
Osaka University
Tohoku University
Waseda University
- Korea**
Korea University
KAIST
POSTECH
Seoul National University
Yonsei University
- Malaysia**
University of Malaya
- Mexico**
Tecnológico de Monterrey
- New Zealand**
University of Auckland
- Philippines**
University of the Philippines
- Russia**
Far Eastern Federal University
- Singapore**
Nanyang Technological University
National University of Singapore
- Thailand**
Chulalongkorn University
- USA**
California Institute of Technology
University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, San Diego
University of California, Santa Barbara
University of Hawai'i at Mānoa
University of Oregon
University of Southern California
University of Washington

Our Mission

- Providing international platforms for collaboration
- Promoting the generation and sharing of knowledge
- Communicating the critical role of universities
- Strengthening the collective international leadership and impact
- Creating partnerships with international organizations, business, governments and NGOs



APRU

**The Voice of
Knowledge & Innovation**

APRU Program Hubs

Global
Health

Multi-
Hazards

Population
Aging

Sustainable
Cities &
Landscapes



Keio University



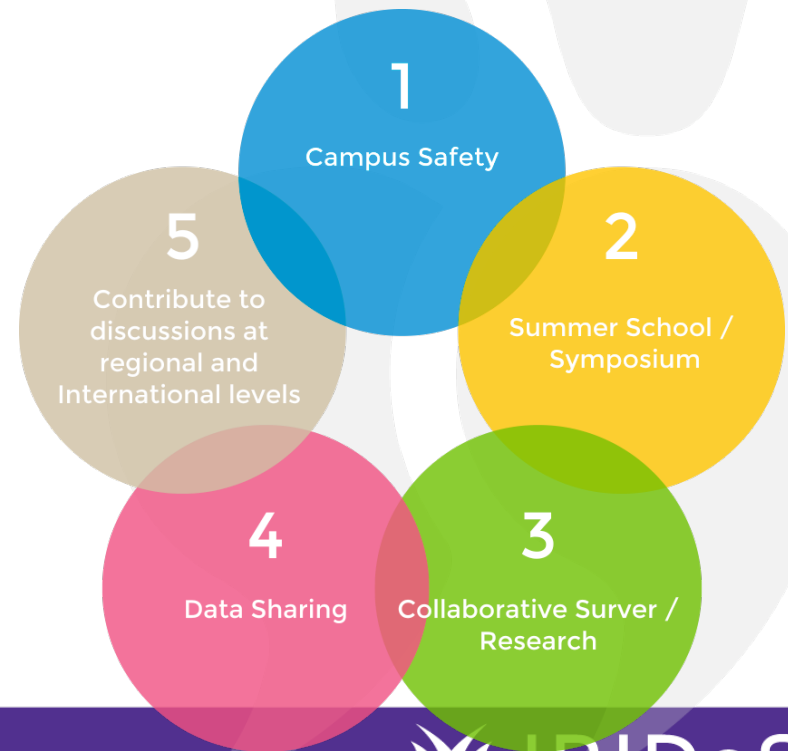
UNIVERSITY
OF OREGON

APRU Multi-Hazards Program

- Established in April 2013. IRIDeS, Tohoku University hosts its Secretariat and provides the coordination and administrative services.
- The Core Group (12 members from *UC Davis, Univ. of Hawaii, Univ. of Chile, Chulalongkorn Univ., National Taiwan Univ., Univ. of Philippines, University of Tokyo., Tohoku University*) is a driving force and decision making body.

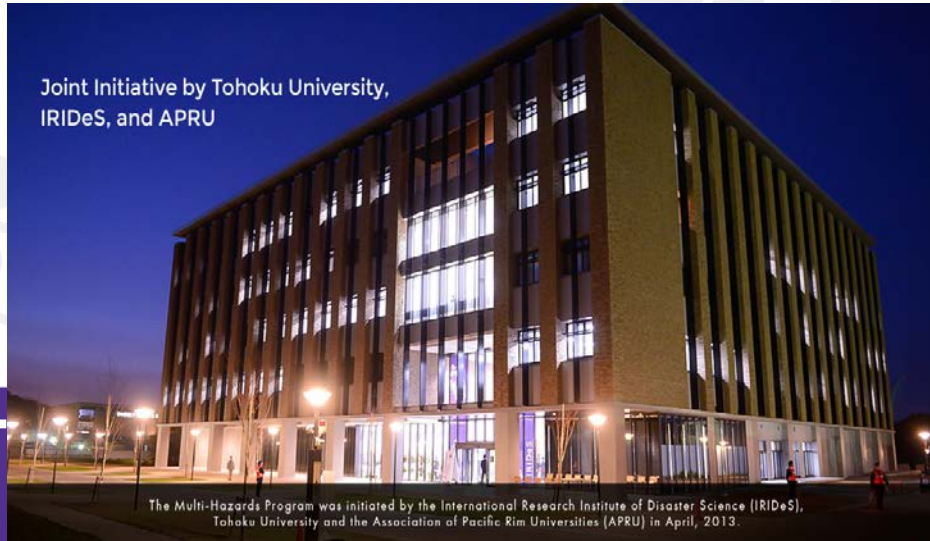
Main Objectives:

- Harness the collective capabilities of APRU universities for cutting-edge research on DRR
- Contribute to the international and regional discussions to make an influence in a DRR policy making process.



International Research Institute of Disaster Science (IRIDeS), Tohoku University

- ✓ Established in 2012 in Sendai (7 departments and 36 areas)
- ✓ Combination of technology/science and history/social science.
Only natural science and technology cannot reduce disaster risks.
- ✓ Work together with various stakeholders – *communities, local authorities, local universities, and private sectors.*
- ✓ High-level education on disaster management (i.e., Leading Graduate School under Tohoku University)



SFDRR: *Expectation to academia and scientific community*

- ◆ SFDRR calls for academia, science and research entities and networks to:
 - ✓ *focus on the disaster risk factors and scenarios;*
 - ✓ *increase research for regional, national and local application;*
 - ✓ *support action by local communities and authorities; and*
 - ✓ *support the interface between policy and science for decision-making*

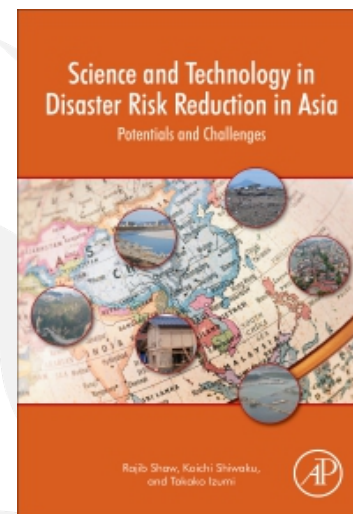
The challenges and gaps - **translating scientific information into the policy-making arena** that can make policies science and evidence based.



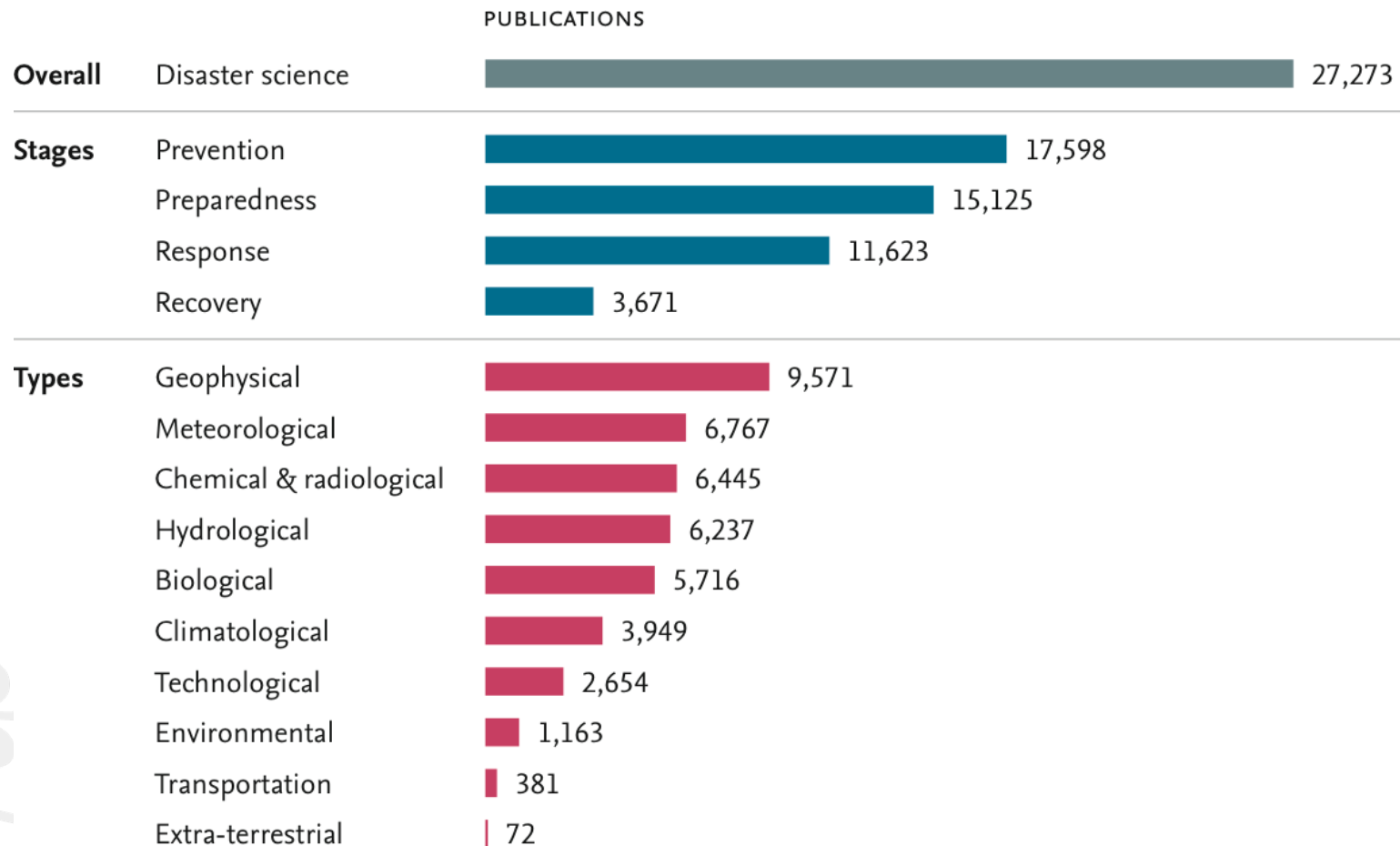


RESEARCH: encouraging collaborative researches



1. **Global Outlook on Disaster Science:** in collaboration with Elsevier, IRIDeS, UNISDR, ICSU etc. It showed an **analysis of recent scholarly output and impact** in disaster science, including research on disaster types according to the Sendai Framework for Disaster Risk Reduction
2. **Book: Science and Technology in DRR in Asia:** Papers based on the abstracts presented at the APRU MH Symposium in 2016 at Kyoto University. It covers new research on the role of science in DRR and lessons learned when research has been applied



Disaster Science Scholarly Output overall by disaster management cycle stage, and by disaster type according to the SFDRR (2012-2016)



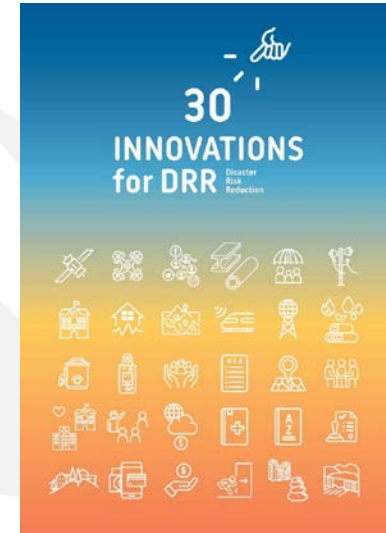
Key findings (2012-2016)

- 27,273 (0.22%) : the number of recent scholarly output in disaster science  *to increase the volume and quality of research being done in the disaster science field to address key gaps in our knowledge*
- Death toll versus publications: Countries with the highest death tolls from natural disasters tend to have low volumes of disaster science scholarly output  *a need to invest in more research to build research capacity in developing countries and strengthen collaborative research and transdisciplinary approaches*

RESEARCH: encouraging collaborative researches

3. 30 innovations for DRR:

- Collects 30 innovations (14 products / 16 approaches) to identify the most important, suitable, and innovative tools
- A survey result on the innovations considered most effective and useful
- Downloaded more than 840 (UNU knowledge library) since April 2019



4. A new international journal: Progress in Disaster Science:

- 1) Holistic perspective on disaster research
- 2) Highlighting the overviews, case studies, and challenges regarding **the implementation of the Sendai Framework**
- 3) Multi-stakeholder and implementation oriented research



EDUCATION: sharing experience and knowledge based on the experience of the Great East Japan Earthquake and Tsunami

1. **MH Summer school:** Nearly 50 students and faculty learned about the GEJE recovery and international DRR strategy. In 2019, 60 students and faculty participated in the summer school.
2. **MH annual research symposium** (Tecnologico de Monterrey in Mexico City): 29-31 October 2019.
3. **Campus Safety Program:**
 - Strengthen the disaster preparedness capacity on campus
 - Promote its importance at the international and regional levels
 - **The 3rd Association of Pacific Rim Universities (APRU) Campus Safety Workshop** ~Risk assessment on campus with an all-hazards approach: addressing and understanding *the risks of natural and man-made hazards*~



Campus Safety Program

Objectives:

- Strengthen the disaster preparedness capacity on campus
- Promote its importance at the international and regional levels

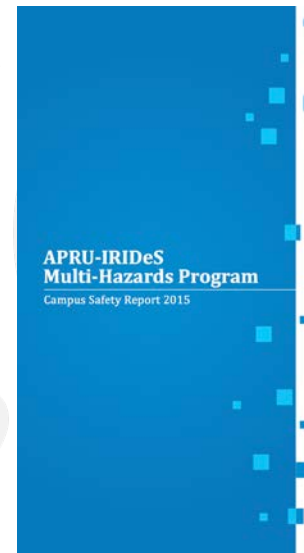
Activities:

- A survey on the current disaster preparedness status was conducted among the APRU universities
- The Campus Safety Workshop was held at IRIDeS, Tohoku University in February 2016 and April 2018 to share their experience and discuss how to overcome the challenges

*Universities need to develop an adequate **disaster management plan** for responding to and recovering from any damage*



One of the recommended actions in the outcome document from the UNISDR Asia Science & Technology Conference on DRR



CONTRIBUTION TO INTERNATIONAL DISCUSSION: bringing up the academic perspectives and voices to the discussions at higher levels

1. 2017 Global Navigation Satellite System (GNSS) early warning system workshop (Sendai, Japan): NASA and UC Davis in collaboration with IRIDeS organized the workshop to discuss a new warning system based on GNSS real time technology.
2. UN Global Platform on DRR (May 2019 in Geneva): organized 2 sessions - 1) Innovation and DRR, 2) Launch of Progress in Disaster Science
3. World Bosai Forum (Sendai, Japan):
 - ✓ A plenary session “*the Knowledge Front of Disaster Risk Reduction*” with Elsevier
 - ✓ the APRU session “*Strengthening contributions to the international community through multi-disciplinary disaster science research*” with Tohoku University.



NEW COLLABORATION WITH PRACTITIONERS:

strengthening the collaboration between academia and practitioners/policy makers

MOU between International Federation of Red Cross and Red Crescent (IFRC) and APRU:

- ✓ **Research** to increase knowledge and science-based evidence to influence policies and practices in disaster risk management.
- ✓ **Policy dialogue and advocacy** in relevant forums and key events.
- ✓ **Cross-collaboration** to co-host events or invite one of the parties to events led by other one.



MH Program's next step for advancing APRU's strategy

The MH program continues to:

- strengthen **the research capacity** of the APRU member universities in disaster science
- provide **a learning opportunity** for students and faculty members.
- work with other stakeholders such as practitioners, governments, international organizations and the private sector to make the best use **of the research outcomes in practice**
- share **scientific evidence for policy making**

NEW POSSIBLE INITIATIVES

- **DRR innovations in various sectors:** gender, health, water, agriculture, education, early warning/communication, livelihood, disaster response, children, disabilities (June 2020)
- World Bosai Forum in collaboration with UNDRR and APSTAAG: Natural disasters induced technological hazards
- **Collaboration with other organizations/agencies:**
APEC EPWG???



Thank you for your attention.

<http://aprumh.irides.tohoku.ac.jp/>
izumi@irides.tohoku.ac.jp

