



# GSRIDRR 2017



世界防災研究所連合  
Global Alliance of  
Disaster Research  
Institutes



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Global Alliance of  
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3<sup>rd</sup> Global Summit of Research Institutes for Disaster Risk Reduction  
Expanding the Platform for Bridging Science and Policy Making

Disaster Prevention Research Institute (DPRI), Kyoto University  
Obaku Plaza, Uji, Kyoto, Japan from 19 to 21 March 2017

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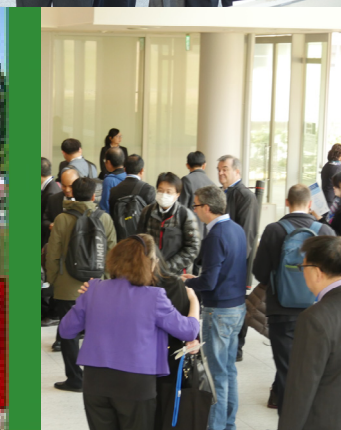
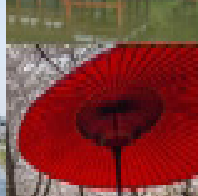
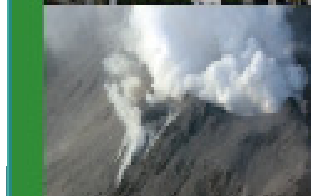
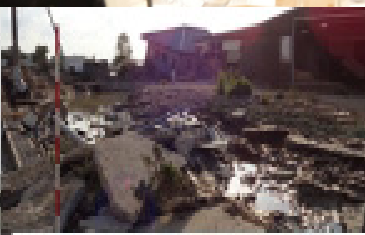
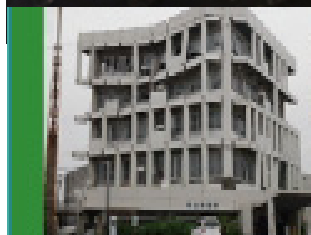


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# GADRI ACTIONS

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# GSRIDRR 2017



## Contents

- 3rd Global Summit
- Opening Ceremony
- Keynote Speeches
- GADRI Member Institutions
- GADRI Achievements and Challenges
- Group discussions sessions
- Plenary Sessions
- Presentations
- Booths and Field Visits
- 3rd Global Summit Outcomes
- GADRI 1st General Assembly
- Pictures
- A few Comments from Participants
- Conclusion
- Current Status of GADRI Member Institutions
- GADRI Contact Details

Contents for the current issue were provided by Hirokazu Tatano and Wilma James; and the photos by Kaoru Saeki.

## 3<sup>rd</sup> Global Summit of Research Institutes for Disaster Risk Reduction Expanding the Platform for Bridging Science and Policy Making

**Disaster Prevention Research Institute (DPRI), Kyoto University  
Obaku Plaza, Uji, Kyoto, Japan from 19 to 21 March 2017**

3<sup>rd</sup> Global Summit of Research Institutes for DRR : Expanding the Platform for Bridging Science and Policy Making (GSRIDRR 2017) will be held at the Disaster Prevention Research Institute (DPRI), Kyoto University, Uji Campus from 19 to 21 March 2017. The 3<sup>rd</sup> Global Summit will bring together representatives from research institutes involved in disaster risk reduction (DRR) research with the following objectives:

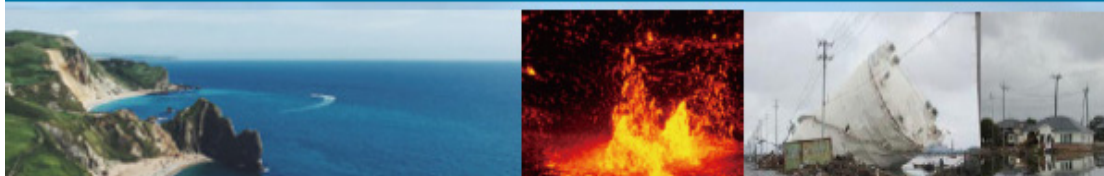
- To serve as an advocate for key research policy statements that are in line with real, evidence-based disaster research needs.
- To carry out a more detailed assessment of key research challenges and to identify priority research areas
- To identify pioneering scientific initiatives to effectively reduce the gaps between science and practice in disaster risk reduction activities.
- To share and build on achievements, and outcomes of past and ongoing GADRI activities addressing research gaps.
- To foster links between local and international organizations and their programs through the GADRI network.

### Expected Outcome:

1. To develop a comprehensive tabulation of important research themes along the four priority areas that will be used to evaluate policies and practices of current research activities and identify gaps in disaster risk reduction in relation to the SFDRR.
  - I Understanding – Deepening the understanding of disaster risks
  - II Governance – Enhancing governance to manage disaster risks
  - III Resilience – Disaster risk reduction for resilience
  - IV Recovery – Effective response to disaster recovery / Build Back Better
2. A book publication based on the results of the discussions to identify the most important research themes for disaster risk reduction. The book will provide visions and knowledge to connect the current status of science and technology with future directions for disaster research to contribute for disaster risk reduction in the world.
3. Encourage cross-institutional collaboration to fill the research gaps.

We extend an invitation to all stakeholders involved in DRR and disaster research to join the 3<sup>rd</sup> Global Summit.

**Registration: <http://gadri.net/summit/>**



### On the Cover

Pictures taken during the 3rd Global Summit of Research Institutes for Disaster Risk Reduction held at DPRI, Kyoto University, Kyoto, Japan from 19 to 21 March 2017.

GADRI Actions is designed, formatted and edited by Hirokazu Tatano and Wilma James.





# **3rd Global Summit of Research Institutes for Disaster Risk Reduction GSRIDRR2017**

## **Expanding the Platform for Bridging Science and Policy Making**

Disaster Prevention Research Institute, Kyoto University, Uji Campus, Kyoto, Japan

19 to 21 March 2017



Participants of the 3rd Global Summit of Research Institutes for Disaster Risk Reduction held at the Disaster Prevention Research Institutes (DPRI), Kyoto University, Uji Campus, Kyoto, Japan from 19 to 21 March 2017



## 3<sup>rd</sup> Global Summit of Research Institutes for Disaster Risk Reduction

**T**he 3<sup>rd</sup> Global Summit of Research Institutes for Disaster Risk Reduction: Expanding the Platform for Bridging Science and Policy Making was organized by the Global Alliance of Disaster Research Institutes (GADRI). The Summit was hosted by the Disaster Prevention Research Institute (DPRI), Kyoto University and sponsored by Kyoto University and other donors.

The conference received wide acclamation within and outside of Japan. The opening ceremony was attended by the Vice-Governor of the Kyoto Prefecture, and the Mayor of Uji City.

3<sup>rd</sup> Summit attracted 251 delegates from 38 countries representing 102 institutions among which were the UN, governmental and international organizations, private sector, educational and research sector in various backgrounds and disciplines involved in disaster risk reduction.

### Objectives of the 3<sup>rd</sup> Global Summit:

The Summit brought together representatives from research institutes involved in disaster risk reduction (DRR) research with the following objectives:

To



serve as an advocate for key research policy statements that are in line with real, evidence-based disaster research needs.

To carry out a more detailed assessment of key research challenges and to identify priority research areas

To identify pioneering scientific initiatives to effectively reduce the gaps between science and practice in disaster risk reduction activities.

To share and build on achievements, and outcomes of past and ongoing GADRI activities addressing research gaps.

To foster links between local and international organizations and their programs through the GADRI network.

## Global Summit Series

**I**n the aftermath of the Great East Japan Earthquake and Tsunami which impacted on the economy and massive human losses, the Disaster Prevention Research Institute (DPRI) Kyoto University engaged to organize the First Global Summit of Research Institutes for Disaster Risk Reduction (GSRIDRR) in November 2011. The main objective of the summit was to bring together research organizations involved in disaster risk reduction (DRR) to reassess and reflect on the challenges posed, and discuss and identify new paradigms based on the lessons learned from recent disasters around the world. At the end of the First Global Summit, a resolution was adopted to establish an international forum on natural disaster research.

During the Second Global Summit of Disaster Research Institutes for DRR in March 2015, the resolution was further discussed and the Global Alliance of Disaster Research Institutes (GADRI) was formerly established to support the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) and the work of the Scientific and Technical Advisory Group of the United Nations Office for Disaster Risk Reduction (UNISDR). Today GADRI has over 130 member institutions.



The First

### Global Summit of Research Institutes for Disaster Risk Reduction

Exploring New Paradigms of Natural Disaster Research Based on

the Lessons Learned from the Great Natural Disasters

November 24 - 25, 2011, Kyoto University, Uji, Japan





## Day 1: 19 March 2017— Opening Ceremony

The 3rd Global Summit opened with a welcome message from the President Juichi Yamagiwa, Kyoto University which was read by Prof. Kaoru Takara. In Prof. Yamagiwa's message he stressed the importance of coming together as one community to raise awareness of disaster risk reduction, sharing information on lessons learnt from disasters, research results and engaging in collaborative research projects to tackle existing disasters., and prevent future disaster risks.



This was followed by a warm welcome to Kyoto City by the Vice Governor of Kyoto City, Mr. Shuichi Yamauchi. He expressed his appreciation for the 3<sup>rd</sup> Global Summit organizers and participants for making an effort to contribute to promote disaster risk reduction given the fact that large scale disasters continue to frequently occur around the world. He further stressed his strong belief of the importance of activities and research efforts that all are involved in are greatly contributing to disaster countermeasures.

The Mayor of Uji City, Mr. Tadashi Yamamoto, congratulated the organizers on the occasion of the 3<sup>rd</sup> Global Summit and welcomed everyone to Uji City. In his remarks, he expressed his hope that the 3<sup>rd</sup> Global Summit will continue to share research results through various interchanges with people from all over the world which will deepen the contributions to disaster prevention research much more. He expressed his expectation to see continuous use of research results that will be used to support disaster affected areas. He closed his remarks wishing everyone prosperity and success at the 3<sup>rd</sup> Global Summit.



Welcome remarks to the 3rd Global Summit were delivered by Prof. Kaoru Takara, Deputy Executive Director, Kyoto University, and Director, Disaster Prevention Research Institutes (DPRI), Kyoto University. He presented an overview of the Global Summit Series which started in November 2011 and the establishment of the Global Alliance of Disaster Research Institutes (GADRI) in March 2015 as an outcome of the 2nd Global Summit.

Prof. Hirokazu Tatano, Secretary-General, GADRI delivered the outline of the 3rd Global Summit with his expectations of the results and outcomes of the Summit.



## Day 1: 19 March 2017— Keynote Speeches

*Theme: Connecting with the International Community and Initiatives for Collaborative Activities: Listening to the Opinions of the International Organizations and Other Stakeholders*



Based on the above theme, the first set of keynote speeches were delivered by Ms. Setsuko Saya, Director, Disaster Management Bureau, Cabinet Office, Government of Japan; Dr. Chadia Wannous, Senior Advisor, United Nations Office for Disaster Risk Reduction (UNISDR), Geneva; Prof. Virginia Murray, Vice-Chair, Scientific and Technical Advisory Group (STAG), UNISDR; and Dr. Yasusuke Tsukagoshi, Special Representative, The World Bank Office in Tokyo.

Ms. Setsuko Saya who is also the Head of Japanese delegation to UNISDR, elaborated on “Collaboration Between Science and Policy Making in Japan” introducing Japan’s best practices to communicate with science and technology, and how the government uses the inputs from S&T community and put them into policy making processes.

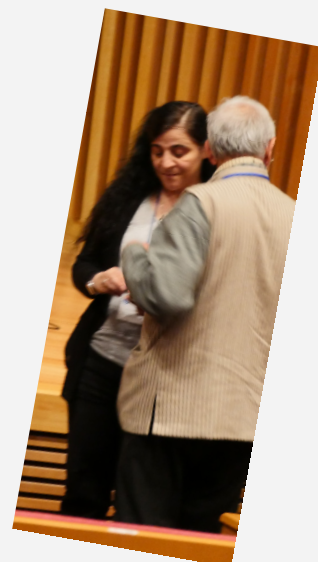
She shared lessons learned from the Kumamoto earthquakes which were quite unusual due to its nature of occurring in a less earthquake-prone area in Japan, and which required much efforts of national and local government corporation in emergency response

when evacuating 180,000 people. For the government of Japan, collaboration in S&T and policy makers are indispensable. Keynote speech concluded with two proposals on how S&T could communicate to policy makers and communities: through augmenting education of S&T in educational systems; and by support of indicators – UNISDR proposed 38 indicators of disaster risk reduction. Many governments have access to raw data and their own governmental methodology to contribute to disaster risk reduction. Provision of data is somehow a mechanical procedure. The problem is how to address this problem and how to interpret the data to policy making processes.



Dr. Chadia Wannous, Senior Advisor, United Nations Office for Disaster Risk Reduction (UNISDR), Geneva, in her keynote address on “The Role of Science and Technology in the Implementation of the Sendai Framework 2015-2020”, after an introduction to the Sendai Framework, shared efforts underway to work in coordination to link to national and regional DRR platforms, partners and networks to integrate S&T actors in their functionalities and events.

She explained that many efforts are in place to managing risks and reducing existing risks. However, preparedness and resilience in social, economic and environmental aspects are necessary to overcome such situations. She concluded her remarks with a note to S&T community to better contribute to the Sendai Framework in a comprehensive and a structured way and emphasized the need to collaborate for action, and from this point of view, GADRI is in a better position today to play an important role to further facilitate contributions from the Science and Technology community for the implementation of the Sendai Framework.







Prof. Virginia Murray, Vice-Chair, Scientific and Technical Advisory Group (STAG), UNISDR delivered a keynote speech on “Science and Technology Commitment to the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030” discussed science and policy linkages at national levels.

She emphasized the need for a formal national disaster risk reduction science policy council/ platforms or a form of national focal points for science to support DRR and management plans to be in place. For

example, conducting periodic review of knowledge needs, new science (including implementation science) and identification of research gaps are some tools that could be used for the purpose. More effort is needed to work out how to achieve this and ensure avoiding duplication of efforts. She shared some reflections and recommendations on the incredible work by the S&T community; importance of having an effective process for sharing knowledge, building partnerships, clarity on outputs which would benefit S&T programme for Sendai Framework; and a joined-up approach to implement the goals of the Sendai Framework.



Dr. Yasusuke Tsukagoshi, Special Representative, The World Bank Office in Tokyo delivered a keynote speech on “Mainstreaming Disaster Risk Management in the World Bank: Sharing Knowledge and Investing to Enhance Resilience in Developing Countries” discussing mainstreaming DRR in developing countries.

The World Bank addresses key challenges related to disaster risk reduction in science and policy. Early Warning Systems combining observation and evacuation system are systems that can save many lives. However these constitute a crucial ‘missing link’ for disaster resilience in many countries. Disaster risk financing strategies are helping countries build layers of protection against disasters and governments in each country should strengthen their policies.

He concluded his remarks by stating that governance is fundamental for disaster risk management, and to implement good governance it is important to induce collection of data, scientific analysis and evidence.





## Day 2: 20 March 2017— Keynote Speeches

*Theme: Discussion on the Future Directions of Disaster Risk Reduction*

In this session, speakers from various disciplines including governmental and international organizations discussed challenges in the context of climate change, and sustainable development goals which are interrelated to disaster risk reduction and resilience. The session directed towards the dimensions of evaluating the indexes for future disaster risk initiatives. Current research gaps, and how to expand activities with a renewed sense of perseverance to prevent future disaster risks by enhancing collaboration in a global scale to realize the targets/goals set out in the Sendai Framework in the real world were stressed out in detail.

The second day keynote speakers included Prof. Shahbaz Khan, Director, UNESCO Jakarta Office, Regional Science Bureau for Asia and the Pacific; Prof. Kimio Takeya, Distinguished Technical Advisor to the President, Japan International Cooperation Agency; and H. E. Dr. Gabriel Duque, Ambassador of Colombia to Japan, Embassy of Colombia, Tokyo.

Prof. Shahbaz Khan, Director, UNESCO Jakarta Office, Regional Science Bureau for Asia and the Pacific delivered a keynote speech on “Science Support for Disaster Risk Reduction”. In his speech, UNESCO’s comprehensive approach taken towards education was stressed with examples. Science policy in DRR usually takes a transdisciplinary approaches in management – providing technical support and developing training materials and access to information in all disciplines are important. The Sendai Framework which was discussed previously provided an understanding and strengthening of efforts in disaster risk reduction to reduce mortality, human losses. He concluded by emphasizing that to accomplish these efforts, what is most important is international cooperation and this is where GADRI contribute to bridge the gap among the scientists, practitioners, policy makers and the community.



Prof. Kimio Takeya, Distinguished Technical Advisor to the President, JICA; and Visiting Professor, Tohoku University deliver a keynote on the “Donor’s practical point of view “what we expect from S&T group” in relation to the Sendai Framework”. He shared opinions from a donor’s point of view on support provided to developing countries that are affected by major disasters. Japan provides 64% support on DRR and is currently the number one donor in the world. Japan’s contribution to the Sendai Framework include providing various inputs to practitioners in governmental levels, climate down streaming; and how best to enhance political and social research platforms.

H. E. Dr. Gabriel Duque, Ambassador of Colombia to Japan, Embassy of Colombia, Tokyo delivered a keynote speech on “Research on Management of Disasters and Risk Reduction: The Colombian Case”.

He shared about the Colombian experience and approximation to Sendai Framework and how Colombia has been building on governance to deal with disaster risk management. He discussed about the importance of linking research to policy making by identify collectively and setting priorities. He highlighted the importance of international cooperation in disaster risk management. He concluded his remarks with a note to GADRI stressing that GADRI could deliver on its accomplishments by fulfilling the objectives set by this conference by identifying collectively the priorities and building the network as a global community.





## Day 3: 21 March 2017— Keynote Speeches

*Theme: Sharing Information of Research Institutions*

The final day, explored the current research activities, knowledge gaps, existing reports, and status of information sharing. Various contributors/practitioners in governmental, national and academic settings shared their views and platforms for sharing knowledge and available resources for disaster risk reduction. This session highlighted many efforts that are already in place to prevent new and reduce existing disaster risks, and how by understanding and sharing information of networks including GADRI member institutes, we could maximize our efforts to collaborate across institutions, policies, and goals set out by various stakeholders.

Keynote speeches were delivered by Dr. Tom De Groeve, Acting Head of Unit, Disaster Risk Management Unit, European Commission, Joint Research Centre (EC-JRC); Dr. Srikantha Herath, Senior Advisor, Sri Lanka Ministry of Megapolis and Western Development; and Prof. Toshio Koike, Director, International Centre for Water Hazard and Risk Management (ICARM).

Dr. Tom De Groeve, Acting Head of Unit, Disaster Risk Management Unit, European Commission, Joint Research Centre (EC-JRC) delivered an informative presentation about the European Commission and the Joint Research Centre achievements in science and technology. He stressed that DRR is no longer handled by one ministry but among many ministries. Without proper channels of communication or bridges among scientists and policy makers, nothing would materialize. The Sendai Framework processes a good interface with science. EU works with the Sendai Framework and the legislation within the Union for protection mechanism for disaster management and provides provision to improve the knowledge base. Bigger networks such as GADRI are better situated to work on building partnerships, identifying knowledge gaps and contributing to the global community.



Dr. Srikantha Herath, Senior Advisor, Sri Lanka Ministry of Megapolis and Western Development; and Visiting Professor at the United Nations University, Tokyo discussed on the “Knowledge to Sustainable Practices: International Network for Transdisciplinary Education (INATE) Experience” citing experiences and case studies. He explained how higher education has championed translating knowledge in to sustainable practices. He stated that one of the difficulties in adaptation is when one needs to adapt to a future which is uncertain, and resilience is much more of a pragmatic approach when trying to modify existing programmes by introducing new elements to improve the resilience of the systems. When the future is uncertain, it is difficult to define future targets and objectives. Sustainability provides the framework on which sustainable goals are agreed upon. Focus was on higher education and how they could be instrumental in translating this knowledge

in to sustainable practices. In conclusion, to adapt to challenges of rapid global change, it is easier to take a transdisciplinary approach where all actors and stakeholders could play a role to facilitate this process; and current practices should encourage higher education which can play a major role in bringing up these transformations.

Prof. Toshio Koike, Director, International Centre for Water Hazard and Risk Management (ICARM) discussed on conventional and modern systems of disaster risk reduction and methodology in terms of increasing water related disasters and how best to address these problems in a holistic manner. Various projects on flood and drought monitoring management and various countermeasures are in place. Seasonal predictions of agricultural drought provides information used for early warning systems, and future climate predicts serious seasons of drought with grave economic impacts. In summary – by accumulating data on damage, hazard and socio economic process, the data could be integrated to risk assessment. Change of identification requires monitoring and prediction. Once this information is in place, it could support policy makers and communities. He concluded by emphasizing on the need for strong capacity building programmes in higher education to build up leaders and practitioners.





## Africa

- ① • Faculty of Engineering, Alexandria University  
• Geology Department, Faculty of Science, Assiut University  
• German University in Cairo (GUC)  
• Water Resources Research Institute (WRRI), Ministry of Water Resources and Irrigation
- ② • Hydrology and Water Resource Engineering, Water Research Institute, Council for Scientific and Industrial Research (CSIR)  
• Dept Agricultural Engineering, University for Development Studies  
• Dept Geography & Resources Development, University of Ghana
- ③ • Disaster Management Training and Education Centre for Africa (DMTEC), University of the Free State
- ④ • Disaster Management and Refugees Studies Institute (DIMARSI), International University of Africa  
• UNESCO Chair in Water Resources, Omdurman Islamic University, Sudan

## Americas

- ⑤ • Department of Civil Engineering, Centre for Technology and Natural Resources, University of Campinas
- ⑥ • Institute for Catastrophic Loss Reduction, Western University
- ⑦ • Centro Nacional de Investigación por la Gestión de Desastres Naturales
- ⑧ • Unidad Nacional para la Gestión del Riesgo de Desastres de Colombia-UNGRD  
• Department of Chemical Engineering, Universidad de Los Andes  
• Observatorio Sismológico y Geofísico del Suroccidente (OSSO), Universidad del Valle
- ⑨ • Institute of Geography, National Autonomous University of Mexico
- ⑩ • Pacific Earthquake Engineering Research Center (PEER), University of California, Berkeley  
• Resilient Communities Research Institute, College of Architecture and Environmental Design, California Polytechnic State University  
• Consortium for Capacity Building (CCB), University of Colorado-Boulder  
• Natural Hazards Center (NHC), University of Colorado-Boulder  
• Center for Risk-Based Community Resilience Planning, Colorado State University  
• Disaster Research Center, University of Delaware  
• Wind and Hurricane Impact Research Laboratory, Florida Institute of Technology  
• Geologic Hazards Science Center, U.S. Geological Survey  
• Advanced Radar Research Center, University of Oklahoma  
• Southern California Earthquake Center (SCEC)

## Asia (excluding Japan)

- ⑪ • Department Disaster Science and Management, Faculty of Earth and Environmental Sciences, University of Dhaka  
• Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET)
- ⑫ • Beijing National Earth Observatory, Institute of Geophysics, China Earthquake Administration  
• Center for Energy and Environmental Policy Research, Beijing Institute of Technology  
• Integrated Risk Governance Project (IRG-Project), State Key Lab of Earth Surface Processes and Resource Ecology, Beijing Normal University  
• State Key Laboratory of Geo-hazards Prevention and Geo-environment Protection (SKLGP), Chengdu University of Technology  
• Institute of Tibetan Plateau Research, Chinese Academy of Sciences  
• Institute for Disaster Management and Reconstruction, Sichuan University - The Hong Kong Polytechnic University  
• College of Engineering, Ocean University of China  
• Key Laboratory of Coastal Disaster and Defence (KLCCD), Hohai University  
• Natural Disaster Research Institute, Northeast Normal University  
• Shanghai Institute of Disaster Prevention and Relief, Tongji University  
• College of Architecture and Environment, Sichuan University  
• State Key Laboratory of Hydraulics and Mountain River Engineering, Sichuan University  
• China Research Center for Emergency Management (CCEM), Wuhan University of Technology
- ⑬ • National Center for Research on Earthquake Engineering, National Applied Research Laboratories  
• Taiwan Typhoon and Flood Research Institute, National Applied Research Laboratories  
• Tainan Hydraulics Laboratory, National Cheng Kung University  
• Disaster Prevention Research Center, National Cheng-Kung University  
• National Science and Technology Center for Disaster Reduction (NCDR)  
• Center for Weather Climate and Disaster Research, National Taiwan University

## Europe

- ⑫ • International Institute for Applied Systems Analysis (IIASA)
- ⑬ • BRGM (Bureau de Recherches Géologiques et Minières)  
• Council of Europe, Strasbourg
- ⑭ • Center for Disaster Management and Risk Reduction Technology (CEDIM)  
• Institute for Advanced Sustainability Studies (IASS)  
• Institute for Environment and Human Security, United Nations University
- ⑮ • Department of Earth Sciences, Università degli Studi di Firenze  
• European Commission, Joint Research Centre (JRC)
- ⑯ • Global Risk Forum (GRF) Davos  
• Faculty of Geosciences and the Environment, University of Lausanne
- ⑰ • Disaster Management Centre, Bournemouth University (BUDMC)  
• British Geological Survey (BGS)  
• Cabot Institute, University of Bristol  
• Evidence Aid, Oxford  
• Global Disaster Resilience Centre, School of Art Design and Architecture, University of Huddersfield  
• Disaster and Development Network (DDN), Department of Geography, Northumbria University  
• Global Disaster Resilience Centre, Swansea University



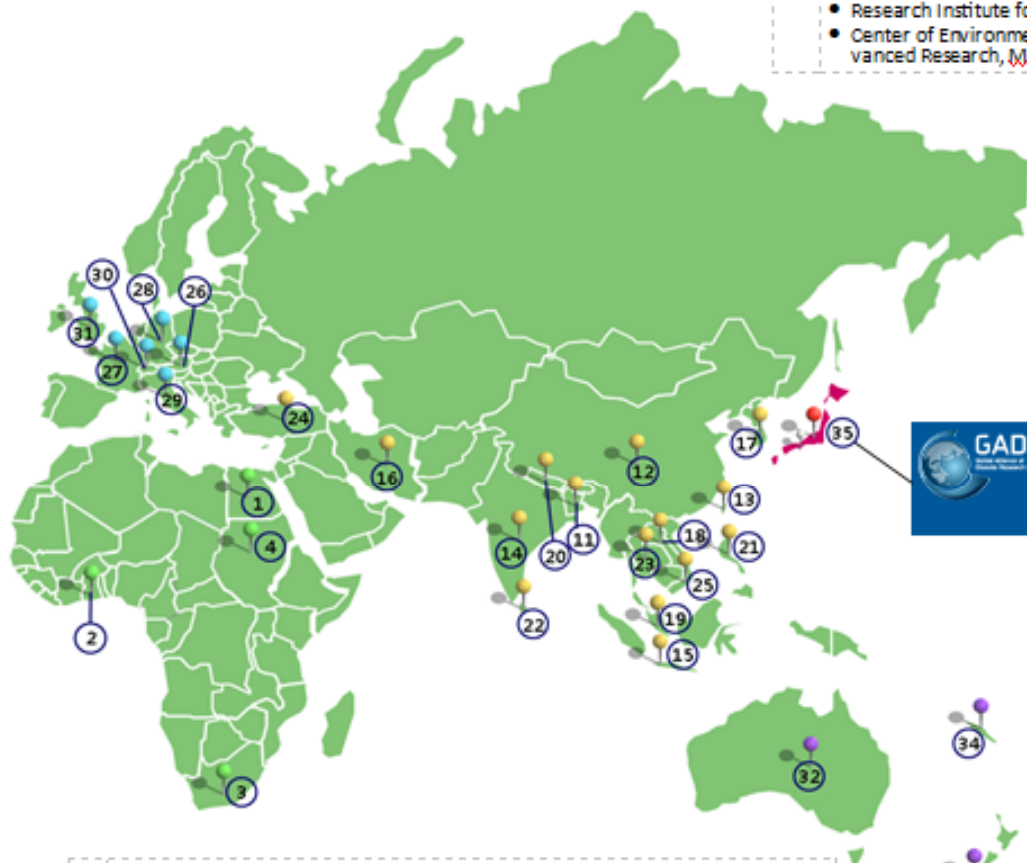
- ⑭ • Humanities and Social Sciences Department, Indian Institute of Technology (IIT)-Bombay  
• Research & Development, Indian Institute of Technology (IIT)-Guwahati  
• Center of Excellence in Disaster Mitigation & Management, Indian Institute of Technology (IIT)-Roorkee  
• Jindal School of Liberal Arts & Humanities, O.P. Jindal Global University
- ⑮ • Department of Urban and Regional Planning, Brawijaya University  
• Faculty of Engineering, Gadjah Mada University  
• Geological Agency, Ministry of Energy and Mineral Resources of the Republic of Indonesia  
• Research Center for Disaster Mitigation, Institut Teknologi Bandung  
• JASATIRTA I Public Corporation
- ⑯ • International Institute of Earthquake Engineering and Seismology
- ⑰ • International Water Resources Research Institute, Chungnam National University  
• Graduate School of Disaster Prevention, Kangwon National University  
• Research Center for Disaster-hazard Resilience, Seoul National University  
• School of Urban & Environmental Engineering, Ulsan National Institute of Science and Technology

## Oceania

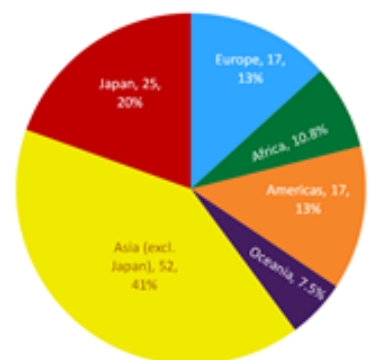
- 32 • Fenner School of Environment & Society, Australian National University (ANU)
- Centre for Infrastructure Performance and Reliability, School of Engineering, The University of Newcastle
- Sustainability Research Centre, University of Sunshine Coast
- Science and Engineering Faculty, Queensland University of Technology
- School of Earth and Environmental Sciences (SMAH), University of Wollongong
- 33 • GNS Science
- 34 • Weather Forecasting Division, Vanuatu Meteorology and Geo-Hazards Department

## Japan

- 35 • Research Center for Potential Development of Disaster Prevention, Akita University
- International Consortium on Landslides (ICL)
- International Centre for Water Hazard and Risk Management (ICHARM) under the auspices of UNESCO Public Works Research Institute (PWRI)
- Research and Education Center for Natural Hazards, Kagoshima University
- Institute of Nature and Environmental Technology, Kanazawa University
- Faculty of Safety Science, Kansai University
- Research and Development Center of Fire and Environmental Safety, University of Kitakyushu
- Research Center for Urban Safety and Security, Kobe University
- Institute of Disaster Area Revitalization, Regrowth and Governance (IDARRG), Kwansei Gakuin University
- Disaster Prevention Research Institute, Kyoto University
- Graduate School of Global Environmental Studies, Kyoto University
- Disaster Risk Reduction Research Center, Faculty of Engineering, Kyushu University
- Research Institute for Applied Mechanics, Kyushu University
- Center of Environmental Science and Disaster Mitigation for Advanced Research, Muroran Institute of Technology



**GADRI Secretariat**  
Disaster Prevention Research  
Institute (DPRI), Kyoto University



As of 1 March 2017

- 18 • Asia Research Center, National University of Laos
- 19 • Center for Southeast Asia Disaster Prevention Research Initiative (SEADPRI-UKM), Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia (UKM)
- Universiti Kebangsaan Malaysia (UKM)
- Universiti Sains Malaysia (USM)
- Malaysia Japan International Institute of Technology (MJIT), Universiti Teknologi Malaysia (UTM)
- Universiti Tenaga Nasional (UNITEN)
- Disaster Management Institute (DMI), Universiti Utara Malaysia (UUM)
- 20 • Institute of Engineering, Tribhuvan University
- International Centre for Integrated Mountain Development (ICIMOD)
- 21 • National Hydraulic Research Center (NHRC), University of the Philippines, Diliman Campus
- 22 • Natural Resource Management & Laboratory Services, Central Engineering Consultancy Bureau (CECB)
- International Network for Advancing Transdisciplinary Education (INATE)
- National Building Research Organisation (NBRO)
- Sri Lanka Institute of Information Technology (SLIIT)
- 23 • Stockholm Environment Institute (SEI) Asia Centre, Bangkok
- 24 • Kandilli Observatory and Earthquake Research Institute, Bogazici University
- 25 • Department of Geoenvironment, Vietnam National University (VNU), Hanoi

- 35 • Advanced Disaster Prevention Engineering Center, Nagoya Institute of Technology
- National Research Institute for Earth Science and Disaster Resilience (NIED)
- Research Institute for Natural Hazards & Disaster Recovery, Niigata University
- Graduate School of Human Sciences, Faculty of Human Sciences, Osaka University
- Research Initiative for Natural Disaster Prevention of Oil and Gas Spill in Industrial Parks, Graduate School of Engineering, Osaka University
- Frontier Research Center for Natural Disaster Mitigation, Ritsumeikan University
- Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH)
- Disaster Prevention Research Center for Island Regions, University of the Ryukyus
- International Research Institute of Disaster Science, Tohoku University
- Earthquake Research Institute, The University of Tokyo
- Center for Urban Earthquake Engineering, Tokyo Institute of Technology

As of 30 March 2017—William Jemec



## Session on GADRI Achievements and Challenges

Prof. Yuichi Ono, International Research Institutes of Disaster Science (IRIDeS), Tohoku University, Japan discussed about the “GADRI Linkage to the World Bosai Forum” which will be held in Sendai, Japan from 25 to 28 November 2017.



He gave an overview of the World Bosai Forum which will take a bilateral and transdisciplinary approach to discuss on DRR issues with multi-stakeholders beyond national boundaries. He explained the word “Bosai” which is a traditional Japanese term to indicate a holistic approach to reduce human and economic loss for disasters and represents activities in all disaster phases, including prevention, recovery, response and mitigation. The conference will further look into solution-oriented discussions on DRR with concrete examples provided by multi-stakeholders; promote the implantation of the SFA; provide access to business opportunities in DRR; and explore Japanese experiences on DRR and observe recovery process of the Tohoku Region. He encouraged participation from private section and others beyond academic and government sectors.

Prof. Wei-Sen Li, Secretary-General, National Science and Technology Center for Disaster Reduction (NCDR) presented on “GADRI Capacity Development Activities”.



He provided a brief overview of the capacity building activities undertaken by NCDR. The international training workshop conducted last year encouraged participants to look at problems with a different angle to understand the impacts to the society, how to successfully evacuate and communicate with people, and how best to communicate with decision-makers. Every year, a large group of international students participate in these workshops which provides a platform to engage in mutual learning, exchange ideals and interact with each other. Last year, Taiwan was hit by the typhoon during the course and some lecturers could not arrive to deliver the lectures. This provided an opportunity for students to get hands-on experience on our operating systems during a disaster situation. This year's course will be on “Evidence-based Post-disaster Recovery”. The course will cover understanding process, procedures and difficulties during recovering phase; how science and technology support to develop safer and sustainable environment at community level; and a field visit to the communities recovering from the 2009 typhoon Morakot.

Prof. Ana Maria Cruz, Head, Disaster Risk Management, DPRI, Kyoto University presented the “State of the Art in Natech Risk Management”.



She stated that natural and technological disasters are on the rise globally, and mostly these are concerned with chemical accidents and the impacts of these on natural and technological disaster on community, economic development and environment. Natech disasters are high impact and low probability events. She highlighted a few the challenges faced in the this field—challenges to address the independencies and cascading events; a single firm assessment which is not sufficient as natural hazards affect very large areas and inadequate assumptions then results in terms of type of mitigation measures that are needed and how the barriers we set up for day to day operation may not be functional. Another critical problem, not only limited to Natech disasters, is the difference disciplines, agencies and rules and regulations that are needed to manage these kind of events; and integrating risk governance and area wide management as well business continuity planning are very important.

Dr. Kantoush Sameh, Associate Professor, Socio and Eco Environment Risk Management, DPRI, Kyoto University presented a paper on “Sustainable Wadi Basins Development in Arid Regions: Innovative Technologies for Flash Floods Forecasting, Mitigating and Water Harvesting”.



He introduced one of the ongoing GADRI transdisciplinary and region specific projects. As the world population approaches to be 10 billion people, drought and water shortages increases, and water becomes one of the most critical and contested resource. Almost 80 countries have severe droughts, and allocated water for population is very limited. During the last ten years, frequency and magnitude of flash floods have increased. The project uses networks and a few members of GADRI are involved in the implementation of the activities. Through networks establish in different counties in the arid region, the project formulates such research groups for implementation, and also for training and education.

## Group Discussion Sessions

There were two group discussions held on day one (19<sup>th</sup> March) and day two (20<sup>th</sup> March). Each group consisted of a chair and co-chair persons who prepared the concept notes for their respective groups. Participants were requested to select in advance the groups they would like to attend to make their contributions to each session. Each group consisted of 30 to 50 participants. Students were allocated to move participants to groups. After several presentations, each group was again divided into smaller groups for discussion. At the end, all discussion outcomes were consolidated to a presentation which was presented to the plenary session.

### Group Discussion Session I: Evaluating Current Research Status and Identifying Most Important Future Research Themes

To facilitate the group discussions, a pre-survey on “Evaluating Current and Future Research Status and Identifying Most Important Research Themes” was conducted among the member institutes of GADRI. The 54 institutes that participated in the survey identified nearly 250 current projects and 73 future projects. This survey paved the basis for the following group discussion sessions.

#### Day 1: Group Discussion Session I: Deepening the Understanding of Disaster Risks

Session I – a-i: Hydrometeorology Related

Session I – a-ii: Meteorology and Wind Related

Session I – b: Earthquake, Volcano and Compound Disasters Related

Session I – c: Geohazard Related



### Group Discussion Session II: Evaluating Current Research Status and Identifying Most Important Future Research Themes

#### Day 2: Group Discussion Session II:

Session II – a : Enhancing Governance to Manage Disaster Risks

Session II – b: Disaster Risk Reduction for Resilience

Session II – c: Effective Response to Disaster Recover / Build Back Better





## Plenary Sessions

Two Plenary Sessions were held on day two and day three, consisting of the keynote speakers of each day. The outcomes of the group discussion sessions were presented at the plenary sessions. A member from each group presented their discussion outcomes in the form of PowerPoint presentations or paper at the plenary session. Later the floor was opened for discussion and Q&A session.



## Presentation Sessions

Another highlight of the 3<sup>rd</sup> Global Summit was the oral and poster presentation sessions.

Registered participants were invited to present their current or future research projects and activities, research achievements, or introduce their respective institutions. There were 24 oral sessions and 32 poster presentations. The sessions were held in parallel during the one-hour break times and two hours on Day 2 and rooms A & B, and the Hybrid Space were allocation for the purpose. Participants could move freely between sessions. Coffee and tea were arranged in each presentation location.

Presenters who wish to publish their work in the Proceedings of the 3<sup>rd</sup> Global Summit were requested to send in their extended abstracts to GADRI Secretariat.

### Oral Session



# Booths and Field Visits

## Poster Session



## Booths by GADRI Member Institutes

### European Commission - Joint Research Centre (JRC)



### Kyoto University Graduate School of Global Environmental Studies

Booth Spaces were provided to share information with participants.



### National Science and Technology Center for Disaster Reduction (NCDR)



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

## Field Visits

In additions to the above, two fields visits were organized to the Ujigawa Open Laboratory, DPRI, Kyoto University, and the Byodoin Temple in Uji. The participants were able to select one venue. After the field visit, participants joined the Closing Banquet held at the Kyoto City Hall .



Visit to Byodoin Temple in Uji



The 3rd Global Summit was quite successful in terms of participation, recognition by the UN, governmental and international organizations, and its commitment to contribute to the implementation of the goals set out in the Sendai Framework.

The following highlight as major outcomes of the 3<sup>rd</sup> Global Summit:

1. Development of a comprehensive tabulation of important research themes along the four priority areas that was used to evaluate policies and practices of current research activities and identify gaps in disaster risk reduction in relation to the SFDRR.
  - I. Understanding – Deepening the understanding of disaster risks
  - II. Governance – Enhancing governance to manage disaster risks
  - III. Resilience – Disaster risk reduction for resilience
  - IV. Recovery – Effective response to disaster recovery / Build Back Better
2. Encouraged cross-institutional collaboration to fill the research gaps among experts, practitioners, educators, scientists, and policy makers.
3. The 3<sup>rd</sup> Global Summit attracted 251 participants from 38 countries
4. Awarded 15 full fellowships to researchers in developing countries
5. Awarded 2 full fellowships to master's students in the UK
6. Concluded a resolution document
7. Proposed the Publication of the Proceedings of the 3rd Global Summit in major academic journals.
8. Proposed GADRI Book Series - a project based on the results of the discussions to identify the most important research themes for disaster risk reduction in each academic discipline. The books will provide visions and knowledge to connect the current status of science and technology with future directions for disaster research to contribute for disaster risk reduction in the world.  
Publication of 7-8 book series summarizing the academic research outcomes and future initiatives in each of the following disciplines:

(I) Understanding the risk

- a. i Hydrometeorology Related
- ii. Meteorological and Wind Related
- b. Earthquake, Volcano and Compound Disasters Related
- c. Geohazard Related
- d. Social and Human Science Related

(II) Managing and planning disaster risk reduction (DRR)

- a. Enhancing Governance to Manage Disaster Risks
  - b. Disaster Risk Reduction and Resilience
  - c. Effective Response to Disaster Recovery / Build Back Better
9. GADRI Prospectus will include information on GADRI member institutes - their research activities, areas of research concentrations, staff, contact/focal points, etc.
  10. GADRI will be represented at major conferences -
    - a. 2017 Global Platform for Disaster Risk Reduction, UNISDR, Cancun, Mexico from 22 to 26 May 2017
    - b. Global Forum on S&T Meeting for disaster resilience, Nov. 22 to 24 in Tokyo
    - c. World Bosai Forum, IDRC, GRF Davos, Sendai International Center, Sendai, Japan from 25 to 27 November 2017\_GADRI is expected to organize one session at this forum.
  11. GADRI membership increased to nearly 150 member institutes.

# 1<sup>st</sup> GADRI General Assembly

## 1<sup>st</sup> GADRI General Assembly

Taking advantage of the GADRI members attending the 3<sup>rd</sup> Global Summit, the First GADRI General Assembly was held at the Fortune Garden, Kyoto City Hall on 21 March 2017. The General Assembly was attended by 58 GADRI member institutes. At the meeting, the following items were endorsed by the General Assembly:

1. Chair of the Board of Directors
2. Secretary-General of GADRI
3. Charter of GADRI – this was endorsed with a few clarifications raised by the members.
4. Current activities of GADRI
5. Outcomes of the 3<sup>rd</sup> Global Summit



## Conclusion of the 3<sup>rd</sup> Global Summit

At the end of the 3<sup>rd</sup> Global Summit, the participants were taken on two field visits: a visit to the Byodoin Temple in Uji City and a visit to the Ujigawa Open Laboratory of DPRI, Kyoto University. After the field visit, the participants were invited to the Closing Banquet which was organized at the Kyoto City Hall and was attended by Mr. Daisaku Kadokawa, Mayor of the Kyoto City.

The 3<sup>rd</sup> Global Summit concluded productively with a positive note. It provided opportunities for participants to network among others, with scientists, practitioners and policy makers. GADRI was widely acknowledged and acclaimed for the pivotal role played in the 3<sup>rd</sup> Global Summit and in its mission to work together to implement the goals set out in the Sendai Framework.





# Super Teams



**Team Secretariat**

**Team Students**



**Team MCs**





# A Few Comments from Participants of the 3rd Global Summit



Prof. Gabriel Ayum Teye, Professor and Vice-Chancellor, University for Development Studies, Tamale, Ghana

The 3rd Global Summit was very beneficial to me as it provided the opportunity for me to interact and network researcher and practitioners on global disaster issues. It also provided my institution the chance to become a member of the Global Alliance of Disaster Research Institutes. The group discussions were very educative and provided the opportunity for cross-fertilisation of ideas. Maybe it should allocate enough time for the oral presentations to allow for more questions. All in all the summit was very successful and useful.



Prof. Dato' Dr. Mazlin Bin Mokhar, Principal Fellow, LESTARI, Universiti Kebangsaan Malaysia, Malaysia

3rd Global Summit was a very useful conference indeed. It had triggered a refreshing kind of thinking and doing on my part and that of my colleagues and associates in Malaysian and ASEAN contexts.. The selected keynote speakers had been excellent and effective in their sharing of information. It would be good to see a few more successful persons from the business and industry, and NGOs to share their view; then this would have been even more fantastic. Group Discussion sessions were re-arranged in smaller breakout groups and they were interesting and useful; bringing out very good successful case studies from countries and localities and from various sectors i.e. not only from the academia. I would suggest to bring in more business and industry leaders with the green economy and innovation thinking and practices and also successful local authority leaders and NGO coordinators that had successfully flipped their respective communities. Well done to Professors Takara, Tatano, and members of GADRI for an increasing performance and success in DRR meetings, sessions, and conferences. The alliance is getting better and stronger and gaining more support from various important and relevant leaders and contributors from all over the world. We all look forward very much to leapfrog the positivism towards achieving a more prosperous, resilient and sustainable livelihoods for all. In general, a very good GSRIDRR2017 and looking forward to more successful and enjoyable similar

sessions in the future especially to tie them up with realities of economics and actual challenges of integration on the ground.



Prof. Maria Del Pilar Cornejo, Director, Pacific International Center for Disaster Risk Reduction at Polytechnic University ESPOL, Ecuador

The 3<sup>rd</sup> Global Summit, in our case was useful because the PIC-DRR was recently created and the Summit gave us the opportunity to interact with other groups and to understand the scope of DRR and what might be missing. The keynote Speakers were fine but I would have liked to see more presentations about successes in achieving Hyogo and Sendai Frameworks of Action. Some kind of evaluation would have been better. The group discussions opened the opportunity for interaction in topics of my interest, and confirm the need to gather together to help each other achieving our goals. I believe the outputs from the groups I was involved with are ready for dissemination and could serve as guides for DRR processes. The poster sessions were good not only for the presenters but also for those who went around finding out what is being done and at what level. A general suggestion is to increase the number of poster presentations. The organization of the 3<sup>rd</sup> Global Summit was great. Everything was really in place; the venue, the schedule; and the help received from the organizers. Disaster Risk Reduction must be part of planning and development and through GADRI we can give the support needed to foster it through the tools we have, the groups involved, and all the academia that participated in it. We have to make sure that the products of GADRI become policies.

Mr. Ricardo M. Romero, Member, Philippines Society of Emergency Medical Technicians, Philippines

The 3<sup>rd</sup> Global Summit is an excellent venue for learning new ideas, current innovations and best practices from different stakeholders in DRR. It also provided an opportunity for networking and possible research collaborations, as well as development and benchmarking of transdisciplinary approaches that can contribute in the improvement of access and effectiveness of DRR programs.



**Thank you!**  
**Prof. Hirokazu Tatano**

GADRI Secretariat would like to take this opportunity to acknowledge with appreciation the roles played by various stakeholders to make the 3<sup>rd</sup> Global Summit a success. It would not have concluded successfully without the generous support and cooperation of all speakers and keynote speakers, sponsors and partners, members of the GADRI Board of Directors, GADRI Secretariat Committee members, DPRI faculty and staff members and all others.

## NEXT ISSUE:

Dear GADRI Member Institutes,

Thank you for your contributions to the GADRI Actions. If you would like to submit an article or share news through GADRI Actions, please send those directly to:

Attn: Ms. Wilma James

E-mail: [secretariat-gadri@dpri.kyoto-u.ac.jp](mailto:secretariat-gadri@dpri.kyoto-u.ac.jp)



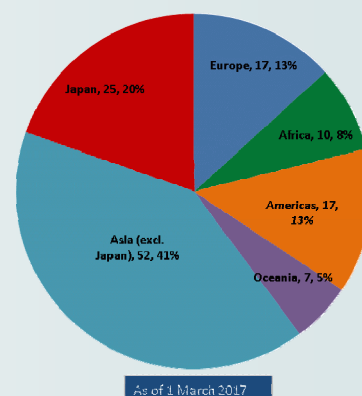
## Global Alliance of Disaster Research Institutes

At the recommendation of the Second Global Summit of Research Institutes held at the Kyoto University Disaster Prevention Research Institute, Kyoto, Japan, in March 2015, the Global Alliance of Disaster Research Institutes (GADRI) was established to support the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) and the work of the Scientific and Technical Advisory Group of the United Nations Office for Disaster Risk Reduction (UNISDR). One of the recommendations was to form a research roadmap for the next decade.

To further realize these goals, GADRI join hands with research institutes around the world. Since March 2015, GADRI's membership has expanded to nearly 100 member institutions around the globe.

GADRI Secretariat is currently hosted by the Disaster Prevention Research Institute (DPRI), Kyoto University, Uji Campus, Kyoto, Japan.

Area	Members
Europe	17
Africa	10
Americas	17
Oceania	7
Asia (excl. Japan)	52
Japan	25
<b>Total</b>	<b>128</b> (35 states)



### To Join GADRI:

Contact GADRI Secretariat ([secretariat-gadri@dpri.kyoto-u.ac.jp](mailto:secretariat-gadri@dpri.kyoto-u.ac.jp)).  
Membership is free; and completely voluntary and non-binding.



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