

### Note from the Editor and Cover page

This edition covers institutional capacity building initiatives in line with GADRI to promote capacity development of disaster research institutes and enhance researcher and student exchanges.

The National Science and Technology Center for Disaster Reduction (NCDR), Chinese Taipei invited students from GADRI members to attend their annual workshop with a few full fellowships which covers tuition fees, international travel, meals and accommodation, and other local expenses. This year, four full fellowships were provided to students from developing countries.

In addition, highlights of GADRI representations at various workshops and conferences are features with a few pictures.

GADRI network continues to expand. A few new members have joined GADRI family.

If you would like to share information or an article in GADRI ACTIONS, please do not hesitate to contact us.

Hirokazu Tatano and Wilma James

- Training Course at NCDR, Chinese Taipei
- GADRI
   Representation at the UNISDR Meeting in Cancun, Mexico
- GADRI
   Representation at the Natural Hazards
   Center Workshop
- GADRI nomination as member of STAG UNISDR
- New Members
- 6. Publications and Upcoming Events

Cover page photos were taken by the DPRI participants who attended the 2017 International Training Workshop on Natural Disaster Reduction on Regional and Local Best Practices of Post-Disaster Recovery: Building Sustainability and Resilience through Scientific Approaches at the National Science and Technology Center for Disaster Reduction (NCDR), Chinese Taipei.

Top right: National Taitung University Library, listing as one of 1001 Libraries to see before you die

Center: Traditional ornaments in newly built houses as part of preservation of Cultural heritage Jialan District

Bottom left: Observing results of crowd funding and the use of social media in post-disaster volunteer program in Dawang District

Bottom right: Classroom session on disaster management coordination by Prof. Wei-Sen Li, Secretary-General, National Science and Technology Center for Disaster Reduction (NCDR)

International Training Workshop on **Natural Disaster** Reduction: Regional and Local **Best Practices** Post-Disaster Recovery **National** and at Science **Technology Center (NCDR)** 





Opening Ceremony—Speakers and participants of the 2017 International Training Workshop

Practices of Post-Disaster technology related from countries shared Participants 13 students from Kyoto University to participate in the highlights of these lecture series. training workshop.

The 2017 International Training Workshop on Natural The classroom sessions were started with three Disaster Reduction on Regional and Local Best keynotes featuring recent efforts in disaster recovery Recovery: Building by distinguished speakers from Taiwan National Sustainability and Resilience through Scientific University, DPRI-Kyoto University and International Approaches was organized by a member of the Global Consortium on Landslides (ICL). The lectures covered Alliance of Disaster Research Institutes (GADRI), the a wide range of disaster components from planning to National Science and Technology Center for Disaster multidisciplinary disaster risk reduction measures with Reduction (NCDR) of Chinese Taipei. The training special focus on Build Back Better (BBB) concept. was held from July 17<sup>th</sup> to 21<sup>st</sup>, 2017 aiming at Planning and implementing process of Typhoon promoting cross-boundary exchanges of science and Morakot recovery in Taiwan, advancement in landslide post-disaster recovery. disaster research in Japan, BBB approach of Kobe their and Tohoku recovery in Japan, Gorkha earthquake experiences in best practices and local innovative recovery in Nepal, community approach of ecosystem approaches in post-disaster recovery. The training recovery after typhoon Haiyan in Philippines, 2004 program consisted of 2-day classroom lectures in Tsunami recovery in Indonesia, ADPC's approach of Taipei and 3-day field visits to recovery sites in recovery need assessment, example of household Taitung and to Tzu Chi Foundation HQ in Hualien in gardening as a recovery initiatives in India and Taiwan. The NCDR sponsored four international Cambodia. Valuing of social capitals in recovery were

# International Training Workshop on Natural Disaster Reduction at NCDR, Taipei City, Taiwan





Keynote Lectures: Prof. Norio Maki (left) and Dr. Jenn-Chuan Chern (right)

### Experience sharing and knowledge building through classroom lectures

The classroom sessions were started with three keynotes featuring recent efforts in disaster recovery by distinguished speakers from Taiwan National University, DPRI-Kyoto University and International Consortium on Landslides (ICL). The lectures covered a wide range of disaster components from planning to multidisciplinary disaster risk reduction measures with special focus on Build Back Better (BBB) concept. Planning and implementing process of Typhoon Morakot recovery in Taiwan, advancement in landslide disaster research in Japan, BBB approach of Kobe and Tohoku based approach to implement the restoration project. recovery in Japan, Gorkha earthquake recovery in Nepal, community approach of ecosystem recovery after typhoon Haiyan in Philippines, 2004 Tsunami recovery in Indonesia, ADPC's approach of recovery need assessment, example of household gardening as a recovery initiatives in India and Cambodia. Valuing of social capitals in recovery were the highlights of these lecture series.

The lectures were designed mainly to sensitize the participants to the importance of social capitals, community participation, innovations in disaster risk reduction and resilience building in recovery practices. NGOs, enterprises and government officials from different countries presented case studies to share recovery practices in different countries. As such, lecturers from Taiwan Red Cross Society, Tzu Chi Foundation, World Vision and Delta Electronic Foundation shared how they incorporated indigenous

culture in the recovery of tribal community. The indigenous culture, arts and lifestyle were integrated in the design and architecture of new relocated houses, bridges and overall community development. Ultimately, in these relocation sites, practices of traditional culture, community bonding and cohesion were found significantly improved.

In addition to the guest lecturers, participants also presented their innovations in the recovery practices in their countries. In Nepal, lack of skilled labor and enforcement of housing design guideline were issues in BBB and to overcome these issues, the government established a new hierarchical structure of skilled personnel for construction and supervision of rural housing reconstruction initiatives. In the Philippines, after the typhoon Haiyan, as an effort to restore the fish population as the main source of income for the fishermen in the affected areas, NGOs came up with an innovative idea of restoring coral ecosystems by planting corals in damaged coral reef areas and introducing community based approach to implement the restoration project.



Participants from Kyoto University

### International Training Workshop on Natural Disaster Reduction at NCDR, Taipei City, Taiwan



### Understanding the importance of sustainable permalivelihood and preservation of cultural heritage through site visits in post-disaster recovery sites

During July 19th to 20th, participants visited recovery sites, which consist of establishment of four permanent group-housing sites and volunteer based recovery site in Taitung County. The objective of this visit was to share Taiwanese experience in rebuilding recovery sites by visiting housing reconstruction projects. Through the visit, participants could witness that the living quality of the disaster-affected community was improved due to the synergic efforts among the government, NGOs, and community. The economic, environmental, and sustainability are the main considerations in rebuilding the houses; hence the site visits highlighted the importance of incorporating the elements of culture and living habits of the residents. The community was involved from designing stage through community meetings in order to capture their expectations. Furthermore, compensations were also given for home-owners who wish to adapt the aboriginal heritage features in their home restoration.

There are four permanent group housing areas which were visited i.e. Jialan, Fushan, Dazhu and Binmao. Most of the affected communities located in the group

nent housing are mainly the victims of Typhoon Marakot. Jialan is the only recon-

at the recovery site

Preservation of Cultural Heritage struction site, which

was not relocated. Six months after the Typhoon Marakot, the tribe leader decided to gather all the eight tribes' residents to stay together. The reconstruction was developed by two NGOs i.e. the World Vision Taiwan and the Taiwan Red Cross.

The NGOs reconstructed the house in two types of houses developed based on the community's request. The rebuilt houses in Jialan area obviously show both safety features in the construction as well as cultural identity of the community.



Group photo at the Fusan Recovery site

# International Training Workshop on Natural Disaster Reduction at NCDR, Taipei City, Taiwan



In Fusan recovery site, the community was relocated from a hillside area where the main livelihood was traditional farmers. The relocation site at the seaside area caused the community to shift their livelihood from traditional farmers to fishermen. In order to ensure the sustainability of their livelihood, the relocation included training program with another tribe to equip the relocated families with skills required as fishermen.

All recovery sites brought the similar messages that the sustainability of livelihood and cultural identity of the communities is among the most important aspects to be considered in post-disaster rebuilding sites. Through their experience, the Taiwanese show that these aspects will allow the community to continue growing and therefore will further enhance the country's development.

The site visits created understanding that for the planners, the safety in relocation and reconstruction is one of the most important elements in post-disaster recovery, in order to lower the disaster risk in the future. Hence, at the same time, the good living quality of the newly established community depends on communities' cultural identity and psychological characters. These aspects allow them to continue growing and move on from their grieving phase. Thus, it is important to narrow the gap between planners and affected communities by working together. The affected communities should realize the importance to move away from high risk disaster area and start new life even though the feelings toward old place is strong. Cultural identity and community practices are pieces of life that they can bring from the old place.

The sense of togetherness and hope in the new livelihood can help them to continue their life in the new relocation sites. As such, this experience enabled participants to understand the importance of the sustainable livelihood and cultural identity for their future reference as disaster managers.

### <u>Crowd funding and the use of social media in</u> <u>post-disaster volunteer program</u>

On July 20<sup>th</sup>, participants visited the Dawang District of Taimali Township, which was hit by Typhoon Nepartak in 2016. The strong wind blew off the roof of the houses in the village and some of the houses were severely damaged. The recovery process from the government is still in process until now, and some of the houses are still not repaired. Most of the residents in the village are elderly who depend on handicrafts making as their main livelihood cannot repair their own house. Having witnessed this condition, Ivy Liu started to make a volunteer program through Taiwan Super Woman Foundation to help with the recovery process.

"Everyday, strong young men from her family would help fixing roofs of them in need—especially the elders," said Ivy. Roof was their priority because it serves as protection from sun and rain in a house. In the weekends, more people from other cities would volunteer in the reconstruction.

The foundation uses social media platform to gather volunteer from all over Taiwan to help rebuilding the damaged houses. More to this, the foundation also gathers financial resources through crowd funding in the same platform. Updates on improvements in the recovery sites were published regularly through this platform.



lvy Liu, the founder of Taiwan
Super Women Foundation



On-going reconstruction

### International Training Workshop on Natural Disaster Reduction at NCDR, Taipei City, Taiwan



The love and nationwide in Taiwan.

## innovations in disaster relief

On the last day of the workshop, participants visited the Tzu Chi University and Tzu Chi Foundation HQ in Hualien City. Tzu Chi Foundation is a worldwide Buddhist NGO based in Hualien, Taiwan. Through the visits the staff and volunteers from Tzu Chi Foundation shared their innovations and experience related to disaster relief and recovery. This includes the mobile kitchen, water purifier, temporary house, solar panels, and instant rice. Master Cheng Yen-founder of the foundation—gave some wisdom to her fellow nuns, monks, staffs, and volunteers who then develop ideas and work together in realizing her wisdom into tangible products. The participants had the opportunity to have a tour in Tzu Chi University to visit the gallery and hear stories of about Tzu Chi Foundation's involvements in University for the opportunity to participate at the disaster reliefs during the past events.

The participants also had the opportunities to enjoy The report was compiled by Chong Khai Lin (Malaysia); their healthy instant rice and cocoa drink produced in Devina Khoirunnisa (Indonesia); Eva Mia Siska the Tzu Chi HQ. The nun who developed the instant (Indonesia); and Md. Shibly Sadik (Bangladesh).

caring towards hometown and rice production method explained the long process of neighborhood is Ivy Liu's main aspiration to continue innovation in developing the perfect instant rice. After rebuilding the damaged houses. Yet, the visit shows years of experimenting, the Tzu Chi Foundation built an that the use of social media platform is very effective to instant rice factory to distribute to disaster-affected gather young volunteers in rebuilding recovery sites communities and to sell in supermarkets across the and it has been proven effective to collect funding world. Besides their innovative works, Tzu Chi Foundation also had years of experience sending donations and volunteers to disaster areas across the Tzu Chi Foundation visit: Wisdoms for world. This experience has made them one of the most well-grounded humanitarian organization in the world.

> After the lectures and field-trips, the 5-day training finally come to an end. The closing ceremony of the workshop was held in Taipei after a dinner banquet. Prof. Li Wei-Sen gave a short closing remarks. Participants receive their certificates of completing the workshop.

#### **Acknowledgement**

Supported participants from Kyoto University wish to express their gratitude to Prof. Li Wei-Sen from the National Science and Technology Center for Disaster Reduction (NCDR) and Prof. Hirokazu Tatano from Disaster Prevention Research Institute (DPRI), Kyoto training workshop.



Mobile Kitchen to serve 8,000 people/hour



Innovators of instant rice project

### The Scientific and Technical Advisory Group (STAG) of UNISDR



Disaster risk reduction and its impact on sustainable development require sound foundations in social and economic knowledge and understanding.

This includes developing relevant scientific and technical capacities especially in developing countries. The UNISDR Scientific and Technical Advisory Group (STAG) has provided technical advice, published case studies on using science for disaster risk reduction and contributed to policy formulation in collaboration with the scientific and technical community.

The Sendai Framework for Disaster Risk Reduction 2015-2030, adopted at the Third UN World Conference on Disaster Risk Reduction held in Sendai Japan in March 2015, recognises the importance of science and technology, calling to "Enhance the scientific and technical work on disaster risk reduction and its mobilization through the coordination of existing networks and scientific research institutions at all levels and all regions with the support of the UNISDR Scientific and Technical Advisory Group..." (paragraph 25g).

To meet this request by the Sendai Framework and to serve the needs of countries and stakeholders more directly, UNISDR work on Science and Technology will be enhanced by reaching out to relevant partners including research institutions, organizations, networks and platforms, who are interested to join efforts and provide evidence-based support to the implementations the Sendai Framework for Disaster Risk Reduction. The UNISDR Science and Technology Advisory Group (STAG) will also be strengthened in terms of its scope and resources and its membership to reflect the wide range of members involved in the Partnership.

Recognizing the importance of research, scientific and technical information for disaster risk reduction, UNISDR established a Scientific and Technical Advisory Group (STAG). The purpose of the STAG is to provide technical advice and support in the formulation and implementation of activities carried out by the disaster risk reduction community. The work of the STAG encompasses all aspects of the scientific and technical dimensions of risk reduction, with particular emphasis on the needs of developing countries.

(Ref: https://www.unisdr.org/partners/academia-research)

# GADRI INVITED TO BE A MEMBER OF Science and Technology Advisory Group (STAG) of UNISDR

Prof. Hirokazu Tatano, Secretary-General, Global Alliance of Disaster Research Institutes (GADRI); and Head, Social Systems for Disaster Risk Governance, Disaster Prevention Research Institute (DPRI), Kyoto University was invited to join the new Science and Technology Advisory Group (STAG) for the UN Office for Disaster Risk Reduction (UNISDR) for its first term of two years (2017-2018) renewable for more term (2019-2020). UNISDR reconfigured STAG ensures interdisciplinary, and a regionally diverse new membership to reflect the composition of the Science and Technology Partnerships. The members of the STAG is expected to meet face-to-face at least once a year to review the activities and outputs. There will also be regular tele and video conferences to exchange information and organize its work.

### Global Platform, Cancun, Mexico

#### Global Platform for Disaster Risk Reduction

The Global Platform for Disaster Risk Reduction (Global Platform), recognized by the UN General Assembly, is the main forum at the global level for strategic advice, coordination, partnership development and the review of progress in the of implementation international instruments on disaster risk reduction. It was established in 2006 and is now the world's foremost gathering of stakeholders committed to reducing disaster risk and building the resilience of communities and nations.



The Global Platform holds biennial sessions. To date, there have been four, in 2007, 2009, 2011 and 2013, all of them held in Geneva. The 2015 edition did not take place, given that that year saw the Third UN World Conference on Disaster Risk Reduction, which included a significant and highly appreciated multistakeholder dimension.

## GADRI Representation at the UNISDR Global Platform for Disaster Risk Reduction Cancun, Mexico from 22 to 26 May 2017

GADRI was represented at the recently held UNISDR Global Platform for Disaster Risk Reduction in Cancun, Mexico from 22 to 26 May 2017. Prof. Hirokazu Tatano, Secretary-General, GADRI, and Professor, DPRI, Kyoto University, Prof. Andrew Collins, Chair of Board of Directors of GADRI, and Leader, Disaster and Development Network, Northumbria University, UK, Prof. Yuichi Ono, International Research Institute of Disaster Science (IRIDeS), Tohoku University and a few other members attended conference. GADRI shared a booth at the marketplace under the theme of "Academia, Science and Technology in DRR" managed by IRIDeS, Tohoku University. The purpose of the booth was to showcase research outcomes and case studies developed through partnerships of multiple stakeholders such as academia, the private sector, communities, UN Agencies as well as governments.

During IGNITE Stage special venue where selected participants are allowed 15 minutes to present a disaster risk reduction topic, project or initiative, Assoc. Prof. Yoshihiro Ito, Research Center for Earthquake Prediction, Disaster Prevention Research Institute (DPRI), Kyoto University, introduced the SATREPS project "Public partnership between Japan and Mexico on disaster mitigation of large earthquake and tsunami hazards" - a collaborative project between Japan and Mexico to mitigate earthquake/tsunami disaster impacts. The presentation was held on Thursday, 25 May 2017.

(http://www.unisdr.org/conferences/2017/globalplatform/en/programme/ignite-stage/view/725)

For further details, please visit the link below:



Yuichi Ono, Hirokazu Tatano, and Andrew Collins – at the Tohoku University Booth at the Global Platform, Cancun, Mexico

http://www.unisdr.org/conferences/2017/globalplatform/en/programme/ignite-stage/view/725

### **Natural Hazards Center Workshop, University of Colorado-Boulder**

# About the 42nd Annual Natural Hazards Research and Applications Workshop, Colorado-Boulder, 19 to 21 July 2017

Knowledge to Action: Reducing Hazards Losses and Promoting Disaster Resilience

**About the Workshop**: Since 1975, the Natural Hazards Center has hosted the Annual Natural Hazards Research and Applications Workshop for 400 federal, state, and local emergency officials; representatives of nonprofit and humanitarian organizations; hazards researchers; disaster consultants; and others dedicated to alleviating the impacts of disasters.

**Our Theme**: With each passing year, the hazards and disaster community accumulates more and more knowledge on the causes and consequences of extreme events. Simultaneously, the number of people negatively affected—due to population growth, climate change, unsustainable development, poor land use planning, rising inequality, and numerous other challenges—continues to climb. The result is a disproportionate loss of life among the world's poorest people and lopsided economic losses in the wealthiest nations.

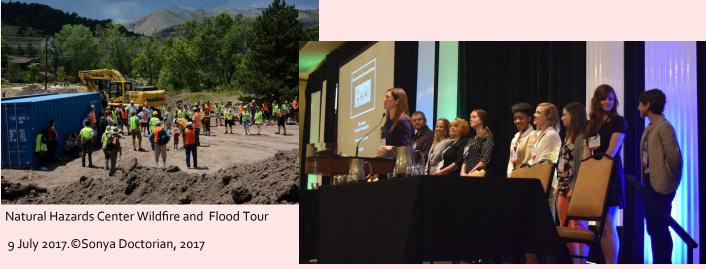
That's why this year's theme is **Knowledge to Action: Reducing Hazards Losses and Promoting Disaster Resilience.** The 2017 Natural Hazards Workshop will address this paradox with sessions that promote an exchange of ideas about how we can move knowledge into action, including in households, in businesses, in the classroom, in communities, and everywhere policy is made and implemented.



Attendees at the Natural Hazards Center Workshop raise

The planned sessions highlighted strategies and programs with a strong foundation in theory and research—that is, evidence-based approaches. Other sessions focused on how these initiatives are created, funded, implemented, evaluated, and maintained in different contexts.

(Ref: https://hazards.colorado.edu/workshop/2017)



Lori Peekl, Director, NHC recognizes NHC staff ©Zoe Welz, 2017

### Natural Hazards Center Workshop, University of Colorado-Boulder

## GADRI Representation at the 42nd Annual Natural Hazards Research and Applications Workshop

GADRI activities were presented during the session on Recent Research and Projects by Prof. Hirokazu Tatano, Secretary-General, GADRI; and Head, Social Systems for Disaster Risk Governance, Disaster Prevention Research Institutes (DPRI), Kyoto University. GADRI memberships continue to grow worldwide while GADRI continues to work towards goals set out in the Sendai Framework. Presentation by Prof. Tatano covered activities and initiatives undertaken by GADRI since the formation in March 2015.

Among these were:

Formation of GADRI Board of Directors in January 2015

Conference on "Open Discussion Forum" in March 2015

**GADRI Charter** 

**GADRI** website

GADRI Actions – newsletter

Regular board meetings of GADRI Board of Directors

1<sup>st</sup> International Symposium on Flash Floods in Wadi System – Disaster Risk Reduction and water Harvesting of Flash Floods in the Arab Region" in October 2015

GADRI Roundtable Discussion Workshop on "Towards an Integrated Disaster Risk Research Platform for Hydro-Meteorological Hazards", October 2015

Workshop on "Bridging Strong-motion and Earthquake Damage" in February 2016

Workshop on "New Generation of Geohazard Mapping and Strategy for Its Social Application" in March 2016

2<sup>nd</sup> International Symposium on Flash Flood Systems in Egypt in October 2016

GADRI Representations at various international conferences

- UNISDR Science and Technology Conference in January 2016
- IDRC, Davos Conference in 2016
- UN-CECAR Conference in Busan, Korea July 2016
- IDRiM Society Conference in Tehran, Italy 2016
- UNISDR Global Forum in Cancun, Mexico May 2017

GADRI organized the 3<sup>rd</sup> Global Summit of Research Institutes for Disaster Risk Reduction at the Disaster Prevention Research Institute (DPRI), Kyoto University, Uji Campus, Kyoto, Japan in March 2017.

GADIR is a useful networking portal for researchers and research institutes to share and learn through cutting-edge research knowledge, lessons learned from past disasters, and contribute research gaps in the

areas that most need disaster risk reduction.



Paul Kovacs, Grace Kang, Gonzalo Bacigalupe, Hirokazu Tatano, and Keith Porter—GADRI Session on 12 July 2017

During the Workshop, the members in Americas proposed to form a North American Alliance of Disaster Research Institutes (NAADRI). This will be in line with the other networks, the UK Alliance of Disaster Research Institutes (UKADRI), and the African Alliance of Disaster Research Institutes (AADRI).

A warm welcome to all of our new members to GADRI family. We look forward to working together to achieve goals and objectives set out by GADRI and contribute to research in disaster risk reduction.



# The Fenner School of Environment and Society, Australian National University

There are few places in the world where economists, hydrologists, historians, ecologists, foresters, geographers and climatologists all work together seeking solutions to some of contemporary society's most significant challenges.

The Australian National University's Fenner School of Environment and Society is one such place and provides a forum for the rigorous exploration of diverse ideas, perspectives, and methods of identifying and solving problems at the interface of the natural and social sciences, including the humanities, as they apply to the environment and sustainability.

Fenner offers expert perspectives on complex environmental and sustainable development challenges, drawing on decades of quality empirical and applied research. Research focuses on understanding environmental changes across a range of scales in time and place, enabling the school to provide past, present and future narratives to guide science, policy and management. Of particular importance to us is our capacity to encourage sound policy and governance outcomes that support sustainability.

In the areas of natural disasters relevant to Australia and Australia's region of interest, our research has focused on floods, droughts, water scarcity, urban planning and wildfires and has focused on informing policy and practice. (see e.g. John Handmer, Stephen Dovers, *Handbook of Disaster Policies and Institutions*, Improving Emergency Management and Climate Change Adaptation, CSIRO Publishing 2013, Geoffrey Cary, David Lindenmayer, Stephen Dovers, *Australia Burning*, Fire Ecology, Policy and Management Issues, CSIRO Publishing, 2003.



#### Centre for Disaster Studies, James Cook University, Australia

The Centre for Disaster Studies is a multi-disciplinary research unit within the College of Science and Engineering at James Cook University. The Centre has acted as the university's

face to the public and the professionals in the Emergency Management and Meteorology fields, city councils and other researchers since its establishment in 1979. Members have extensive research expertise, field work experience and professional teaching capacity in community based disaster management (all hazards).

Academic research members have a strong foundation in the following research areas (both domestic and international):

- Integrated disaster risk reduction and climate change adaptation
- Land use planning for disaster risk reduction (DRR) and climate change
- Building resilience in the built, natural and social environment
- Tourism crisis and disaster management
- Vulnerability and capacity assessment (community mapping for DRR and recovery)
- Social network analysis for disaster governance, risk reduction and resilience
- Post disaster assessment for response and recovery
- Sustainable development/redevelopment and livelihoods

Affiliate members of the Centre also conduct relevant research in the fields of engineering, public health, nursing, journalism/media, psychology, education, anthropology, human geography and the broader social sciences. The Centre has extensive experience in the translation of research and science into effective policy recommendations and action.

Webpage: https://www.jcu.edu.au/centre-for-disaster-studies

### University of National and World Economy, Bulgaria

The University of National and World Economy can be seen in the future as a leader among the higher educational institutions in Southeastern Europe that educate students and conduct researches in the field of economics, management and administration, law and politics.

University of National and World Economy is responsible to sustain and develop highly educated academic body of prominent, nationally and internationally acknowledged professors and scientists.

University of National and World Economy is called to strengthen and develop its positions as a kind of undisputed, respected and valuable territory of the national and European educational and research space.

The effects of natural disasters are very serious and the destruction caused may take a very long time to recover. Related damage is severe and it may cause relief expenses of billions of Euros. With the increase of natural disasters that have occurred in the past years, it is expected their frequency will continue to increase in the coming years.

At present, at global and national levels, a wide range of multiple scientific and scientific-applied research activity in the area of disaster risk reduction concerning individual types of disasters is conducted. Modern information and communication technologies can facilitate significantly the decision-making processes from the point of view of disaster risk reduction.geographical and global settings, not-for-profit organization backgrounds, agriculture, marine life, welfare, risk management, safety engineering and social networking services will be included.

Webpage: http://www.unwe.bg/en



## Disaster Risk Reduction Programme, Department of Geography & Resource Development, University of Ghana

The programme started as part of the Periperi U which is a partnership of African universities that spans across the continent and is committed to building local disaster risk related capacity. Established in 2006, with five original members, the partnership has grown to include eleven

universities from Algiers to Antanarivo, with institutions in Algeria, Ethiopia, Ghana, Kenya, Madagascar, Mozambique, Nigeria, Senegal, South Africa, Tanzania and Uganda.

The goal of Periperi U is to reduce disaster risks in among African countries through improved national and local disaster risk management, due to enhanced strategic human capacity to integrate risk reduction into critical developmental sectors and programmes. The partners of Periperi U believe this can accomplished through building and embedding sustainable 'multi-tasking' capabilities in disaster risk and vulnerability reduction capacity building in ten selected institutions of higher learning in Africa consistent with global disaster reduction priorities reflected in the Hyogo Framework of Action.

Since 2006 to 2015, an average of three MPhil students are produced by the programme. Like most newly established programmes/centres, the major challenge has been finance needed to procure the necessary logistics and facilitate research in general.

Webpage:http://www.riskreductionafrica.org/partners-and-programmes-1/university-of-ghana-accra-ghana.html

### NITech ADPEC

# Advanced Disaster Prevention Engineering Center, Nagoya Institute of Technology, Japan

The Advanced Disaster Prevention Engineering Center (ADPEC) was established in November, 2011. Prediction, mitigation and control of huge natural disasters such as

earthquake, tsunami and typhoon will be the final goal of ADPEC. By clarifying the process and the mechanism of the natural disasters and developing various kinds of technologies utilized for the huge disasters, we aim to establish the world leading research center for disaster prevention and mitigation. We also contribute actively to the mitigation of natural disasters as a member of University Consortium for Disaster Mitigation Research in Tokai Area. Meanwhile we will make every effort to help preventing and mitigating the huge disasters based on the viewpoint of useful and easily-acceptable technologies. We always keep in mind that the technology we developed should be able to make a real contribution to the construction of a harmonic society that can stand strongly in face of the natural disaster.

The activities of ADPEC are as follows.

To oppose a menace of the large-scale natural disaster such as earthquake, tsunami and typhoon, we perform the practical study for the making of city resisting the disaster that can keep people, assets, economic activities by utilizing ability for technology development of ADPEC overall.

We cope by a social request about disaster prevention and mitigation quickly and support activity to control a disaster from the both sides of hardware and software.

We build Tokai area base of a study, the service of city disaster prevention and mitigation. Furthermore, I build the international collaboration network about the East Asia disaster prevention.

Webpage: http://adpec.web.nitech.ac.jp/

# Centre for Coastal and Ocean Engineering (COEI), Universiti Teknologi Malaysia

COEI was formally known as the Coastal and Offshore Engineering Institute. The rebranding of COEI was formalized by Universiti Teknologi Malaysia (UTM) in 2015 under a university wide restructuring of research centers and faculties. COEI was first established in 1990 as a pioneer R&D research centre in Malaysia that specialize in coastal and offshore engineering. It is one of the five research centres (RC) that forms the Research Institute for Sustainable Environment (RISE) in UTM. As a member of RISE, COEI works very closely with other member RCs whose niche areas are all related to sustainable environment and sustainable processes.

COEI has developed a few innovative products related to coastal erosion protection and engineered reef system such as the Sine Slab, Hydrocheese, Stepfloat and Artgrass. Many of these products has been in employed throughout the country either as prototype application or field test systems. COEI has wide experience in hydraulic studies and hydrodynamic simulation of coastal processes with over 60 consultancy works on record and over 20 research projects. Clients include port authorities and port operators, the Marine Department, PETRONAS Carigali, Drainage and Irrigation Dept, private developers and other engineering consultants needing specialized services in coastal engineering.

Our present interest now are on climate change effects, primarily sea level rise, extreme coastal storms, coastal floods and tsunamis. We were responsible for completing the first tsunami modelling study for Malaysia, after the catastrophic 2004 Indian Ocean tsunami event and pioneer application of the coastal vulnerability index (CVI) in Malaysia as a means to classify and assess coastlines risks to sea level rise that would help future planning and strategy.

Webpage: http://kl.utm.my/coei/



### Disaster Management Institutes, School of Technology Management and Logistics, Universiti Utara Malaysia

Disaster Management Institute (DMI) was established in August 2016 as one of the School Centre of Excellence (SCoE) institutes to spearhead the disaster management research capability of the school and to collaborate with related agencies and universities that have

common interest in disaster management research areas. Disaster Management Institute focuses its research mainly on three important phases in the disaster management cycles; the pre disaster phase (preparedness, mitigation and early warning), during disaster phase (response such as evacuation, control room and others) and post disaster phase (recovery, rehabilitation, reconstruction and development, risk on damaging properties and others). The institute concentrates on high impact disaster management research by aligning to the university's niche areas through collaborating with related private companies, government agencies, local and international universities. Since the expertise of DMI is providing education by creating awareness and disaster resilience, another niche area for the institute is to educate communities, which include public including business communities, school, nonprofit organization and other interested parties.

Webpage: https://sites.google.com/site/dmistml/



# Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), the Philippines

The project, known then as the Prevention and Management of Marine Pollution in the East Asian Seas, was implemented by the United Nations Development Programme (UNDP) and executed by the International Maritime Organization (IMO), while the Government of the Philippines hosted the regional project office within the Department of Environment and Natural Resources (DENR) compound in Quezon City, Metro Manila.

The successful completion of the pilot phase project in September 1999 led to the building of confidence and recognition of the need to develop stakeholder partnerships in addressing the increasing environmental challenges in the seas of East Asia. A second phase project (1999-2007) focusing on building intergovernmental, interagency and multisectoral partnerships in environmental management was supported by GEF, with implementation beginning in October 1999. The thrust of the new project was to build partnerships, hence the acronym PEMSEA, to represent the new project initiatives.

Recognizing the importance and urgency in addressing the environmental challenges and in moving toward sustainable development of the Seas of East Asia, the 2006 Haikou Partnership Agreement established PEMSEA as the region's coordinating mechanism for the implementation the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA).

Webpage: http://www.pemsea.org/

#### Faculty of Security Engineering, University of Zilina, Slovakia

The Faculty of Security Engineering, University of Žilina, (FSE UNIZA) prepares security engineering experts with knowledge in methods of crisis management that are able to identify,

analyze and assess risks in various types of environment, and to manage preventive activities and adequate response. It educates crisis managers, rescue service workers and experts in managing the processes of protection of persons and property. The Faculty is more than sixty years old and has established a stable position in the professional security community in Slovakia and abroad. It has developed cooperation with educational and research institutions, public administration institutions and business companies in the respective fields. The activities of the Faculty have been positively evaluated, even in the external environment. It has been continuously holding the 2<sup>nd</sup> place in the respective subject field in the academic ranking of Slovak universities, based on comparison of indicators of education and research activities.

The Faculty of security engineering operates a number of laboratories to support research and teaching activities. Recently, our existing laboratory facilities were extended by opening two new state-of-art laboratories at the university science park.

FSE UNIZA has also Department of security and safety research which role is to identify of relevant funding schemes and calls, potential project partnerships, gathering and presentation of basic information about the possibilities of involving the faculty departments in research project activities.

Webpage: http://fbi.uniza.sk/en/

### Central Engineering Consultancy Bureau (CECB), Sri Lanka

The Natural Resources Management and Laboratory Services (NRM&LS), is an AGM unit of the Central Engineering Consultancy Bureau (CECB) functioned under the Ministry of Mahaweli Development & Environment, Sri Lanka. Finding the utmost importance of preserving the environment while catering the construction sector, CECB has taken the initiative of establishing the NRM&LS, to fulfill the construction and industry related environmental issues in accordance to the government regulations. Stating with the Moragahakanda Hydro Power Project in year 2000, today NRM&LS is engaged with a wide variety of Environmental Impact Assessments, Disaster Risk Assessments, Environmental Management Plan and Social Safeguard Studies both locally and internationally. Some of the major projects include Conflict Affected Region Emergency (CARE) Project conducted in Nothern Province in Sri Lanka, range of Irrigation Projects, Water Supply Projects, Mini Hydro power projects, Port City Development Project, Waste to energy development project which has a national significance and internationally for many Hydro Power projects and Social and Environmental Assessment such as the Nyamwamba Small Hydro Power Project, Uganda which our commitment and dedication is highly involved.

The CECB laboratory services of NRM&LS comprises an advanced laboratory spectrum providing a range of sample testing including the Chemical and Environmental Laboratory, Advanced Concrete Testing Laboratory, Advanced Soil Testing Laboratory, Geotechnical Investigations and foundation excavation. Theses laboratories are well-equipped with the advanced instruments and latest technology network in which highly trained professionals involved in carrying out diversified testing methods and research projects to furnish the best solutions for around 2000 clientele.

Webpage: http://cecb.lk/

### Disaster Preparedness, Mitigation and Management, Asian Institute of Technology (AIT), Thailand

The Asian Institute of Technology promotes technological change and sustainable development in the Asian-Pacific region through higher education, research and outreach. Established in Bangkok in 1959, AIT has become a leading regional postgraduate institution

and is actively working with public and private sector partners throughout the region and with some of the top universities in the world. AIT's Mission is: To develop highly qualified and committed professionals who play leading roles in the region's sustainable development and its integration into the global economy.

Disaster Preparedness, Mitigation and Management (DPMM) at Asian Institute of Technology (AIT) uses interdisciplinary capacities (engineering, medicine, natural and social science, as well as management) to manage and minimize the effects of disasters in people on the front lines of disaster response and preparedness. It provides professional education and short term training for the capacity building of the Asia-Pacific as well as neighboring regions. AIT's contribution towards disaster research is multi-faceted, starting from Disaster Education, Capacity development, Training, engineering and social solution for disaster risk reduction. Exploring the possible funding sources for student from various govt. department will be advantageous to create a sizable human resource, which can influence the development planning and help to build resilient community.

Webpage: http://dpmm.ait.ac.th/wp/

Webpage: http://www.evidenceaid.org/

evidence aid Evidence Aid, United Kingdom Those affected by, or at risk of, disasters and conflict have a right to receive humanitarian aid or disaster risk reduction support in the most timely, effective and appropriate way possible. To achieve this we need to know what works and what doesn't, and to ensure our actions and decisions are based on evidence. Evidence Aid aims to inspire and enable those guiding the humanitarian and DRR sectors to apply an evidence-based approach in their activities and decisions. We will stimulate and satisfy an increasing demand for evidence related to health outcomes, to improve the impact of humanitarian and DRR aid and contribute to a humanitarian and DRR sector where the evidence based approach will be used when and where appropriate. Evidence Aid has successfully engaged in seven systematic reviews for the World Health Organization (details on request), a priority setting exercise (http:// currents.plos.org/disasters/article/dis-13-0023-prioritization-of-themes-and-research-questions-for-healthoutcomes-in-natural-disasters-humanitarian-crises-or-other-major-healthcare-emergencies/) and a Delphi study (http://www.evidenceaid.org/wp-content/uploads/2013/01/Report-of-Round-1-of-Policy-Delphi-2016-08-22-FINAL1.pdf). In collaboration with Virginia Murray, Evidence Aid successfully co-organised a side event during the UNISDR Science and Technology Conference on the Implementation of the Sendai Framework for Disaster Risk Reduction, addressing issues around evidence dissemination and publication. Afterwards Evidence Aid became a Sendai Framework Science and Technology partner to ensure continuing engagement. For 3ie (International Initiative for Impact Evaluation - http://www.3ieimpact.org/en/), Evidence Aid founder Mike Clarke, contributed to a scoping study to analyse the evidence base of evaluations in humanitarian assistance (http://www.3ieimpact.org/en/publications/3ie-scoping-paper-series/3ie-scoping-paper -1/). All these activities somehow contribute of a more evidence based approach, but not all are convinced this is needed or the best way forward. Evidence Aid will continue to try to convince people that there is a need for more robust evidence and advocate for a more evidence based approach to DRR.

### Overseas Development Institute (ODI), United Kingdom

The Overseas Development Institute (ODI) is a leading independent think tank on international development and humanitarian issues. Our mission is to inspire and inform policy and practice which lead to the reduction of poverty, the alleviation of suffering and the achievement of sustainable livelihoods in developing countries. We do this by locking together high quality applied research, practical policy advice, and policy-focused dissemination and debate. ODI's Risk and Resilience Programme delivers high quality research, analysis and policy advice on the distribution of risk, impacts of climate, weather extremes and other hazards on development, and the political economy of resilience strategies.

ODI's policy advice and outreach has supported governments, donors, and practitioners across the world to improve the uptake of risk management and resilience-building approaches. In addition to bespoke advice and projects ODI have achieved this through our role in major networks including the Climate and Development Knowledge Network (CDKN).

- ODI have played (and continue to play) a critical role in promoting adaptation and resilience in post-2015 disaster, climate and development agreements, including shaping the outcomes of the Sendai Framework for Disaster Risk Reduction and World Humanitarian Summit.
- We are well known for our strong track record in knowledge dissemination, partnering, and acting as intermediaries between climate scientists, social scientists and decision-makers, including in our role as the Knowledge Manager for the BRACED programme (Building Resilience and Adaptation to Climate Extremes and Disasters) and as the lead institute for PRISE programme (Pathways to Resilience in Semi-arid Economies).

Webpage: https://www.odi.org/



#### Public Health England, United Kingdom

We are an executive agency of the UK Department of Health, and a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

We employ 5,500 staff (full-time equivalent), mostly scientists, researchers and public health professionals. We have 8 local centres, plus an integrated region and centre for London, and 4 regions (north of England, south of England, Midlands and east of England, and London). We work closely with public health professionals in Wales, Scotland and Northern Ireland, and internationally. Public Health England was established on 1 April 2013 to bring together public health specialists from more than 70 organisations into a single public health service.

PHE's research within disaster risk reduction aims to ensure public health and science has a prominent role in the Sendai framework. To achieve this, PHE regularly conducts robust, evidence-based research into disaster risk reduction. Our research is conducted on the understanding that disasters don't recognise borders, and so protecting the health and wellbeing of the UK involves a commitment research on global issues.

Webpage: https://www.gov.uk/government/organisations/public-health-england

### **Upcoming Events**

IDRiM Conference, Reyjkavik, Iceland from 23 to 25 August 2017



World Bosai Forum, Sendai, Japan from 25 to 28 November 2017



First Meeting of the GADRI Book Series in Tokyo, Japan on 21 November 2017

Meeting of the GADRI Board of Directors in Tokyo on 22 November 2017



### **Publications**

3rd Global Summit of Research Institutes for Disaster Risk Reduction: Expanding the Platform for Bridging Science and Policy Making

https://link.springer.com/article/10.1007/s13753-017-0123-z



Science for Disaster Risk Management 2017: Knowing Better and Losing Less , European Commission, Join Research Centre

http://drmkc.jrc.ec.europa.eu/knowledge/Challenges-Sharing



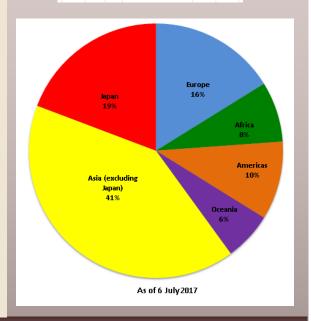
### Global Alliance of Disaster Research Institutes (GADRI)

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	(21)
Africa	(10)
Americas	(13)
Oceania	(8)
Asia (excluding Japan)	(53)
Japan	(25)
TOTAL	130
	(35 States)



#### To Join GADRI:

Contact GADRI Secretariat - secretariat-gadri@dpri.kyoto-u.ac.jp. Membership is free; and completely voluntary and non-binding.



Global Alliance of Disaster Research Institutes (GADRI) Secretariat

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