



Photograph (above): Over 20 experts from 14 countries in the EU and Asia attended the CABARET project kick off meeting, in March 2017, Colombo, Sri Lanka

## New EU Project Aims to Improve Multi-Hazard Early Warning and Build Disaster Resilience in Coastal Communities

Experts from across Europe and Asia met in March 2017 in Colombo, Sri Lanka, to launch a new project funded by the European Union to foster regional cooperation for more effective multi-hazard early warning and increased disaster resilience among coastal communities.

The project, called CABARET (Capacity Building in Asia for Resilience EducaTION), will support joint initiatives and sharing of good practices among Higher Education Institutes in Asia and Europe, as we as promote links between Higher Education and other socio-economic actors.

### Background to the project

Experience over recent years of the impacts of coastal hazards such as tsunamis, storm surges, sea level rise and coastal erosion, has shown that inadequate preparation for and response to emergency situations have contributed to widespread damage and the avoidable loss of lives and livelihoods. These hazards set back economic development in both developed and developing economies, and tend to disproportionately affect the most vulnerable in society. The shortcomings

in preparation have been due to a lack of warning through poor regional detection and communication systems, but they also reflect inadequate awareness, planning and coordination.

This situation, together with the increasing globalisation of risk, calls for strengthened multi-hazard early warning systems at all levels. It also calls for an integrated and holistic approach to early warnings for multiple hazards and risks tailored to user needs across sectors. In this regard, international and regional collaboration as well as multi-stakeholder partnership at all levels is critically necessary, given the transboundary nature of most coastal hazards.

### EU-Asia partnership

CABARET is co-funded by an EU Erasmus+ programme grant of €993,340, will run for three years and is led by the University of Huddersfield's Global Disaster Resilience Centre, based in the UK. They are joined by a group of experts from a consortium of 14 European and Asian higher education institutions from Bulgaria, Indonesia, Latvia, the Maldives, Malta, Myanmar, the Philippines, Spain, Sri Lanka, and the United Kingdom. The Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO), the Asian Disaster

Preparedness Center and the Federation of Sri Lankan Local Government Authorities are Associate Partners of the project, and will help to promote the benefits across Asia and beyond.

### Supporting the Sendai Framework for Disaster Risk Reduction 2015-30

The project was inspired by the UN Sendai Framework for Disaster Risk Reduction, agreed by UN member states in 2015. It includes a strong call for higher education to support the understanding of disaster risk and promote risk-informed decisions and risk sensitive planning from the local to the global levels. It also calls for the coordination of existing networks and scientific research institutions at all levels and all regions. The goal is to strengthen the evidence-base in support of the implementation of the new framework.

### Workplan

The first phase of CABARET will involve a detailed analysis of existing capacity for multi-hazard early warning at the national level in Indonesia, the Maldives, Myanmar, the Philippines and Sri Lanka, as well as a wider regional analysis across Asia. This will provide the basis for future capacity development activities aimed at fostering regional cooperation and integration.

## Planned outcomes

- Enhanced regional and transboundary cooperation for multi-hazard early warning
- Empowered individuals and organisations with the skills, competencies and credentials needed to promote and sustain regional cooperation aimed at reducing the likelihood and impact of disasters in coastal communities
- Enhanced capacities of the partner HEIs in Asia to meet (match) the challenges and specific needs of the wider economic and social environment
- Strengthened internationalisation of HEIs and their capacity to network effectively in research, scientific and technological innovation
- Exchange of experience and practice in spite of diversity, and increased ability of partner HEIs in Asia to build relationships with relevant socio-economic actors
- Improved skill (knowledge, qualifications,) acquisition for professional teams involved in multi-hazard early warning

## Work packages

The project is managed through nine work packages, each led by different partners from across the consortium.

The relationship between these work packages is shown in Figure 1. A major survey of intra and inter regional capacity for early warning (WP1) will inform capacity development activities across four key work packages.

### WP1: Intra and inter regional capacity building framework

WP leader/ co-leader: University of Central Lancashire; Institute of Technology Bandung

Objective: Identifying intra and inter regional cooperation capacity needs across partner country HEIs to improve MHEW and increase resilience among coastal communities.

### Work Package 2: Project Management

WP leader/ co-leader: University of Huddersfield; University of Moratuwa

Objective: Project Management: to deliver outputs and achieve intended outcomes.

### Work Package 3: Quality assurance & monitoring

WP leader/co-leader: University of Central Lancashire; Mandalay Technological University

Objective: Ensuring systematic monitoring and evaluation of the project's activities to maximise the probability that the project will deliver its planned outputs and achieve its intended outcomes.

### Work Package 4: Regional innovation hub on MHEW

WP leader/co-leader: University of Huddersfield; University of Peradeniya

Objective: Creating an innovation hub for resilient coastal communities, promoting scientific cooperation and knowledge transfer in higher Education within Asia, and between Asia and Europe on early warning and disaster resilience.

### Work Package 5: Regional cooperation for MHEW

WP leader/co-leader: University of Malta; University of Andalas

Objective: Developing a capacity building roadmap to address regional gaps and priorities.

### Work Package 6: Partnerships with social and economic actors

WP leader/co-leader: University of Cantabria; De La Salle University

Objective: Exploring, promoting and initiating opportunities for fruitful university partnerships with socio-economic actors in coastal communities.

### Work Package 7: Learning and teaching tools, methodologies and approaches

WP leader/co-leader: Mining & Geology University; Maldives National University

Objective: Developing innovative multi-disciplinary training courses tailored for rapid skill acquisition for professional teams involved in MHEW at the national and regional level.

### Work Package 8: Dissemination and exploitation

WP leader/ co-leader: Riga Technical University; Institute of Technology Bandung

Objective: Publicising the capacity building progress, successes & outcomes and raising awareness across the field of HE about capacity building for multi-hazard early warning and increased resilience in coastal communities.

Further information about the project and its workplan can be found at [www.disaster-resilience.net/cascade](http://www.disaster-resilience.net/cascade).

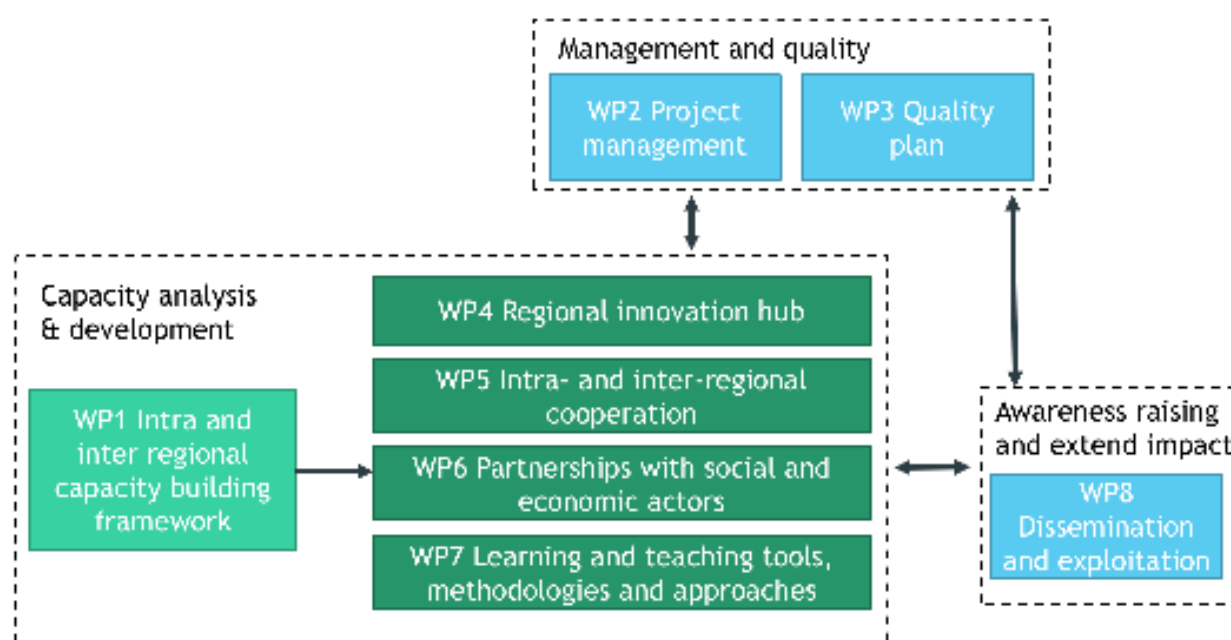


Figure 1 (above): The project's activities are represented in eight key work packages, with a major national and regional survey (WP1), informing a series of capacity development activities (WPs 4, 5, 6 and 7)



# Sendai Framework and Multi-Hazard Early Warning

Traditionally, many countries have been reactive to disasters experiencing significant losses in lives and livelihoods of their citizens. Adoption of the Hyogo Framework for Action (HFA) 2005–2015 by 168 countries has led to a paradigm shift in disaster risk management from emergency response to a comprehensive approach which also includes preparedness and preventive strategies to reduce risk.

Early Warning Systems (EWS) are well recognized as a critical life-saving tool for floods, droughts, storms, bushfires, and other hazards.

The Sendai framework highlights the need to invest in, develop, maintain and strengthen people-centred multi-hazard, multi-sectoral forecasting and early warning systems; and requests the international community to promote the further development of, and investment in, effective, nationally compatible, regional multi-hazard early warning mechanisms.

EWS have received increasing international consideration in the past decade, as highlighted by the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR) and three International Early Warning Conferences hosted by the Government of Germany, the appreciation of EWS during the G8 summit in 2005 and in various United Nations General Assembly Resolutions, and the recent natural hazard events such as storm surges and tsunamis that underlined the importance of EWS in saving lives and reducing losses.

In line with the international efforts to promote early warning, the World

Conference for Disaster Reduction (WCDR) in 2005 adopted plans that put in place the International Early Warning Programme (IEWP) first proposed at the Second International Conference on Early Warning (EWC II) in 2003 in Bonn, Germany. As an implementation mechanism, the Platform for the Promotion of Early Warning (PPEW) was launched in 2004 and remained operational until 2008.

## Recent Advances in Early Warning Systems

In line with the Priority for Action 2 of the Sendai Framework for Disaster Risk Reduction 2015–2030 (SFDRR), regions and countries across the world have made significant progress in strengthening multi-hazard, end-to-end, people-centred EWS over the past 10 years. Progress has been evident in the development of observation and monitoring systems and the strengthening of communication and information on risks, as part of the overall efforts to strengthen disaster resilience. Today, EWS are established and operational in many countries of the world, focusing on a variety of natural hazards and utilizing available scientific knowledge and modern ICT.

## Challenges related to Early Warning Systems

According to SFDRR, Notwithstanding these advances in EWS in the past decade, many countries still have not benefited from them as much as they could have, and significant gaps remain, especially with the “last mile” of EWS.

A key challenge has been in reaching the most remote and vulnerable population with timely, meaningful, and actionable warning information. Several gaps persist due to weak coordination among the actors and agencies concerned, feeble public awareness and participation as well as insufficient political commitment. Additional efforts are needed to institutionalize and strengthen multi-hazard, end-to-end, people-centred EWS for all communities, and to deliver warnings from one authoritative source or “voice” at the national level.

## Call for Multi-Hazard Early Warning Systems

EWS have often been developed to target specific hazards. In some cases, EWS are operated for multiple hazards, particularly in the context of hydro-meteorological phenomena. It is important to consider a holistic and integrated multi-hazard approach to EWS as a strategy to streamline such systems, to apply lessons learned from their operations, and to contribute effectively to DRR. It is also important for warning messages to originate from an official authoritative source and communicated through broadened channels of dissemination, including the social media.

Furthermore, States agreed on a global target for DRR specifically on MHEWS by SFDRR (i.e. Target 7: Substantially increase the availability of and access to MHEWS and disaster risk information and assessments to the people by 2030).

*Photograph: UN Secretary General  
Mr. Ban Ki-moon at the Global  
Platform for Disaster Risk Reduction*



## Preliminary steps for a worldwide Tsunami EWS App

IH Cantabria (University of Cantabria) has developed in the frame of a web-app and a free mobile-app IH-TSUSY. IH Tsunamis System is an operational system that calculates the propagation of the tsunamis in case they occur using near real time earthquakes data provided by international agencies (i.e. USGS) to run, on the fly, the numerical simulation of any possible tsunami, and providing maps containing tsunami travel time and the estimated wave amplitude. This app was awarded with the prize "Best mobile-app of the year" in the Cantabria digital prize awards <<http://www.premioscantabriadigital.com/portfolio-item/ih-tsunamis-system-ih-tsutsy/>>, in Nov. 2016.

More information is available at:

App award: <http://www.ihcantabria.com/en/newss/item/1370-ihtsusy-de-ihcantabria-se-alzo-como-ganadora-en-la-9-edicion-de-los-premios-cantabria-digital/1370-ihtsusy-de-ihcantabria-se-alzo-como-ganadora-en-la-9-edicion-de-los-premios-cantabria-digital>

App presentation: <http://www.ihcantabria.com/es/newss/item/1384-ihcantabria-releases-new-update-for-ih-tsunamis-system>

App web site: <http://tsunami.ihcantabria.com/>

App mobile application site (android): [https://play.google.com/store/apps/details?id=com.ihcantabria.ih\\_tsunamis](https://play.google.com/store/apps/details?id=com.ihcantabria.ih_tsunamis)

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## The Asian University Network of Environment and Disaster Management

There is a rising trend towards post-graduate disaster risk-related education in countries exposed to recurrent natural and other threats. This shift is not restricted to developed nations. Even in resource-constrained but recurrently exposed countries, post-graduate disaster risk-related degrees are increasingly possible (eg the University of Tribhuvan in Nepal, Bahir Dar University in Ethiopia or the University of Gadjah Mada in Indonesia). In the Philippines, the virtual destruction of the former Camarines Sur State Agricultural College (now known as the Central Bicol State University of Agriculture) in 2006 by Typhoons Milenyo and Reming not only resulted in physical reconstruction of the college's facilities. It also prompted the 2008 introduction of a Masters in Disaster Risk Management.

Such developments underline a growing institutional capacity that is 'locally owned' to sustainably generate strategic human capital to address recurrent risks. This increasingly applies in at-risk countries at all

stages of the development continuum.

The Asian University Network of Environment and Disaster Management (AUEDM) was established in 2008. It is 'a unique initiative of prominent Asian universities that [have] come together to share knowledge resources related to the environment and disaster risk management with the larger group of stake-holders working on these issues' (Shaw, et. al, 2011).

As with Periperi U, the AUEDM partnership strives to mobilise higher education capabilities in response to a social imperative to alleviate disaster- and risk-related hardship aimed at 'bridging academic research, education and field practice' A partnership spanning Asia, with links to other networks.

The AUEDM partnership spans Asia, from the University of Tokyo in Japan to Kabul University in Afghanistan, involving 24 HEIs as well as other observers and/or advisors. It covers countries with highly varied risk and development profiles as well as local risk management capabilities.

### AUEDM partnership

Kabul University, Afghanistan

Tribhuvan University, Nepal

BRAC University, Bangladesh

University of Peshawar, Pakistan

Royal University of Phnom Penh, Cambodia

University of Philippines Los Baños, Philippines

Beijing Normal University, China

Nanyang Technological University, Singapore

Jadavpur University, India

Inje University, South Korea

Tata Institute of Social Sciences, India

University of Colombo, Sri Lanka

University of Madras, India

University of Peradeniya, Sri Lanka

Institute of Technology Bandung, Indonesia

National Yunlin University of Science and Kyoto University, Japan

Chulalongkorn University, Thailand

Tokyo Polytechnic University, Japan

Danang University of Technology, Vietnam

Universiti Kebangsaan Malaysia, Malaysia

Hue College of Economics, Vietnam

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## CABARET Presented at Global Multi-Hazard Early Warning Conference

Professors Richard Haigh and Dilanthi Amaratunga also actively took part at the Multi-Hazard Early Warning Conference which aimed to demonstrate to countries how they can build, improve the availability of, and their communities' access to, multi-hazard early warning, risk information and assessment. This conference was held from

22 to 23 May in Cancún, Mexico, hosted by the government of Mexico, in connection with the United Nations Office for Disaster Risk Reduction (UNISDR) Global Platform for Disaster Risk Reduction.

The Global Platform was attended by more than 6,500 delegates, including Heads of State, leading politicians, the event – organised by UNISDR (the United Nations Office for Disaster Risk Reduction) – is the world's foremost gathering of stakeholders committed to reducing disaster risk and to building the resilience of communities and nations.

CABARET was presented in a poster session aimed at reflecting good practices, practical experience and innovation in line with the objectives of the Conference.

The Conference deliberations and outcomes: Guided efforts and investments by countries and international organizations for effective, impact based, multi-hazard early warning systems; Review progress by countries' efforts to establish early warning systems against the Sendai Framework, the 2030 Sustainable Development Agenda and the Climate Change Paris Agenda; and Learn from, exchange information on and promote the replication of good practices in individual, cluster and multi-hazard early warning systems.



The Conference served as a Preparatory Meeting on Early Warning for the Global Platform, complementing the overarching goals of the Platform, and specifically providing more detailed background to the Early Warning Session planned to be held on the opening day of the Platform.

Relevant stakeholders at the event included all countries, but in particular, those who stand to benefit the most from further development of MHEWSs such as LDC, SIDS and LLDC; National disaster risk management/civil protection agencies; National meteorological and hydrological services, geological surveys and institutes, health organizations and related scientific and academic institutions from nations that are interested to share good practice examples.

Organizations involved in planning the event included FAO, IFRC, ITU, JRC/EC, UNDP, UNEP, UNESCAP, UNESCO, UNESCO-IOC, UNISDR, UNOOSA/ UNSPIDER, WFP, WHO, WMO, World Bank.



The two professors also had bi-lateral meetings with Sirinivasa Kumar Tummala, Head of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System Secretariat (ICG/IOTWMS), about continuing their collaborations as part of the EU funded Erasmus+ project CABARET, which aims to build capacity for regional multi-hazard early warning.

## CABARET to Support International Day for Disaster Reduction

As part of its next Steering Committee meeting in Spain, to be held in September, CABARET partners will be supporting the upcoming International Day for Disaster Reduction.

The United Nations General Assembly has designated 13 October as the date to celebrate International Day for Disaster Reduction (IDDR) to promote a global culture of disaster reduction, including disaster prevention, mitigation and preparedness. Since it began 25 years ago, the day has grown into a major global awareness event celebrated in many ways to encourage efforts to build more disaster-resilient communities and nations.

Following the Step Up Campaign, which started in 2011 and was dedicated each year to a particular group of vulnerable people exposed to disasters – Children and Youth (2011), Women and Girls (2012), People Living with Disabilities (2013), Older Persons (2014), and Indigenous People (2015) – UNISDR launched the Sendai Seven Campaign to promote each of the seven targets of the Sendai Framework for Disaster Risk Reduction adopted in Sendai, Japan in March 2015.

As was the case throughout the Step Up Campaign, the success of the Sendai Seven Campaign depends on engaging and connecting with a wide range of stakeholders to promote awareness of the Sendai Framework and actions required to implement it, and to achieve its targets.

The Sendai Seven Campaign is an opportunity for all, including governments,



Photograph (above): CABARET partners attending the Intergovernmental Coordination Group for IOTWMS 1st Integrated Intersessional Meetings in Jakarta, Indonesia

local governments, community groups, civil society organisations, the private sector, international organisations and the UN family, to promote best practice at international, regional and national level across all sectors, to reduce disaster risk and disaster losses.

This year's focus is Target B: Reducing the number of affected people by disasters by 2030.

The next issue will include a report on how CABARET partners have supported the event.

Info: [www.unisdr.org/we/campaign/iddr](http://www.unisdr.org/we/campaign/iddr)

## Capacity Assessment of Tsunami Preparedness

Dr Harkunti Rahayu, Professor Richard Haigh and Professor Dilanthi Amaratunga, from the CABARET consortium, recently attended the first meeting of the Task Team Capacity Assessment of Tsunami Preparedness (TT-CATP). The meeting took place alongside the Intergovernmental Coordination Group for IOTWMS 1st Integrated Intersessional

Meetings in Jakarta, Indonesia, September 2017.

The TT-CATP has been tasked with reviewing existing questionnaires and national reports, developing suitable questionnaires, and guiding implementation of an online baseline survey for capacity assessment of tsunami preparedness in the Indian Ocean region. It will also develop guidelines and an implementation plan for piloting a Tsunami Ready programme in the Indian Ocean. This will include identifying communities in one or two countries for pilot implementation, based on outcome of capacity assessment survey and interest of the Member States.

Dr Rahayu chairs the TT-CATP, and Professors Haigh and Amaratunga have been invited to join the TT-CATP as external experts.

It was agreed at the meeting that TT-CATP will refer to the results of CABARET capacity analysis surveys to inform the capacity assessment of tsunami preparedness for the IOTWMS member states.

TT-CATP will also explore the possibility of utilising the online training being developed through CABARET for meeting the capacity development needs of the IOTWMS member states.

This is a major opportunity for the CABARET project to reach key target stakeholders of the project.

The CABARET project will be working closely with Dr Rahayu to align the workplan with the needs to the TT-CATP, thereby greatly increasing the potential impact of the project.

Future issues of the newsletter will provide updates on these contributions in the coming months.

13 OCTOBER 2017  
**INTERNATIONAL DAY  
FOR DISASTER REDUCTION**  
REDUCING THE NUMBER OF AFFECTED PEOPLE BY DISASTERS BY 2030



## Write for CABARET Newsletter

The CABARET project provides an opportunity for people to share knowledge and experience. This newsletter is written by the CABARET membership for the CABARET membership, and also for other readers working with national and international NGOs, UN agencies, government and donor institutions, academics, and independent consultants.

We, the Editors of CABARET newsletter, welcome contributions from CABARET partners and associate partners. We are also pleased to consider articles submitted by anyone involved in research capacity building within the context of disaster resilience among coastal communities.

If you have knowledge and experience to share, please consider making a contribution.

The scope of contributions should be consistent with the aims of CABARET.

Typically, we welcome contributions in the following categories (word counts are advisory):

- News and reports from activities and events linked to the project (100 - 500 words)
- Reports on developments in the field / projects that are being investigated by partners – these do not have to be activities directly linked to the project, but should be relevant to project partner institutions (100 - 500 words)
- Useful Resources – relevant publications, websites (up to 20 - 40 words)
- Upcoming events (20 words)

We welcome suggestions for alternative types / styles of contribution.

If you have an idea for an article that you would like to develop, the Editors would be pleased to discuss it with you – send an email to Ms Kinkini Hemachandra (K.Hemachandra2@hud.ac.uk)

The Editors reserve the right to edit any contribution



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[www.disaster-resilience.net/cabaret](http://www.disaster-resilience.net/cabaret)

### European partners

University of Huddersfield  
University of Central Lancashire  
University of Cantabria  
University of Mining and Geology  
University of Malta  
Riga Technical University

United Kingdom (Lead Institution)  
United Kingdom  
Spain  
Bulgaria  
Malta  
Latvia

### Asia partners

University of Moratuwa  
University of Peradeniya  
Bandung Technical Institute  
Andalas University  
Maldives National University  
De La Salle University  
Ateneo de Manila University  
Mandalay Technological University  
University of Yangon

Sri Lanka  
Sri Lanka  
Indonesia  
Indonesia  
Maldives  
Philippines  
Philippines  
Myanmar  
Myanmar

### Associate partners

IOC-UNESCO  
Asian Disaster Preparedness Center  
Federation of Sri Lankan Local Government Authorities

### Further information

For further information on the CABARET project, contact Professor Richard Haigh (r.haigh@hud.ac.uk) and Professor Dilanthi Amaratunga (d.amaratunga@hud.ac.uk).

[www.disaster-resilience.net/cabaret](http://www.disaster-resilience.net/cabaret)