

International Journal of Disaster Resilience in the Built Environment

Prof. Richard Haigh & Prof. Dilanthi Amaratunga

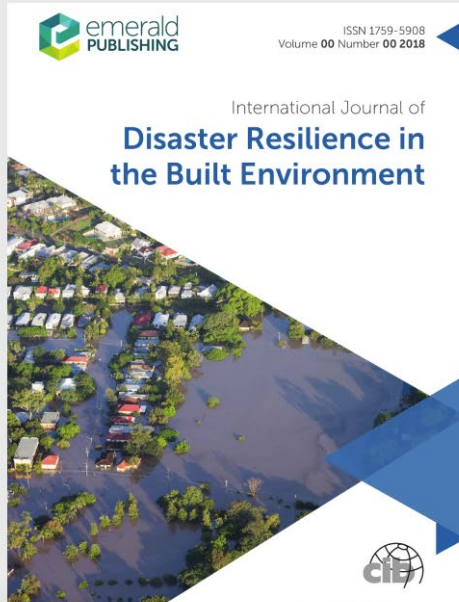
ICG/IOTWMS Working Group 1 on Tsunami Risk, Community
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International Journal of Disaster Resilience in the Built Environment



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Editors:
Professor Dilanthi Amaratunga &
Professor Richard Haigh
Global Disaster Resilience Centre,
University of Huddersfield, UK

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International Journal of Disaster Resilience in the Built Environment

- Special issue in memory of Professor Samantha Hettiarachchi
- Guest Editor Prof. Priyan Dias
- Call for papers in 2019; Published in 2020, Volume 11, Issue 2
- 9 research articles & 1 editorial
- Approximately 7,000 downloads
- 2 research articles have already been cited in 10+ other articles



International Journal of Disaster Resilience in the Built Environment

- In 2021, we issued another call for a special issue on *Technology enabled tsunami early warning: opportunities, gaps, barriers and challenges*
- We did not receive enough papers to justify an issue from the IOTWMS community
- However, after peer review, 3 related papers were accepted and are being published in regular issues



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Guest editorial

Guest editorial

Early warning systems to reduce tsunami impacts

Professor Samantha Hettiarachchi, PhD (Lond), DIC, was a Senior Professor in Civil Engineering at the University of Moratuwa, and a Fellow of the National Academy of Sciences, Sri Lanka (NASSL). He made exceptional national and international contributions in the areas of coastal engineering, coastal zone management and disaster risk reduction. He was the Vice-Chairman and Acting Chairman of the steering group that installed the Indian Ocean Tsunami Warning and Mitigation System (IOTWMS), collaborating with 26 Indian Ocean rim states under the auspices of UNESCO-IOC. Under his leadership UNESCO-IOC produced a definitive guideline on Tsunami Risk Assessment, now in its second edition (UNESCO, 2015). In Sri Lanka, his expertise was used by Coast Conservation Department, the Lanka Hydraulic Institute (LHI), the Disaster Management Centre (DMC) and the National Science Foundation. He was consulted by the Governments of Indonesia and Oman, in addition to that of Sri Lanka.

Professor Hettiarachchi died at the relatively young age of 62 in April 2018, after a courageous battle against cancer. This special issue is meant to celebrate his life and work. It is appropriate that this *grósmóskóðir* is carried in *IJDRBE*, because he collaborated very closely with its Chief Editors, being an editorial board member from its inception. He was also a keynote speaker at the 3rd International Conference on Building Resilience at Abangalla in 2013, a conference series that is closely associated with this journal. The issue will be launched, fittingly in partnership with UNESCO too, at the 9th conference in the series to be held in Bali in January 2020. The actual call for papers was issued at a memorial lecture in Prof Hettiarachchi's honour, delivered in Colombo by Professor Eduard Kissling, Professor of Geophysics at ETH Zurich, under the auspices of the NASSL.

There are nine contributions in this issue, titled *Early Warning Systems for Reducing Tsunami Impact*. Three of them are from Sri Lanka, which is to be expected given Prof Hettiarachchi's rootedness in his home country. However, there are others from Japan, Canada, Indonesia and Sweden; and two from the United Kingdom. The UK is where Prof Hettiarachchi engaged in most of his initial academic collaborations. He obtained his doctorate from Imperial College London working under Prof Patrick Holmes, in the course of which he developed links with HR Wallingford, and subsequently worked for a year in the Maritime Engineering Group of Ove Arup and Partners, London. It is only after the Indian Ocean tsunami of 2004 that he broadened his travels and interactions, many of which are reflected by the author affiliations in this issue.

Japan is a country that extended significant technical assistance to Sri Lanka soon after the tsunami. The Canadian paper is from the University of Calgary (jointly with LHI), which launched the International Institute for Infrastructure Resilience and Reconstruction (IIIRI), largely spearheaded by some Sri Lankan academics there. Indonesia is a key country that was involved in the IOTWMS. The Swedish Lund University link is thanks to the European Union funded seven-country ASCENT project, intended to strengthen research and innovation capacity for the development of societal resilience to disasters. This project was led by Professors Dilarithi Amararatunga and Richard Haigh of Huddersfield University, who are the joint chief editors of *IJDRBE* and authors in two of the papers herein. Many of the other authors are Professor Hettiarachchi's students, two of them full professors - one at the



Several papers have been published in the journal which are directly related to IOTWMS themes

Article Publication date: 28 January 2020

A study of people-centered early warning system in the face of near-field tsunami risk for Indonesian coastal cities

Harkunti Pertiwi Rahayu, Louise K. Comfort, Richard Haigh, Dilanthi Amaratunga and Devina Khoirunnisa

This study aims to identify the gaps in current policy and propose a viable framework for policy improvement regarding people-centered tsunami early warning chain in...

View summary and detail

HTML PDF (3.1 MB)

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Article Publication date: 4 January 2022

Review of Tsunami early warning system and coastal resilience with a focus on Indian Ocean

Indrajit Pal, Subhajit Ghosh, Itesh Dash and Anirban Mukhopadhyay

Article Publication date: 23 April 2020

Applicability of the PTVA-4 model to evaluate the structural vulnerability of hospitals in Sri Lanka against tsunami

Sathiyathan Harisuthan, Hashan Hasalanka, Devmini Kularatne and Chandana Siriwardana

This paper aims to identify the specific parameters in developing a framework to assess the structural vulnerability of hospital buildings in Sri Lanka against tsunami...

Article Publication date: 14 January 2020

Vulnerability assessment of reinforced concrete buildings in Indonesia subjected to tsunami inundation forces

Dicky Hanggara and Anil Christopher Wijeyewickrema

This paper aims to evaluate the vulnerability of typical low-rise reinforced concrete (RC) buildings located in Indonesia subjected to tsunami loading.

Article Publication date: 14 January 2020

An update of proposed Sri Lanka warning system for east and west coast tsunamis

Sanjeeva Wickramaratne, S. Chan Wirasinghe and Janaka Ruwanpura

Based on the existing provisions/operations of tsunami warning in the Indian Ocean, authors observed that detection as well as arrival time estimations of regional tsunami...

Article Publication date: 28 January 2020

The upstream-downstream interface of Sri Lanka's tsunami early warning system

Richard Haigh, Maheshika Menike Sakalasuriya, Dilanthi Amaratunga, Senaka Basnayake, Siri Hettige, Sarath Premalal and Ananda Jayasinghe Arachchi

The purpose of this paper is to deliver a detailed analysis of the functioning of upstream-downstream interface process of the tsunami early warning and mitigation system...

View summary and detail

HTML PDF (683 KB)

DOWNLOADS 2431 ALTMETRICS

Article Publication date: 15 December 2020

Guiding factors for planning public open spaces to enhance coastal cities' disaster resilience to tsunamis

R.R.J. Chathuranganee Jayakody and Dilanthi Amaratunga

Public open spaces (POS) in cities are often measured as a strength to enhance cities' sustainability with a contribution to the three pillars: economic, social and...

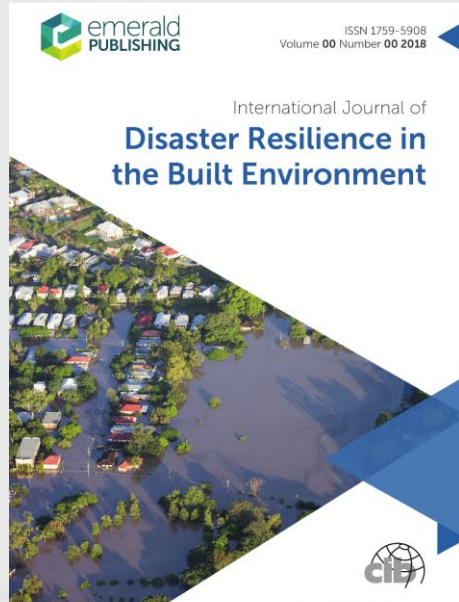
Article Publication date: 11 October 2019

A multi-scenario assessment of the seismogenic tsunami hazard for Bangladesh

Janaka J. Wijetunge

This paper aims to describe a multi-scenario assessment of the seismogenic tsunami hazard for Bangladesh from active subduction zones in the Indian Ocean region. Two...

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We continue to welcome submissions or special issue proposals from IOTWMS / tsunami related research

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