

Impact of Covid19 Pandemic on IOTWMS business process

Survey on tsunami warning services, evacuation, and sheltering during COVID-19

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ICG/IOTWMS Working Group 1 on Tsunami Risk, Community
Awareness and Preparedness
Intersessional Meeting – 17 & 18 April 2023



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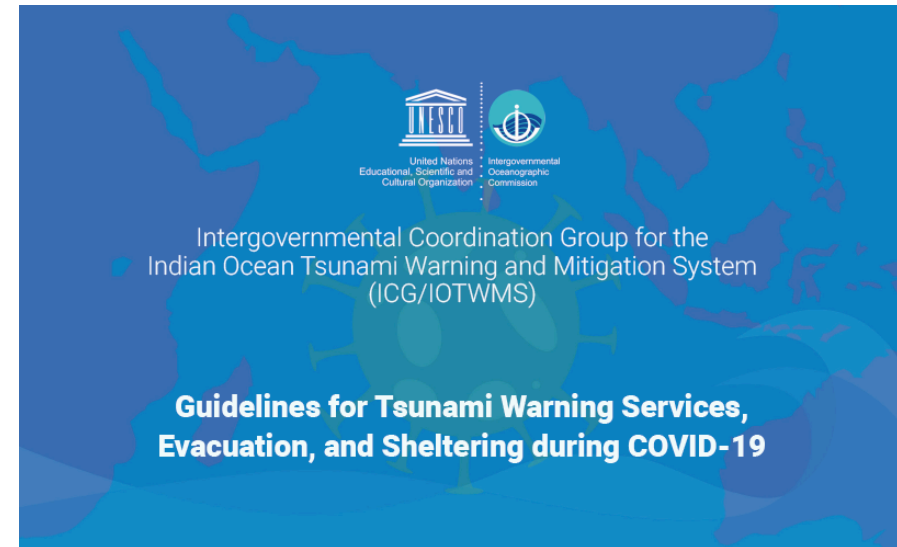


Background

The COVID-19 response resulted in a shift of priorities, alterations in work patterns, processes and venues, the introduction of physical distancing, self-isolation and quarantine measures, as well as temporary lockdowns of entire communities.

This may create ambiguity or confusion with regards to tsunami warning services and response actions like evacuation, under coexisting COVID-19 protocols.

In response, Guidelines for Tsunami Warning Services, Evacuation, and Sheltering during COVID-19 were issued by the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) in 2020.



Purpose

This document is aimed at national authorities responsible for the organisation of tsunami warning and emergency response. It clarifies the status of the regional tsunami services for the Indian Ocean and suggests best practices for national and local actions during the COVID-19 pandemic.

The document recognises that current national, regional and local responses to the COVID-19 may differ depending upon a number of conditions, such as the phase of the pandemic, transmission in the community, demographics, response capabilities, etc. ICG/IOTWMS Member States are therefore strongly encouraged to develop nationally coordinated guidelines based on this document to suit specific national circumstances and protocols, thus contributing to a common understanding of how to handle tsunami warnings and evacuations under COVID-19 pandemic conditions. Additionally, it is essential that the public in every country is properly sensitised to the resulting guidelines in advance of a tsunami event, so that they can act appropriately during a tsunami emergency.

Context

The current COVID-19 response has resulted in a shift of priorities, alterations in work processes and venues (home office), physical distancing, self-isolation and quarantine measures, as well as temporary lockdowns of entire communities. This may create ambiguity or confusion with regards to tsunami warning services and response actions like evacuation, under co-existing COVID-19 protocols.

In particular, it must be taken into account that the rapid-onset nature of tsunamis not only requires immediate action by official authorities to provide warnings and initiate evacuation processes, but may also require quick and autonomous decisions on the part of the population for self-evacuation in the case of near-field threats. This is of course also true in COVID-19 times and it is therefore necessary to ensure that the population is not prevented from taking life-saving action by possible official restrictions aimed at the containment of the virus. As has been shown tragically in the past, tsunamis can also claim thousands of lives.

Survey of national and local responses to COVID-19 in relation to tsunami early warning

- Developed by HUD and ITB through Working Group 1 Tsunami Risk, Community Awareness and Preparedness of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning & Mitigation System (ICG/IOTWMS) of the Intergovernmental Oceanographic Commission of UNESCO
- Issued by the Secretariat of IOTWMS and circulated to all 28 member states of the IOTWMS in early October '21, through their National Contact Points
- Aims of survey
 - Understand current national, regional and local responses to COVID-19
 - Understand the uptake of the IOTWMS Guidelines for Tsunami Warning Services, Evacuation, and Sheltering during COVID-19



EX1

Tsunami warning services, evacuation, and sheltering during COVID-19

Background and consent to proceed

Before commencing this survey exercise, please:

1. Read the background information provided below
2. Confirm your willingness to participate in this survey by clicking the checkbox

What is this survey about?

The current COVID-19 response has resulted in a shift of priorities, alterations in work patterns, processes and venues, the introduction of physical distancing, self-isolation and quarantine measures, as well as temporary lockdowns of entire communities. This may create ambiguity or confusion with regards to tsunami warning services and response actions like evacuation, under co-existing COVID-19 protocols.

This survey is being conducted to better understand current national, regional and local responses to COVID-19, which may differ depending upon a number of conditions, such as the phase of the pandemic, transmission in the community, demographics and response capabilities. The survey is also looking to understand the uptake of the Guidelines for Tsunami Warning Services, Evacuation, and Sheltering during COVID-19, which were issued by the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) in 2020. For these guidelines please click [here](#).

Who is conducting the survey?

This survey is being conducted by Working Group 1 Tsunami Risk, Community Awareness and Preparedness of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning & Mitigation System (ICG/IOTWMS) of the Intergovernmental Oceanographic Commission of UNESCO, in conjunction with the University of Huddersfield, UK and Institute of Technology Bandung, Indonesia.

Who should complete this survey?

Responses to this survey are encouraged from the designated National Tsunami Warning Centre (NTWC) and National Disaster Management Organisation (NDMO) of each Member State of the ICG/IOTWMS. We are also seeking to get an insight into local impacts and responses, so we are therefore seeking responses from Local Disaster Management Organisations (LDMOs) and any National or Local COVID Task Force organisations who may be involved in a country's tsunami early warning services and response, especially under co-existing COVID-19 protocols. Tsunami National Contacts (TNCs) are invited to coordinate national responses by sharing the survey link with responsible NTWC,

Who was invited to complete this survey?

- Responses to this survey were encouraged from the designated National Tsunami Warning Centre (NTWC) and National Disaster Management Organisation (NDMO)
- We were also seeking to get an insight into local impacts and responses, so responses from Local Disaster Management Organisations (LDMOs) and any National or Local COVID Task Force organisations who may be involved in a country's tsunami early warning services and response, especially under co-existing COVID-19 protocols

Survey structure

- 28 questions
- Respondent information
- Section 01: General questions on measures adapted to COVID-19 conditions (BEFORE A TSUNAMI EVENT)
- Section 02: Tsunami preparedness measures adapted to COVID-19 conditions (BEFORE A TSUNAMI EVENT)
- Section 03: Principles for tsunami warning and evacuation (BEFORE AND DURING A TSUNAMI EVENT)
- Section 04: Principles for sheltering (DURING A TSUNAMI EVENT)

Tsunami warning services, evacuation, and sheltering during COVID-19

Section 01: General questions on measures adapted to COVID-19 conditions (BEFORE A TSUNAMI EVENT)

The following are general questions for all NTWCs, DMOs and others involved in emergency response and planning:
(ALL TO COMPLETE)

4. To what extent has COVID-19 had an impact on your organisation's role in tsunami warning and evacuation response?

- A great deal
- A lot
- A moderate amount
- A little
- Not at all

5. Are you aware of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) Guidelines for Tsunami Warning Services, Evacuation, and Sheltering during COVID-19?

- Yes
- No

6. How useful are the ICG/IOTWMS Guidelines for Tsunami Warning Services, Evaluation and Sheltering during COVID-19?

- Extremely useful
- Very useful
- Somewhat useful
- Not so useful
- Not at all useful
- Not used
- Not aware of the guidelines

Responses

Disappointing response

- A minimum of one response from eleven countries
 - 15 NTWC (11 countries)
 - 5 NDMO (3 countries)
 - 4 LDMO (1 country)
- Some of the responses are not complete

Summary

- It is not possible to carry out meaningful analysis on such a low response rate / draw conclusions that would be representative
- Doubtful that reissuing the survey would work – timeliness of survey etc.

Survey on tsunami warning services, evacuation, and sheltering during COVID-19

Project Collaborators

University of Huddersfield, UK (Lead) – Prof. Richard Haigh & Prof. Dilanthi Amaratunga
Ministry of Health, Sri Lanka
University of Colombo, Sri Lanka
University of Peradeniya, Sri Lanka
University of Moratuwa, Sri Lanka
State Ministry of Urban Development, Sri Lanka
Federation of Local Government Authorities, Sri Lanka
Intergovernmental Oceanographic Commission (IOC) of UNESCO
ICG/IOTWMS/WG1
Chamber of Commerce, Sri Lanka
Bandung Institute of Technology, Indonesia
Asian Disaster Preparedness Centre (ADPC), Thailand

Survey Implementation

Disaster Management Centre, Government of Sri Lanka

Study funded by

University of Huddersfield, UK



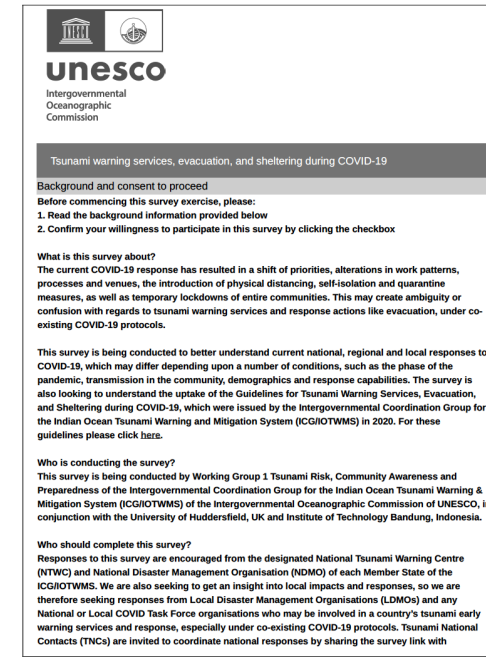
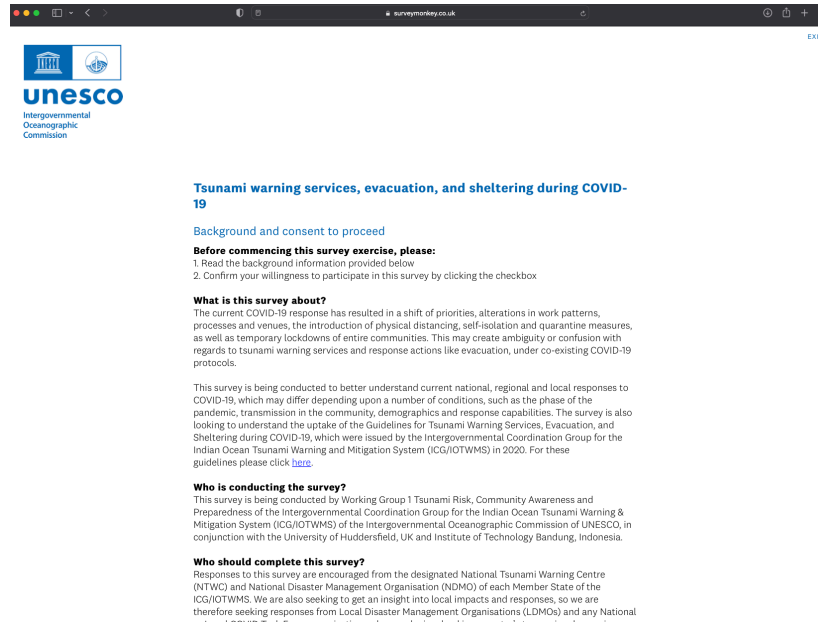
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- To get an insight into local impacts and responses from Local Disaster Management Organisations (LDMOs) and any National or Local COVID Task Force organisations who may be involved in a country's tsunami early warning services and response, especially under co-existing COVID-19 protocols
- To better understand local responses in tsunami warning services, evacuation, and sheltering to COVID-19 in Sri Lanka.
- To understand the uptake of the Guidelines for Tsunami Warning Services, Evacuation, and Sheltering during COVID-19, which were issued by the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS)

Targeted 14 coastal Districts:
Ampara; Batticaloa;
Colombo; Galle; Gampaha;
Hambantota; Jaffna;
Kalutara; Kilinochchi;
Mannar; Matara; Mullaitivu;
Puttalam; Trincomalee



Completed online or paper based

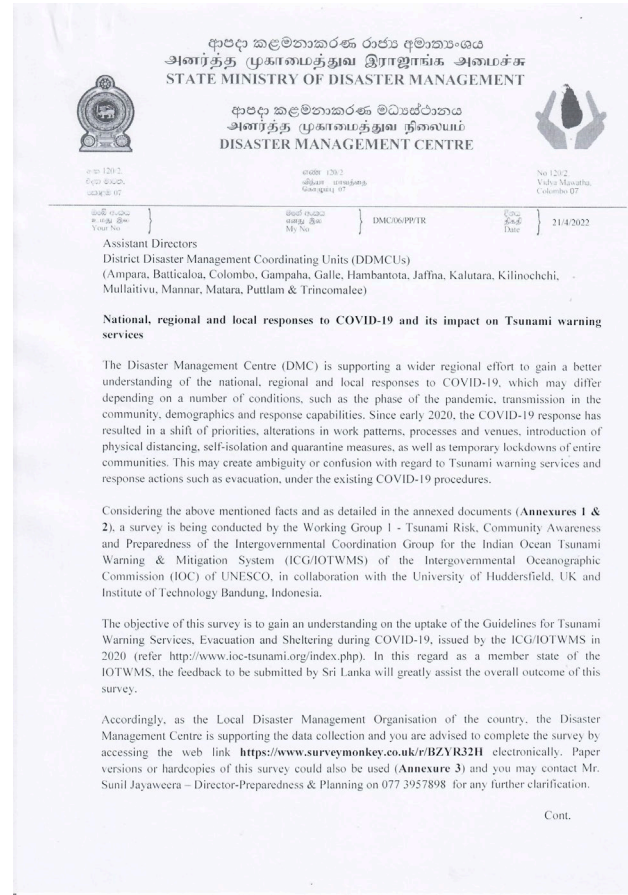


<https://www.surveymonkey.co.uk/r/BZYR32H>

Paper based copies to be returned to :
Mr Sunil Jayaweera, Director Preparedness ,
Disaster Management Centre,
State Ministry of Disaster Management,
Vidya Mawatha, Colombo 7.

Sub-national survey in Sri Lanka

- Excellent response rate
- Multiple responses from all 14 Coastal Districts, including Assistant Directors of DDMCUs and District Secretaries (Government Agent)
- After screening, twenty-seven responses were subject to analysis and are presented in this report
- A minimum of one response was obtained from each of the fourteen coastal Districts, while two or more responses were submitted by seven coastal Districts.
- Fourteen responses were from the Assistant Directors of the District Disaster Management Units. The remaining thirteen responses were from District Secretaries in seven of the fourteen Districts.



**Report on local responses in Sri Lanka
tsunami warning services, evacuation, and
sheltering during COVID-19**

Prepared by Global Disaster Resilience Centre, University of Huddersfield, UK
in collaboration with the Disaster Management Centre, Sri Lanka



- The results suggest that despite not experiencing a tsunami warning event during this period, Sri Lanka's District based Disaster Management units experienced a high level of impact on their role in tsunami warning and evacuation response.
- The results suggest that despite not experiencing a tsunami warning event during this period, Sri Lanka's District based Disaster Management units experienced a high level of impact on their role in tsunami warning and evacuation response.
- Standard operating procedures and contingency plans have been updated to address COVID-19 health protocols.
- However, the results do suggest that there were some variations in the changes enacted across Districts.



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- Tsunami assembly areas and shelters in many districts have been used for COVID-19 treatment
- Capacity reductions ranged from 40% to 75%. In such cases, alternative buildings / areas have usually been identified for use in case of a tsunami evacuation, including schools, hotels/guest houses and places of worship
- Multiple channels have been widely used to inform the public about any changes to tsunami shelter arrangements during COVID-19, especially public announcements, social media, and electronic media.
- Hospitals, clinics, and other health care facilities being used to treat COVID-19 patients in their Districts, were also located in a tsunami hazard zone
- A high-level awareness at the District level about both the added complications of a dual tsunami and pandemic threat to healthcare facilities, and also of the contingency plans put in place to address the associated risks.
- PPE has been provided to those people likely to be involved in managing and leading community evacuations and sheltering during a tsunami warning
- Guidelines were available to the public informing them of the COVID-19-related hygienic advice to be followed in case of a tsunami evacuation, including through the Disaster Management Centre or Ministry of Health



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- Specific guidance recommended in the ICG/IOTWMS Guidelines for Tsunami Warning Services, Evacuation, and Sheltering during COVID-19 has been issued to relevant authorities and evacuation staff involved in Sri Lanka's tsunami early warning
- Strong uptake of this guidance and a high level of awareness among respondents at the District level
- Guidance also provided by the Ministry of Health in a handbook issued for Managing Safety Centers During Covid-19
- High level of awareness among respondents of a 'track and trace system' in place to record information of people at shelters, and to subsequently manage any COVID-19 transmissions and clusters resulting from the sheltering



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Gaps and recommendations

- Plans should include the arrangements for pregnant mothers and children, COVID-19 patients, and elders, including transportation
- Additional measures / special consideration is required for night events or power failures
- The existing tsunami operational plan should be updated to specifically address a pandemic / multi-hazard situation



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In conjunction with representatives from the Disaster Management Centre, Sri Lanka, through this survey, several opportunities for improvement were identified

- There is a need to update the existing tsunami operational plans to reflect night-time scenarios and procedures to be adopted regarding preparedness, emergency response and evacuation. It will be important to carry out a night time tsunami drill / exercise to practice the effectiveness of the measures to be adopted during such challenging situations and amidst the backdrop of a pandemic
- Tsunami operational plans must be updated to reflect and address pandemics or multi hazard events
- It is important to address the needs of the most vulnerable communities, especially persons with disabilities (PWDs)
- In some districts, some of the signage in evacuation routes has got corroded and needs to be replaced
- There could be surges of new variants in the future or similar pandemics, it is sensible to consider these challenging backdrops/situations or multi hazards, when carrying out future tsunami drills / exercises / tabletop exercises etc.



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