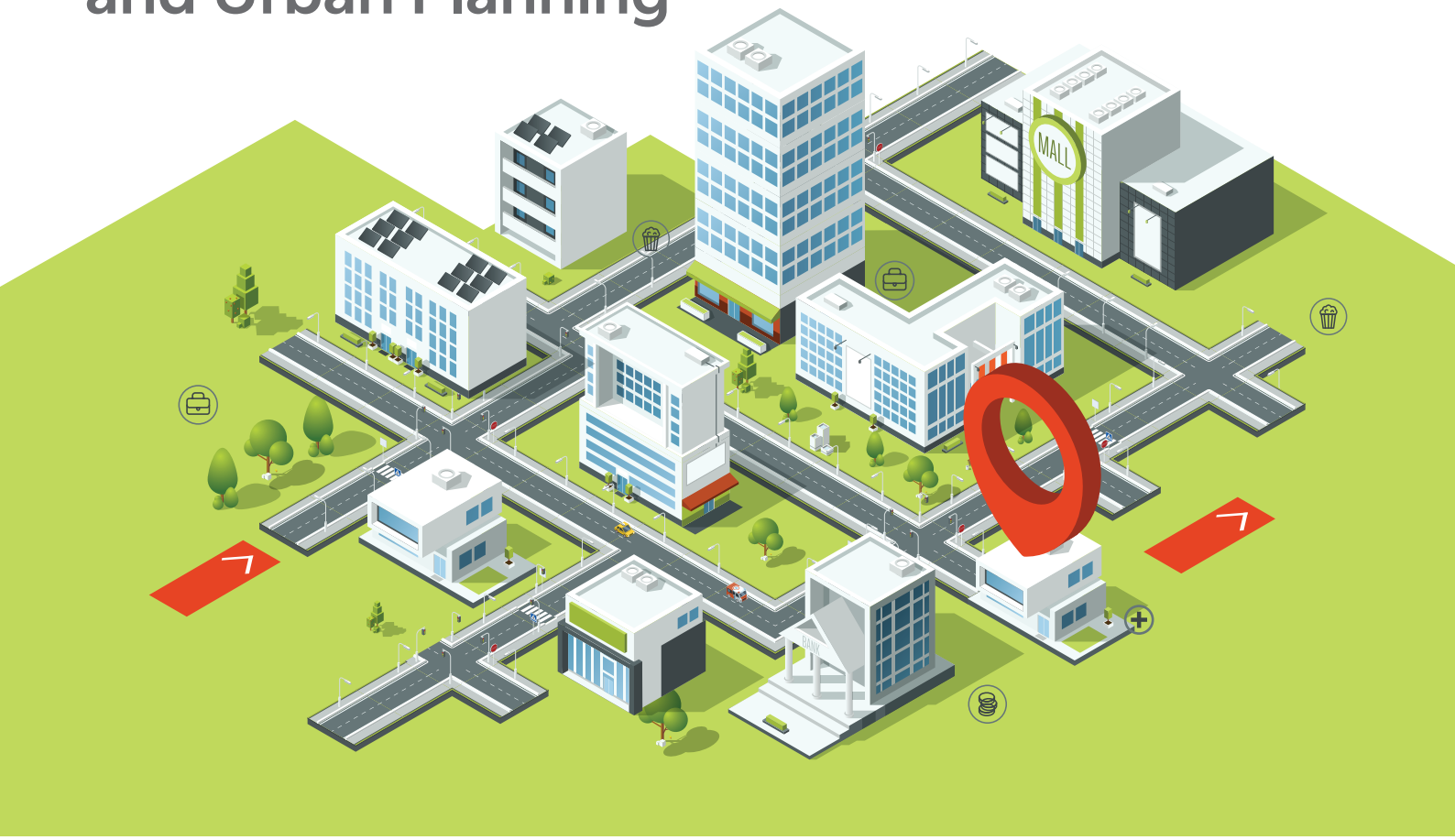
# Integrating Pandemic, Tsunami and Other Multi-Hazard Preparedness into Early Warning and Urban Planning




## What is the nature of the research problem?

The global spread of COVID-19 has overwhelmed health systems, but also caused widespread social and economic disruption. By putting societies and economies on hold, many countries have curtailed the ability of the virus to spread. These defensive measures have helped to limit the short-term impacts, but also resulted in a shift of priorities, alterations in work processes and venues, physical distancing, self-isolation and quarantine measures, as well as temporary lockdowns. These tend to disproportionately affect disadvantaged groups, including people in poverty and migrants, who most often live in overcrowded and under resourced settings, and depend on daily labour for subsistence.

These COVID-19 measures have also exposed gaps in many countries' disaster risk reduction strategies, which often fail to address pandemics despite them being an explicit goal of the Sendai Framework for Disaster Risk Reduction 2015-30 (SFDRR), the global agreement to reduce and prevent disaster risks. This type of threat does not respect administrative boundaries and exposes the interconnectedness of economic and social activity. What has been the disruption to different sectors of the economy? How can different sectors of the economy be better prepared for future pandemic threats? What are the implications for planning urban spaces? How can urban spaces be better developed to help society cope with the "new normal"? What are the implications of these changes for disaster risk reduction?

## How will the research problem be addressed?

This project will address two specific challenges: 1) the integration of COVID-19, pandemic and biological hazard preparedness as part of multi-hazard early warning; and, 2) mainstreaming tsunami, biological and multi-hazard preparedness into urban planning for coastal regions.

We will address these challenges through the following four objectives:

1. Understand the current status and best practices of COVID / biological hazard preparedness as part of tsunami and multi-hazard early warning in coastal areas of the Indian Ocean region.
2. Explore ways to mainstream tsunami, biological and multi-hazard preparedness into urban planning for tsunami prone areas.
3. Examine the economic impacts of COVID-19 across different parts of the economy and explore ways to enhance economic preparedness and mitigate impacts.
4. Develop a vision on disaster risk reduction in future urban spaces.

## What are the planned outputs and outcomes?

This project will target the nineteen of twenty-eight Indian Ocean countries that are part of the IOC UNESCO IOTWMS (Indian Ocean Tsunami Warning and Mitigation System) and are categorised as Least Developed (8), Lower Middle (5) or Upper Middle Income (6) countries on the Development Assistance Committee list. Several outputs will also specifically target national and local actors in Sri Lanka and Indonesia. Collectively, the project will provide insights into how the current COVID-19 pandemic has challenged emergency arrangements within Indian Ocean countries, but also explore some of the challenges and opportunities for how countries must evolve and adapt to the 'new normal'. Key outputs include:

- A capacity survey of the current status and best practices of COVID / biological hazard preparedness as part of tsunami and multi-hazard early warning in coastal areas of the Indian Ocean region
- A report of national and local practices for preparedness planning associated with integrated, systemic risks (natural and biological hazards) and actions during the COVID-19 pandemic
- Regional guidelines on how to mainstream tsunami, biological and multi-hazard preparedness into urban planning for tsunami prone areas, to be published through Working Group 1 of the IOC UNESCO IOTWMS, providing reach to all member states in the Indian Ocean region
- A policy brief that will inform a planned government White Paper by the State Ministry of Urban Development, Sri Lanka on mainstreaming disaster risk reduction in costal urban cities
- A position paper on economic preparedness in Sri Lanka, published jointly with the Chamber of Commerce, Sri Lanka
- A vision paper will explore the preferred future and benefits of the future for disaster risk in urban spaces, but also show the dependencies between different factors that shape the future, to be published jointly with the State Ministry of Urban Development in Sri Lanka
- Contributions to theory will be published through four jointly authored journal papers

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adpc
The Asian Disaster Preparedness Centre, Thailand

Green Building Council of Sri Lanka

UNESCO United Nations Educational, Scientific and Cultural Organization
Intergovernmental Oceanographic Commission
Intergovernmental Oceanographic Commission of UNESCO IOTWMS (Indian Ocean Tsunami Early Warning and Mitigation system)

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