



IOWave16

INDIAN OCEAN TSUNAMI WAVE EXERCISE 2016

Countries being put in
tsunami warning situation



Two scenarios: Sumatra
and Makran Trench



Building momentum for World
Tsunami Awareness Day



24 COUNTRIES PARTICIPATED AND 60,000 PEOPLE EVACUATED

The Indian Ocean Tsunami Wave Exercise (IOWave16) placed Indian Ocean Member States in a tsunami warning and emergency situation. The National Tsunami Warning Centres (NTWCs) and the National and/or Local Disaster Management Offices (NDMOs/LDMOs) were required to test their Standard Operating Procedures, communications links at all levels of the warning and response chain, and their dissemination of the warning and advice to the communities that subsequently conducted evacuation drills.

INDIAN OCEAN WAVE EXERCISES

Under the guidance of the Intergovernmental Coordination Group for Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) of the Intergovernmental Oceanographic Commission of UNESCO (UNESCO-IOC), the Member States collaborated in the development of the tsunami early warning and mitigation system, which was initially tested through the Indian Ocean-wide tsunami warning and response exercise IOWave09 (October 2009). The system then came into operation immediately following the subsequent IOWave11 (October 2011) exercise and was exercised again in IOWave14 (September 2014). Since 2011, the three Tsunami Service Providers (TSPs) of Australia, India and Indonesia have provided real-time tsunami products to the National Tsunami Warning Centres (NTWCs) of the IOTWMS Member States. The latest Indian Ocean-wide tsunami exercise (IOWave16) was conducted on 7 and 8 September 2016. A post-IOWave16 regional workshop was held on 5-8 December in Bandung, Indonesia to discuss best practices and important lessons.

New in IOWave16

IOWave16 marked the transition from what primarily used to be an “upstream technical exercise” among tsunami early warning generation agencies, into a more comprehensive end-to-end exercise that extended also “down-stream” to the dissemination of early warning, decision making by national and local authorities and other stakeholders, and community evacuations in 12 countries.



IOWave exercises key to tsunami survival

Tsunamis are infrequent, but when a tsunami strikes, it can be extremely deadly. Therefore, IOWave as regular exercise is essential to foster awareness and to test end-to-end warning scenarios where relevant agencies, community organizations and citizens groups work together to prepare for the evacuation after a tsunami warning is issued. Communities' awareness and their readiness to act quickly and appropriately is hereby substantially enhanced.

End-to-end tsunami early warning system

It is a connected system of seismic and sea-level networks, regional tsunami service providers, national tsunami warning centres, disaster management offices and finally the vulnerable communities all connected using an effective communication chain. It begins with the rapid detection of a tsunami wave and ends with communities' appropriate and timely response to a warning.

IOWave16 HIGHLIGHTS

Partnerships with other stakeholders



Timor-Leste Red Cross in IOWave16

In Iran, Timor-Leste, and Kenya, local NGOs and the Red Cross facilitated the community evacuations. The media and private sector were involved in disseminating early warning and raising the awareness of the local communities. UNISDR facilitated participation of independent observers in India and Seychelles during IOWave16.

Participation of children and schools

Education has proven to save children's lives and others. In Oman, schools from 4 provinces evacuated to their schools' rooftops as safe havens, while in Comoros school children participated at the beach. In Indonesia, hundreds of school children joined the evacuation to the multistorey evacuation shelters.



Students evacuating to a roof in Oman

Working with local governments to save lives

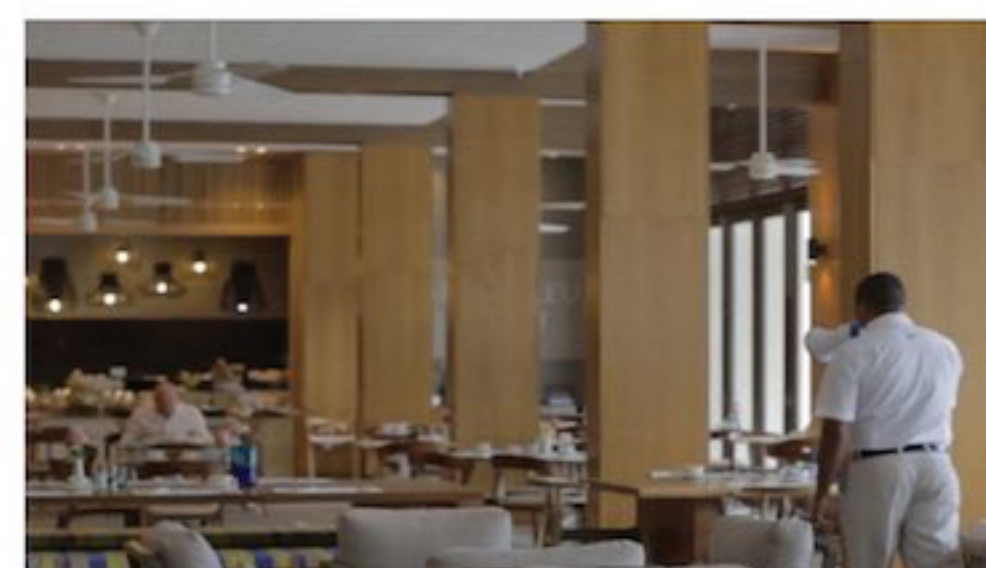


Local government officials in Pandeglang, Indonesia: military, police and health sectors

In Indonesia, the BMKG (Meteorological, Climatological, and Geophysical Agency) as the NTWC coordinated closely with the BNPB and BPBD (the National and Local Disaster Management Authority) to mobilise 4,800 people in ground evacuation simulation. In India, state and provincial governments worked closely with the Indian National Centre for Ocean Information Services (INCOIS) to simulate an evacuation of over 40,000 people.

Engaging the tourism industry

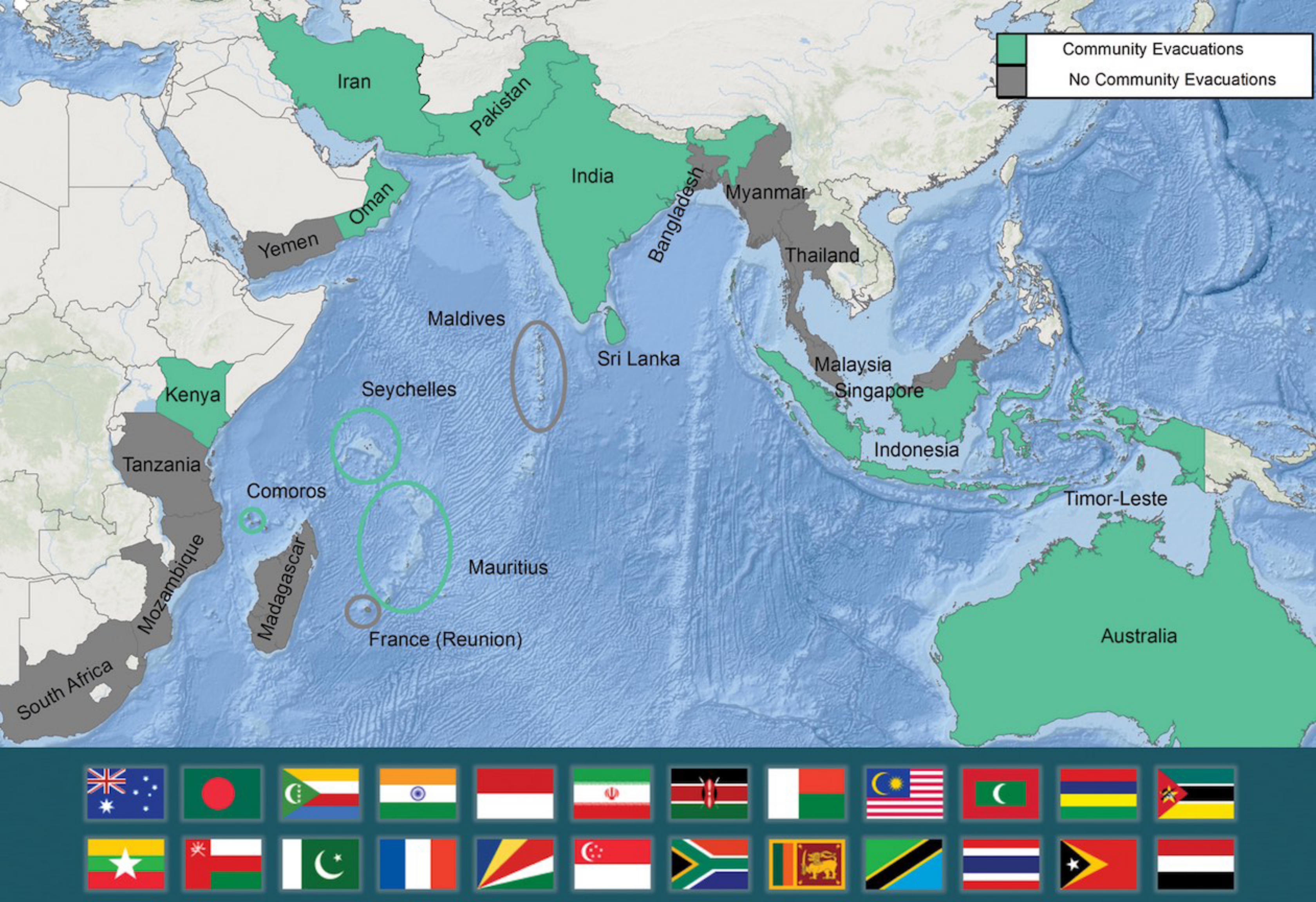
In Mauritius, 25 hotels participated in the exercise and in Iran, tourists at the beach took part in the exercise after they heard the warning from sirens and speakers. The tourism industry, being an important economic pillar in many Indian Ocean countries, plays a role in promoting tsunami awareness and preparedness.



Simulation in one of the hotels in Seychelles

Reaching the most at-risk

In Seychelles, 133 elderly residents and 40 mentally ill patients were involved in IOWave16. This demonstrated that children, pregnant women, elderly people, and people with disabilities who are more at-risk, require specific measures in tsunami simulation exercises.



UNESCO-IOC Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS)

The Intergovernmental Oceanographic Commission of UNESCO (UNESCO-IOC) has been coordinating the establishment of Tsunami Warning and Mitigation Systems in all the ocean basins through the intergovernmental coordination groups in the Caribbean, Indian, North East Atlantic and Mediterranean and Pacific Ocean basins. Following the devastating 2004 Indian Ocean Tsunami, UNESCO-IOC established the ICG/IOTWMS to put in place an effective warning system and to coordinate mitigation efforts among the 28 Indian Ocean Member States. In the recent years, there has been renewed focus on enhancing community awareness and response mechanisms by regular conduct of ocean-wide tsunami drills. Indian Ocean Wave Exercise is a two-yearly exercise of the UNESCO-IOC ICG/IOTWMS. Learn more on www.ioc-tsunami.org

UNESCO-IOC Indian Ocean Tsunami Information Centre (IOTIC)

IOTIC is an UNESCO-IOC entity hosted at UNESCO Jakarta Office. It serves as an information resource to support the Indian Ocean Member States in capacity building, education, and awareness and preparedness initiatives. IOTIC collates reports, media coverage, photographs, videos and other publicity material on in-country participation in IOWave exercises and makes these publicly available via their website. Learn more on iotic.ioc-unesco.org

United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

As United Nations' regional development arm whose mandate is to foster cooperation between its 53 members and 9 associate members, ESCAP provides an intergovernmental platform that sets regional norms and standards and provides capacity development. Member States established the ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness to help building resilience through strengthened end-to-end, multi-hazard early warning systems. It has supported some 30 projects with a total budget of over US\$ 13 million. With the generous support of Japan, ESCAP supported IOWave16 with strategic communication, provision of a regional tsunami platform, and facilitated consolidation of the learning to improve subsequent IOWave exercises and to link with regional policy development. Learn more on www.unescap.org and on the regional tsunami platform at www.drrgateway.net/tsunami-platform



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