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PRESS RELEASE

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Five years after the Indian Ocean Tsunami – are we better prepared and more resilient to disasters?

Geneva - On December 26, 2004, a massive tsunami reared up in the Indian Ocean and spread towards millions of people on the surrounding coasts. For those nearby, in Aceh, Indonesia, the Thai coastal resorts, and the island communities, there was little warning. With no knowledge or preparedness, people faced a terrifying situation as they tried to escape the growing wall of turbulent water, forcing its way across beaches, harbours, and towns. The earthquake that caused the tsunami was a warning to those who felt it, but only a few people recognized this. Across the ocean, in Sri Lanka and India, towns and villages went about their business on a busy sunny morning, unaware that a wave was racing across the sea at the speed of a jet plane and would strike them in a few hours. With little awareness and no warning system, who was to know what was coming?

As news of this unprecedented disaster unfolded, it became clear that many tens of thousands of people had died, and that whole communities had vanished, replaced in minutes by seawater, mud and debris. Over the following days and weeks, the full horror was revealed - 230,000 people dead, and an economic loss estimated at more than 10 billion US dollars. For the developing countries concerned, it was a devastating blow.

The tsunami was the result of a very large undersea earthquake, where the Earth's crust had split like a zipper along an extensive fault line, starting near Sumatra and reaching a thousand kilometres northward into the Bay of Bengal. With some shock, the public learned that geologists and seismologists were well aware of the fault and had warned that massive forces built up over hundreds of years could unleash earthquakes and tsunamis at any time. Some scientists had argued for an Indian Ocean tsunami warning system, mirrored on the long-established Pacific Ocean tsunami warning system, but to no avail.

Five years later, Margareta Wahlström, Special Representative of the UN Secretary-General for Disaster Risk Reduction says there is better news to report. "The affected countries and communities have largely recovered, and warning systems are now in place, not just for tsunamis, which are relatively rare, but also linked to those for tropical cyclones, storms, and floods."

“Awareness of disaster risks and how to reduce them is now much higher, in part because of the Hyogo Framework for Action.” This international agreement on how to reduce disaster losses was put in place at the World Conference of Disaster Reduction in Kobe, Japan, January 2005, immediately after the tsunami.

“The Indian Ocean Tsunami itself provided a loud and clear warning, to governments and the public, to become more proactive in grappling with natural risks, and to make our nations and communities more resilient,” said Ms Wahlström. “It has sharpened the commitment to putting the Hyogo Framework into action and to reducing the escalating losses from disasters. Indirectly, it will also help us adapt to the increases in extreme events from climate change.”

The Indian Ocean Tsunami Warning System has been a major achievement for the countries concerned and the United Nations. A multi-partner, multi-donor USD 11M project to support the development of the regional warning system was led by the United Nations International Strategy for Disaster Reduction in partnership with UNESCO's Intergovernmental Oceanographic Commission. The Intergovernmental Oceanographic Commission has overseen the development and operation of the Pacific Tsunami Warning System for several decades and this experience was instrumental in coordinating the necessary intergovernmental processes and technical support that the Indian Ocean countries needed.

Other regions at risk to tsunamis have also paid attention to the Indian Ocean experience. As a result, the Intergovernmental Oceanographic Commission is now coordinating work on new warning systems for the Caribbean and the Northeast Atlantic and Mediterranean Sea (see figure below.) Initiatives to upgrade national capacities for warning and response are also underway in Pacific Ocean countries.

As a result of the international consortium approach, which is in line with the Hyogo Framework, considerable progress has been made on the technical aspects of the early warning systems. However, less has been achieved on necessary mitigation measures such as rebuilding in safe locations, putting building codes into practice, and establishing evacuation routes. Without these, the impacts and losses for coastal populations and structures from another tsunami or severe storm still could be very high. Also, warning systems need to take a more people-centred “end-to-end” approach in order to systematically reach the people who are most at risk.

A stocktaking of efforts in the Indian Ocean region since the tsunami struck in 2004, in terms of addressing the following five Priorities for Action of the Hyogo Framework shows mixed progress.

Disaster risk reduction as a political priority: Nearly all coastal countries are actively participating in the regional tsunami warning system’s Intergovernmental Coordination Group. There is wide acceptance that the warning systems must be basin-wide, covering tsunami and other ocean related hazards, and should be “end-to-end” systems. Many countries have already modified their legal framework to allow for dedicated preparedness of communities and swift warning and response by local authorities and institutions. In Indonesia for example, a National Platform for

disaster risk reduction with representatives from all sections of society has been set up, while in the Maldives, a national plan on disaster risk reduction has been put in place.

Risk assessment and early warning systems: The impacts of a tsunami are heavily dependent on the shape of the coastline. Detailed studies of the different coastlines have now started by some countries, to assess the risks in different areas. This involves inundation modelling studies and the development of vulnerability maps and evacuation routes, but in most countries this work is hampered by the lack of high resolution data on ocean bathymetry (depth to sea floor) and land topography. The new Indian Ocean tsunami warning system is now well established, and has three operational Regional Tsunami Watch Centres (India, Indonesia and Australia) that provide services to the neighbouring countries in Asia and Africa.

Education and public awareness: Most of the member states of the warning system have conducted test-case training courses for teachers and communities on natural hazards, covering both tsunamis and tropical cyclones, and on disaster risk reduction. Indonesia has already adapted its school curricula while other countries are starting to translate educational material into local languages. Media organisations have been involved. For example the Asian Broadcasting Union collaborated with the United Nations to run workshops on disaster risk for journalists.

Mitigation and building codes: This area has seen the least progress, owing to the longer timeframe needed for long-term planning and the economic implications. Countermeasures in coastal zone management, such as tsunami proof construction of coastal infrastructure and/or removal to higher grounds, have been taken in very few cases – for example by constructing tall structures that enable vertical evacuation. Most rebuilt tourist hotels and other buildings remain in the same locations close to the shoreline and have not benefited from tsunami-defensive features. On a positive note, the re-planting of mangroves as a buffer zone between the sea and human dwellings has commenced in several coastal areas.

Preparedness for response: Countries in the region are collaborating to develop Standard Operating Procedures to facilitate swift warnings and response right through to the community level, and to ensure smooth operation and coordination between the warning centres and national civil protection structures, and with other organizations. However, some countries have not started looking into this issue. Another challenge, not well addressed, is to find ways to bring together the stakeholder groups, from politicians, disaster managers, warning centre personnel, media and local communities, all of whom need to be involved in preparing for timely and proper response to imminent hazard threats and disasters.

According to Ms Wahlström, “The Indian Ocean tsunami was a big wake-up call, and as a result we have seen some good progress to better address disaster risks of all types and to develop multi-hazard warning systems. The Hyogo Framework has proven to be a valuable guide and an essential tool to check on how we are doing. All this work will pay off in future – especially as climate change will generate more and more extreme hazard events.”

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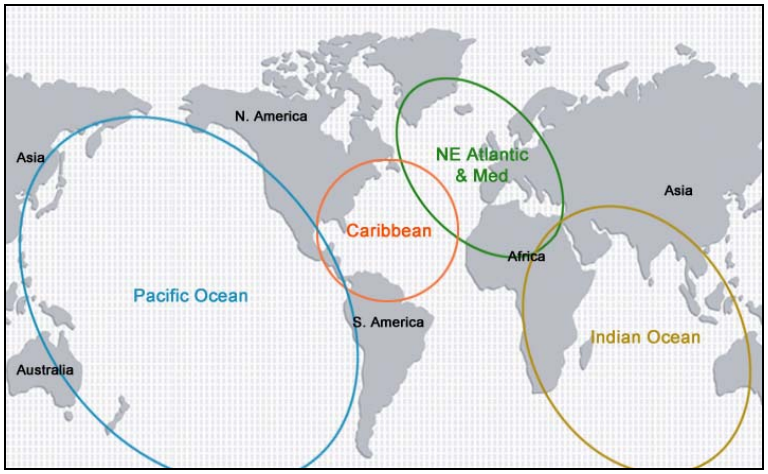

Figure1: Regions covered by the four Tsunami Warning Systems (from www.ioc-tsunami.org)

As part of the three new warning systems under development, regional tsunami watch centres are currently being tested to develop their capability to provide tsunami watch services to countries at risk to tsunami and storm surge.