IOC TS-143: Capacity Assessment of Tsunami Preparedness in the Indian Ocean:
Status Report, 2018

Harkunti P. Rahayu, Chair TT-CATP

Capacity Assessment of Tsunami Preparedness in the Indian Ocean:

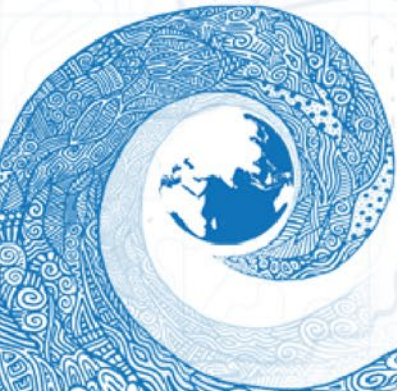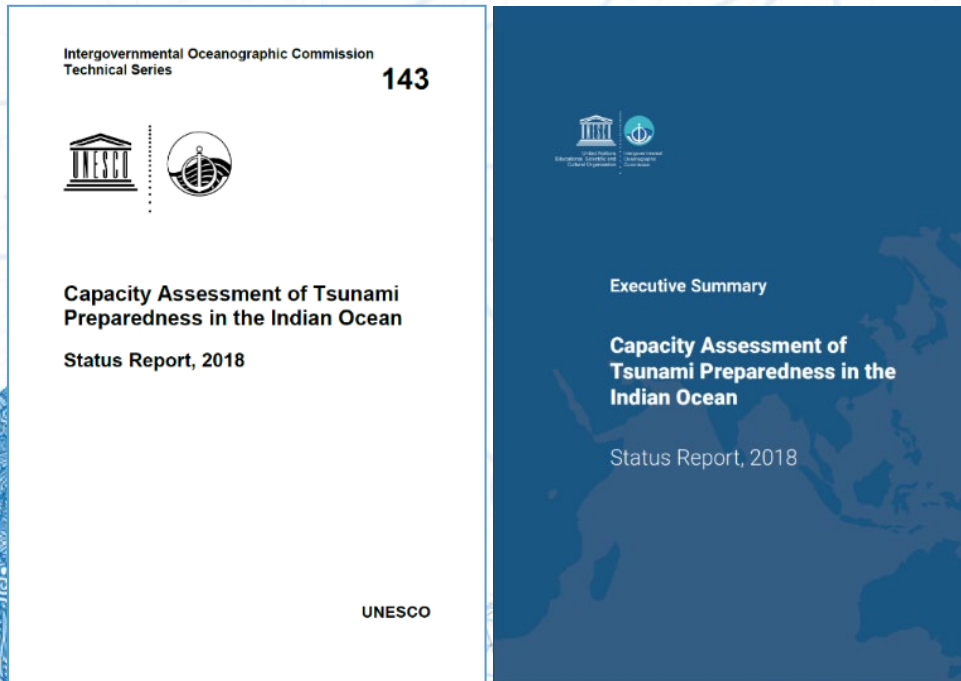Status Report, 2018 & Executive Summary

Intergovernmental Oceanographic Commission
Technical Series 143

Capacity Assessment of Tsunami Preparedness in the Indian Ocean

Status Report, 2018

UNESCO

Executive Summary

Capacity Assessment of Tsunami Preparedness in the Indian Ocean
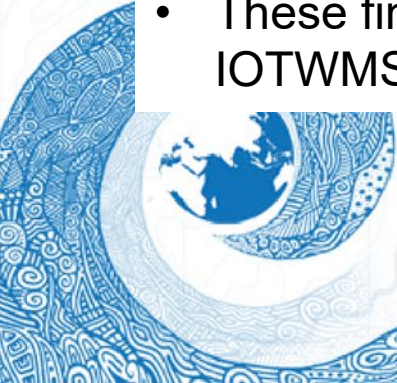
Status Report, 2018

The Status Report is a follow-up to the 2005 Assessment of Capacity Building Requirements for an Effective and Durable Tsunami Warning and Mitigation System in the Indian Ocean.

The full report is complimented by an Executive summary.

The documents are available on the meeting website.

BACKGROUND

- In the aftermath of the 2004 Indian Ocean tsunami, IOC facilitated missions to assess the state of tsunami readiness in 16 affected countries.

- The findings were published in the 2005 Assessment of Capacity Building Requirements for an Effective and Durable Tsunami Warning and Mitigation System in the Indian Ocean (IOC/INF-1219)

- These findings provided critical inputs to the design and development of the IOTWMS.

METHODOLOGY

- 12 years later, the ICG/IOTWMS at its 11 session (Putrajaya, Malaysia, 2017) decided to establish a Task Team to design and conduct an extensive online survey covering all aspects of the end-to-end tsunami warning and mitigation system.

- The online survey forms the dataset for the 2018 Status Report on Capacity Assessment of Tsunami Preparedness in the Indian Ocean.

- 20 Indian Ocean countries have provided input to the Capacity Assessment

2005 & 2018 CAPACITY ASSESSMENTS

20 Countries provided inputs to the 2018 assessment with 14 of these also providing inputs to the 2005 assessment.

COMPARATIVE LISTS OF COUNTRIES SURVEYED IN THE 2005 AND 2018 ASSESSMENTS
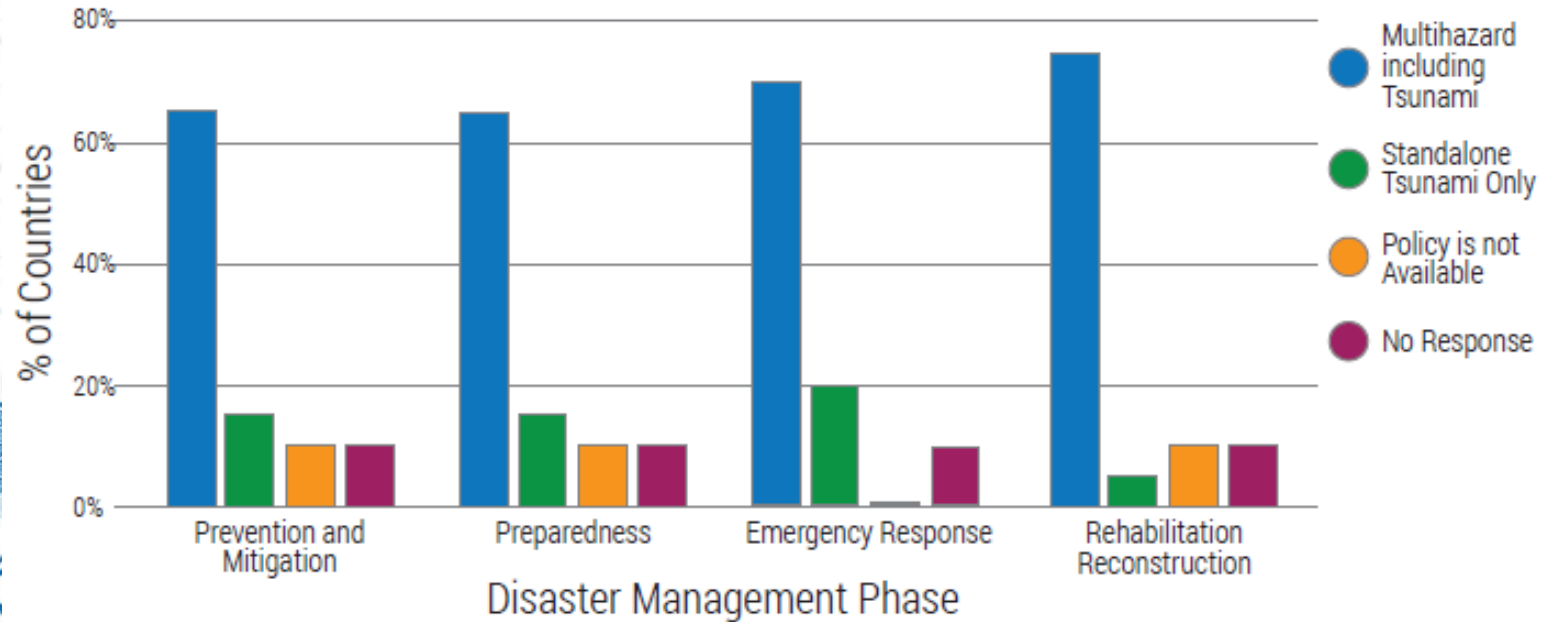*(by alphabetical order)*

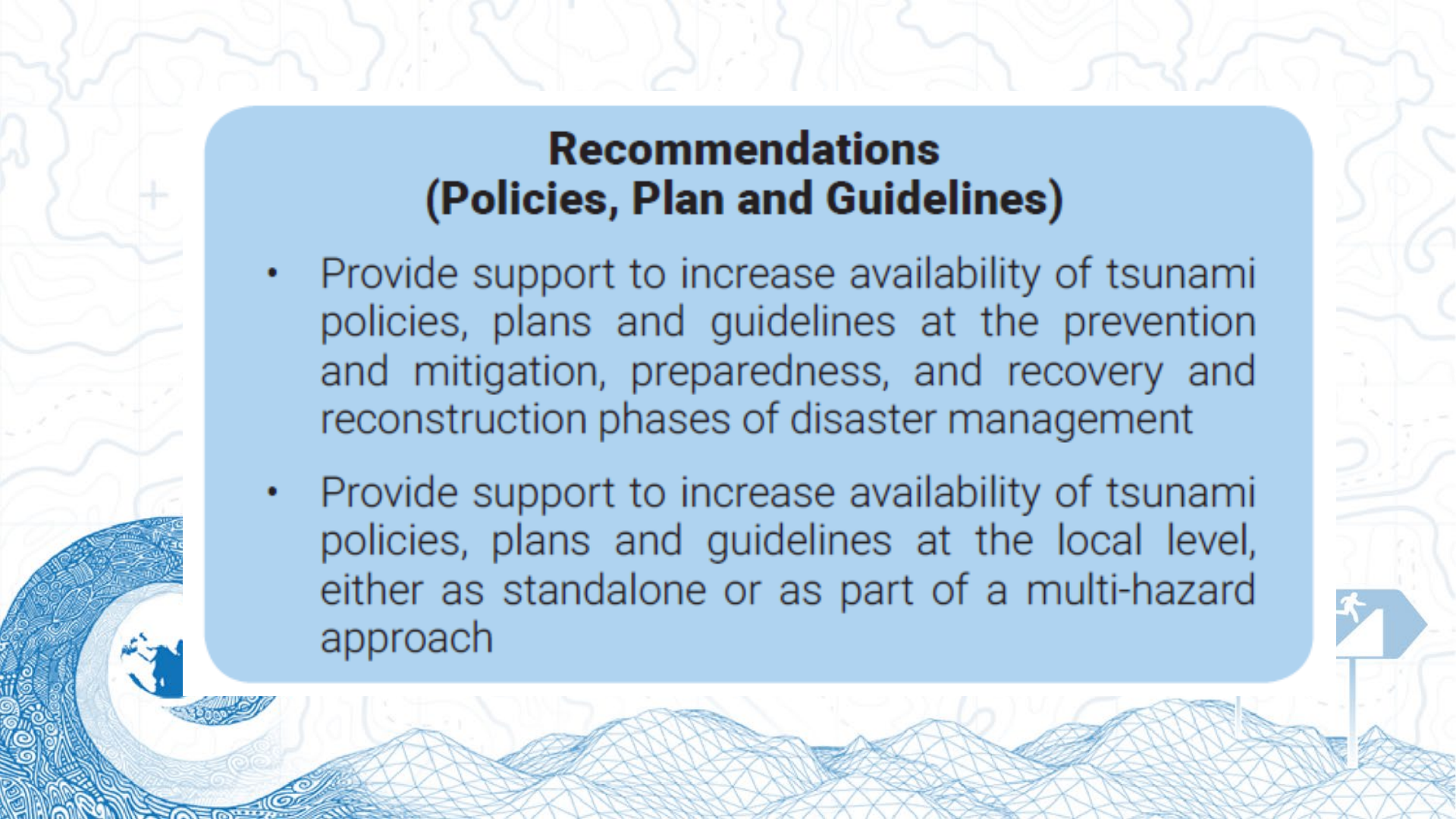| 2005 Assessment of Capacity Building Requirements for an Effective and Durable Tsunami Warning and Mitigation System in the Indian Ocean (IOC/INF-1219) – Consolidated Report for Countries Affected by the 26 December 2004 Tsunami	2018 Capacity Assessment of Tsunami Preparedness in the Indian Ocean –Status Report (IOC Technical Series, 143)
	Australia
Bangladesh	Bangladesh
Comoros	Comoros
	Overseas France (Indian Ocean)
	India
Indonesia	Indonesia
	Iran (Islamic Republic of)
Kenya	Kenya
Madagascar	Madagascar
Malaysia	Malaysia
Mauritius	Mauritius
Mozambique	Mozambique
Myanmar	Myanmar
Oman	Oman
Pakistan	Pakistan
Seychelles	
	Singapore
Somalia	
	South Africa[10]
Sri Lanka	Sri Lanka
Tanzania	Tanzania
Thailand	Thailand
	Timor-Leste

2018 CAPACITY ASSESSMENT REPORT

- The 2018 assessment provides a new baseline of the status of tsunami preparedness capacity in the region covering 3 pillars: Information on Hazard/Risk Assessment, Information on Detection, Warning and Dissemination, and Information on Awareness & Response

- The online survey include five sections: 1) basic information; 2) policies, plans and guidelines; 3) risk assessment and reduction; 4) detection, warning and dissemination; and 5) public awareness, preparedness and response.

- The results indicate that there has been considerable improvement across all components of the IOTWMS since 2005

- It also identifies specific gaps and prioritises capacity development requirements at both regional and national levels

Availability of *national tsunami policies* for different phases of the disaster management cycle
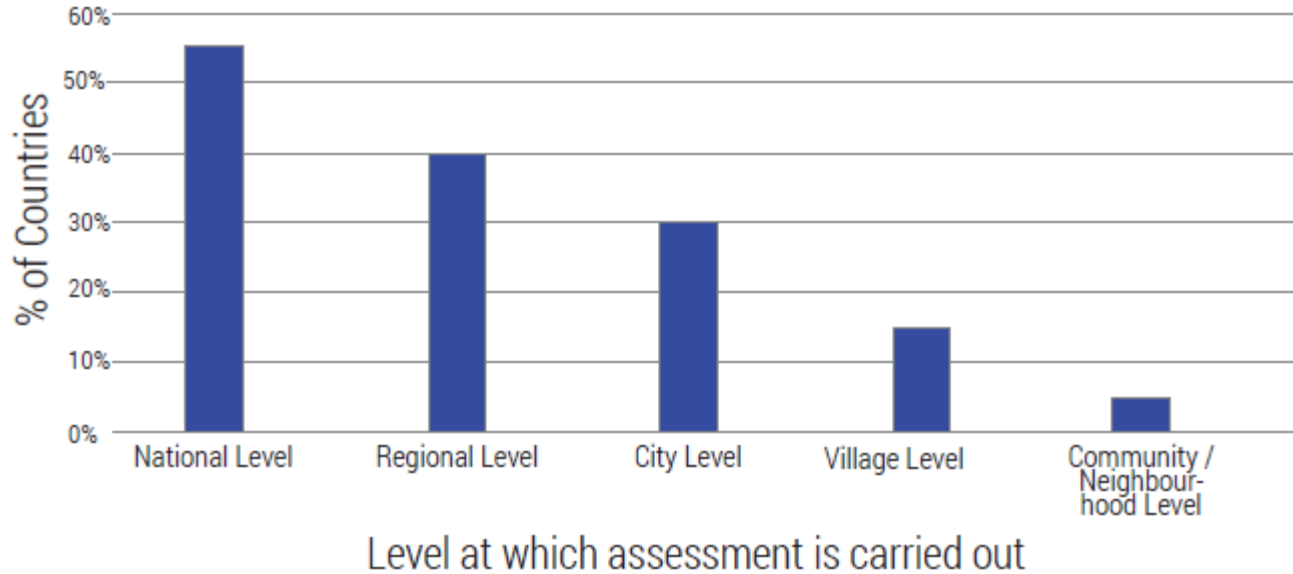
Recommendations
(Policies, Plan and Guidelines)

- Provide support to increase availability of tsunami policies, plans and guidelines at the prevention and mitigation, preparedness, and recovery and reconstruction phases of disaster management

- Provide support to increase availability of tsunami policies, plans and guidelines at the local level, either as standalone or as part of a multi-hazard approach
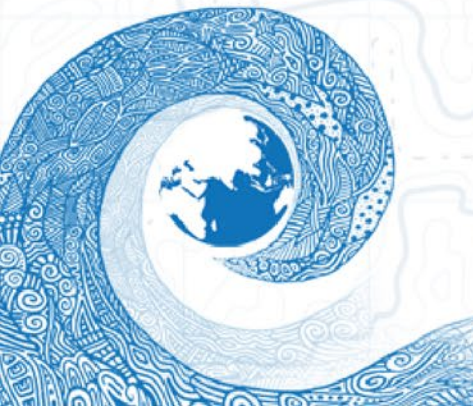
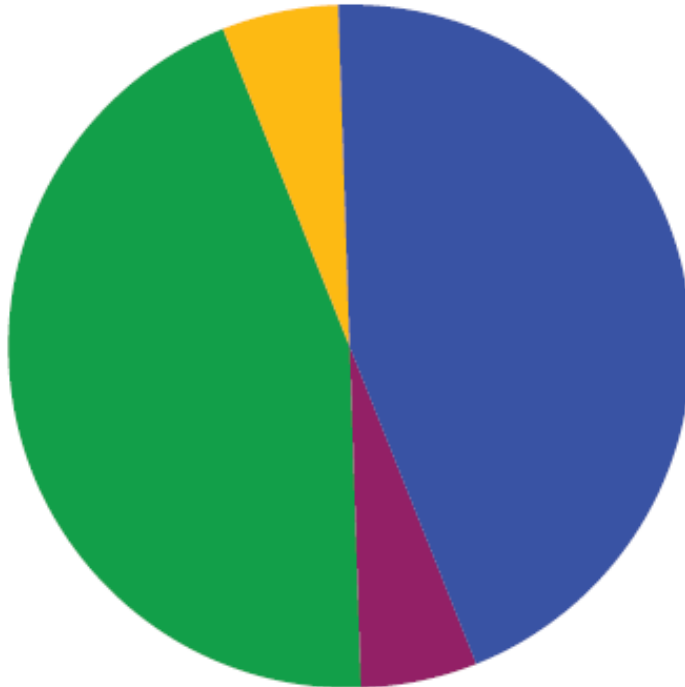# Percentage of countries that have carried out *tsunami risk assessments* at different levels

Recommendations
(Risk Assessment and Reduction)

- Increase engagement of other national, regional or international actors in the carrying out of tsunami hazard and risk assessments

- Increase the availability of publicly accessible data for tsunami hazard and risk assessments

- Increase the capacity for tsunami hazard assessment, especially in the areas of evacuation mapping, hazard mapping and inundation mapping

- Capitalise on the existing capacity in Member States for delivering training on hazard mapping and inundation mapping

- Increase the capacity for city, village and community level tsunami risk assessments

- Increase the capacity for developing products from tsunami risk assessments, such as risk maps, evacuation maps, guidelines and action plans

Data used by National Tsunami Warning Centres for *determining national tsunami threat*

% of Countries

- Use TSP data only
- Use TSP data and own threat assessment data
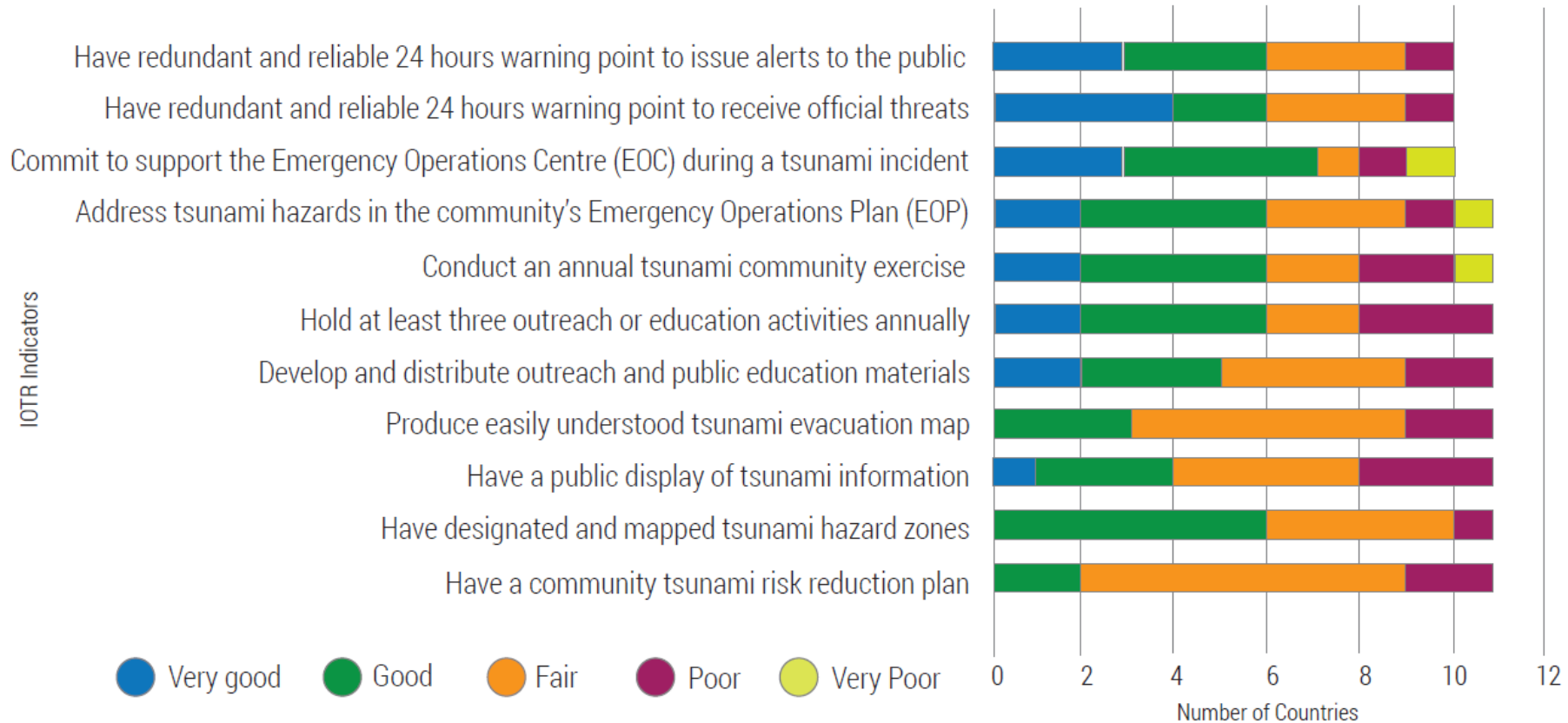- Use own threat assessment data only
- No response

Recommendations
(Detection, Warning and Dissemination)

- Provide support to increase the capacity for analysing real-time seismic and sea-level data for tsunami threat

- Provide support to increase the capacity for tsunami modelling to support generation of threat forecasts

- Undertake a further study to examine whether there is a need for so many different software tools to be used to analyse data for tsunami threat or tsunami modelling

- Increase the frequency of tabletop or similar tsunami warning exercises to review and test SOPs, and reduce the potential for complacency among countries that have not experienced a recent tsunami event

Status of *Tsunami Ready Indicators*

Recommendations
(Awareness, Preparedness and Response)

- Provide support for countries to improve their SOPs at the interface between upstream and downstream, including the operation of a 24/7 emergency operation centre, receiving information from the NTWC, and response criteria and decision-making, as well as the associated human resources and infrastructure.

- Provide support for countries to improve their SOPs to address warning dissemination, communication with the NTWC, communication with other stakeholders, evacuation call procedures, communication with local government and media arrangements, as well as the associated human resources and infrastructure.

- Provide support for the development of community level evacuation SOPs.

- Capitalise on the willingness of countries to share their SOPs to share good practices across Member States.

- Provide training and share Member States' experience of different types of evacuation infrastructure.

- Provide support to incorporate tsunami exercises into cities, villages, communities and schools.

- Provide training and share Member States' experience of different public engagement materials.

- Develop educational materials such as teaching kits, and encourage the incorporation of tsunami awareness into the school curricula.

- Raise awareness of the Global Disaster Risk Reduction Day (13 October) and World Tsunami Awareness Day (5 November).

Follow-up Activity (Dec 2020)

- **WG1** has endorsed the recommendations of the Capacity Assessment of Tsunami Preparedness [Status Report 2018] related to a) risk assessment and reduction and b) awareness, preparedness and response for consideration in the *WG-1 work plan*.

- **WG2** has endorsed the recommendations of the Capacity Assessment of Tsunami Preparedness [Status Report 2018] related to detection warning and dissemination for consideration in the *WG-2 work plan*.

- ***Action:*** Working Groups to prioritise future *Capacity Development requirements* of IOTWMS Member States based on results of the TT-CATP survey

Thank you.

Harkunti P. Rahayu, Chair TT-CATP

Acknowledgements:

ICG/IOTWMS Task Team on Capacity Assessment of Tsunami Preparedness
ICG/IOTWMS Secretariat