

**CONCEPT NOTE**

# FIRST REGIONAL WORKSHOP ON TSUNAMI INUNDATION MAPPING

***UNESCAP TTF-31 Project:***

***“Strengthening Tsunami Early Warning in the North-West Indian Ocean through Regional Cooperation”***

# 7 September 2022

**BACKGROUND**

Tsunami inundation mapping has been identified as one of the priority topics to be addressed in the five partner countries in the North-West Indian Ocean (NWIO) region in order to improve inundation mapping and evacuation planning in support of tsunami preparedness.

The TTF-31 Project will support finalisation of a Probabilistic Tsunami Hazard Assessment (PTHA model (V1.0)), including an exchange of experts to be trained in its architecture and use. There will also be a Scientific Exchange Meeting to share the PTHA results with the region for adoption, as well as report on the latest regional/international studies on the tsunami hazard in the Makran subduction zone. The project will also support the establishment of a NWIO Regional Working Group on Tsunami Inundation Modelling and Mapping (RWG-TIMM), with input from international experts, to foster ongoing regional cooperation and exchange of knowledge on inundation modelling and mapping. A gap analysis of tsunami inundation modelling and mapping capabilities in the region will be undertaken. The regional working group will aim to develop a unified methodology for tsunami inundation modeling in order to assure inter-comparable results throughout the region.

The project will provide information on existing approaches, methodologies and input data for tsunami inundation modelling and mapping. To facilitate joint learning and national implementation, the project suggests the establishment of national working groups on tsunami inundation modelling and mapping to facilitate and inform a gap analysis by the project in each of the five countries participating in the project (India, Iran and Pakistan with funding from the project; Oman and United Arab Emirates (UAE) through self-funding). The project will later use this information to provide recommendations to the NWIO countries about what fits best and how to proceed regarding the development of necessary and feasible approaches for tsunami inundation mapping.

By this the participating countries can develop a solid foundation that will help achieving the goals of the UN Ocean Decade Tsunami Programme to make all communities highly at risk prepared for and resilient to tsunamis by 2030.

# OBJECTIVES

Through this regional workshop it is intended to kick-off a joint working process among the five partner countries and the project team to identify the requirements for tsunami inundation modelling and mapping in the region. During the workshop the following shall be achieved:

* Providing background information on the TTF-31 project and related initiatives, such as the UN Ocean Decade Tsunami Programme and the UNESCO-IOC Tsunami Ready Recognition Programme (TRRP).
* Getting to know each other and develop regional partnership arrangements.
* Discuss the establishment of National Working Groups on Tsunami Inundation modeling and mapping (NWG-TIMMs), which are proposed as a mechanism to subsequently facilitate joint learning and national implementation of the project activities. National working groups should involve not only representatives from agencies, universities and research institutions, but also the local level, preferably from the community of the Pilot Areas to be involved in order to improve cooperation between science and application in the warning process. Representatives might therefore also be drawn from Provincial Disaster Management Organisations (PDMOs) and/or Local Disaster Management Organisations (LDMOs).
* Discussion and sharing of knowledge on principal concepts, methodologies and approaches for tsunami inundation modelling. Partner countries are invited to share their experiences and skills of tsunami inundation modeling and mapping.
* Presentation and discussion of the approach for a gap analysis in each of the five countries and preliminary results.
* Outlook on further activities to be undertaken under the framework of the project, including next steps towards building a common understanding and joint strategy for tsunami inundation modelling in the region and nationally.

# OVERALL SCHEDULE

The workshop will run as a virtual regional meeting with a duration of 3 hours and 30 minutes.

# ORGANISERS

The organisation of this regional meeting will be undertaken by the UNESCO-IOC/BMKG Indian Ocean Tsunami Information Center (IOTIC), UNESCO-IOC Secretariat of the Intergovernmental Coordination Group for Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS), and Project Team for the UNESCAP TTF-31 project with the support of the UNESCO-IOC Tsunami National Contacts (TNCs) from India, Iran, Oman, Pakistan and UAE.

# PARTICIPANTS

The joint working process on tsunami inundation modelling and mapping in the TTF-31 project requires the establishment of a regional working group consisting of representatives from the five partner countries (India, Iran, Oman, Pakistan and UAE). This regional working group shall be composed of representatives from national agencies (e.g. National Tsunami Warning Centre), from universities and research organisations. It may also include representatives in other countries who are interested or involved in the topic.

**EVENT WEBSITE**

For further information on the workshop, please refer to the event website: [https://oceanexpert.org/event/3630](https://oceanexpert.org/event/3630%20) .

# AGENDA

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| **Time** | **Draft Agenda Item (Speaker/Lead)** |
| 0600 – 0630 UTC | 1. **Opening**    * Welcome remarks (Head of ICG/IOTWMS Secretariat, Mr. Rick Bailey)    * Background: The TTF-31 Project (ICG/IOTWMS Secretariat,   Ms. Nora Gale)   * + Context: The UN Ocean Decade Tsunami Programme (Mr. Rick Bailey) and the UNESCO-IOC Tsunami Ready Recognition Programme   (Mr. Ardito Kodijat)   * + Objectives of the Workshop (Project Consultant, Mr. Jörn Lauterjung) |
| 0630 – 0730 UTC | 1. **Requirements for Inundation Mapping from the Tsunami Evacuation Planning (TEP) perspective** (Mr. Harald Spahn) 2. **Preliminary Results of the Probabilistic Hazard Assessment**   (Mr. Andrey Babeyko)   1. **Identification of Pilot Areas in accordance with TEP** (Mr. Harald Spahn) 2. **Discussion of items 2 – 4** |
| 0730 - 0745 | **Break** |
| 0745 – 0845 UTC | 1. **Country Presentations**    * Introductions of members of the Regional Working Group on Tsunami Inundation Modelling and Mapping    * Overview on previous experiences with tsunami inundation modelling and mapping and available input data (shallow water bathymetry, DEM’s, development, computational resources, etc. |
| 0845 – 0915 UTC | 1. **Preparation of gap analysis** (Mr. Jörn Lauterjung)    * Background and approach    * The questionnaire    * Timeline    * Discussion |
| 0915 - 0330 UTC | 1. **Summary**, **Outlook** and **Closing remarks**   (Mr. Ardito Kodijat, Ms. Nora Gale, Mr. Rick Bailey)   * + Project partnership arrangements involving National Working Groups and pilot areas   + National online workshops to further help identify national gaps and capacities   + Support by the project   + Outlook on the further process (TTF-31 Project outlook), including development |