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Response Indicators
How to achieve, challenges, solution

6.1 Warning and Response Plans and Capacity (National, Local, Community)

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Tsunami Ready Indicator

	TSUNAMI READY INDICATORS
I	**ASSESSMENT (ASSESS)**
1	**ASSESS-1**. Tsunami hazard zones are mapped and designated.
2	**ASSESS-2**. The number of people at risk in the tsunami hazard zone is estimated.
3	**ASSESS-3**. Economic, infrastructural, political, and social resources are identified.
II	**PREPAREDNESS (PREP)**
4	**PREP-1**. Easily understood tsunami evacuation maps are approved.
5	**PREP-2**. Tsunami information including signage is publicly displayed.
6	**PREP-3**. Outreach and public awareness and education resources are available and distributed.
7	**PREP-4**. Outreach or educational activities are held at least 3 times a year.
8	**PREP-5**: A community tsunami exercise is conducted at least every two years.
III	**RESPONSE (RESP)**
9	**RESP-1**. A community tsunami emergency response plan is approved.
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11	**RESP-3**. Redundant and reliable means to timely receive 24-hour official tsunami alerts are in place.
12	**RESP-4**. Redundant and reliable means to timely disseminate 24-hour official tsunami alerts to the public are in place.

9. RESP-1:
A community Tsunami Emergency Response Plan (TERP) is approved

Introduction

The main purpose of a **Disaster Emergency Response Plan (DERP)** is to **prepare for effective response** in order to saving and protecting the general public

Disaster Emergency Response Plan (DERP) covers arrangements for **before, during, and after the disaster impact.**

The DERP covers **arrangements for warnings and evacuations and public awareness** that are **important part of the Tsunami Ready** Recognition Programme.

The DERP is **written document** detailing what must be done during a tsunami emergency, how people and property are protected and how resources are used.

A DERP is supported by specific **SOPs that will be activated on the receipt of a tsunami warning** or during a local source earthquake that may generate a tsunami

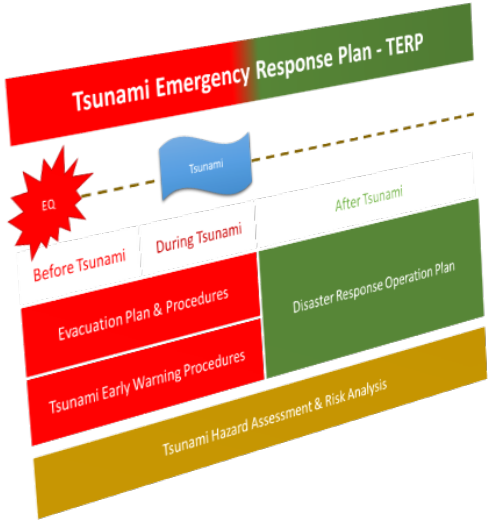
Elements of a DERP - DMO

Command Chain, Roles & Responsibilities

Evacuation plan & procedures

Search & Rescue

Tsunami early warning arrangements



Damage and needs assessments

Public awareness

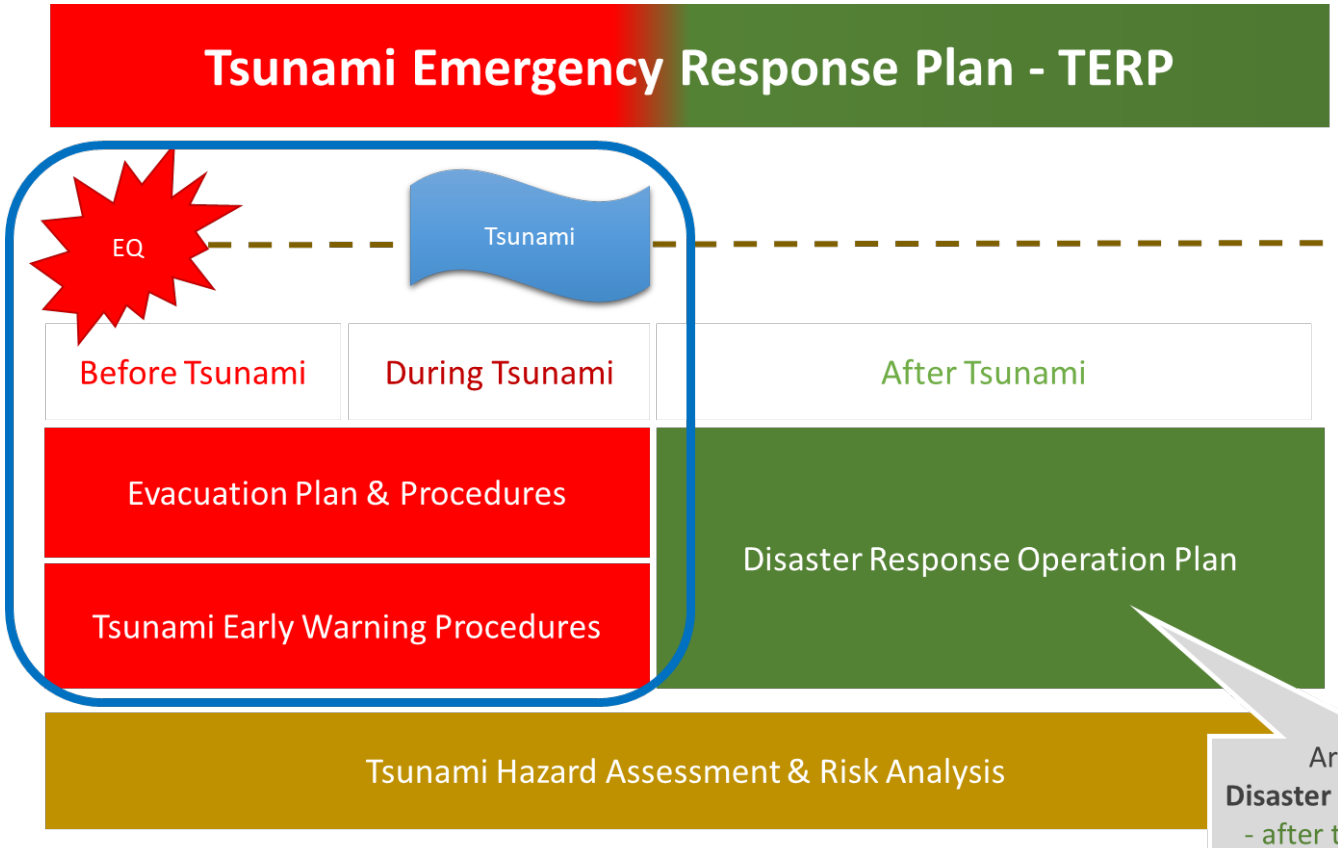
Shelter, food, and medical care

Tsunami hazard and risk assessment

Exercising & updating the plan

Restoring critical infrastructure

Scope and Focus in Tsunami Ready



A **T**sunami **E**mergency **R**esponse **P**lan (**TERP**) should of course consider **all three phases**

The **Focus of Tsunami Ready** is on **before and during a tsunami event**

Identify **steps** or **measures** in each phase, assignment of **responsibilities**, chain of **authority** and **organization**, identification of **resources**

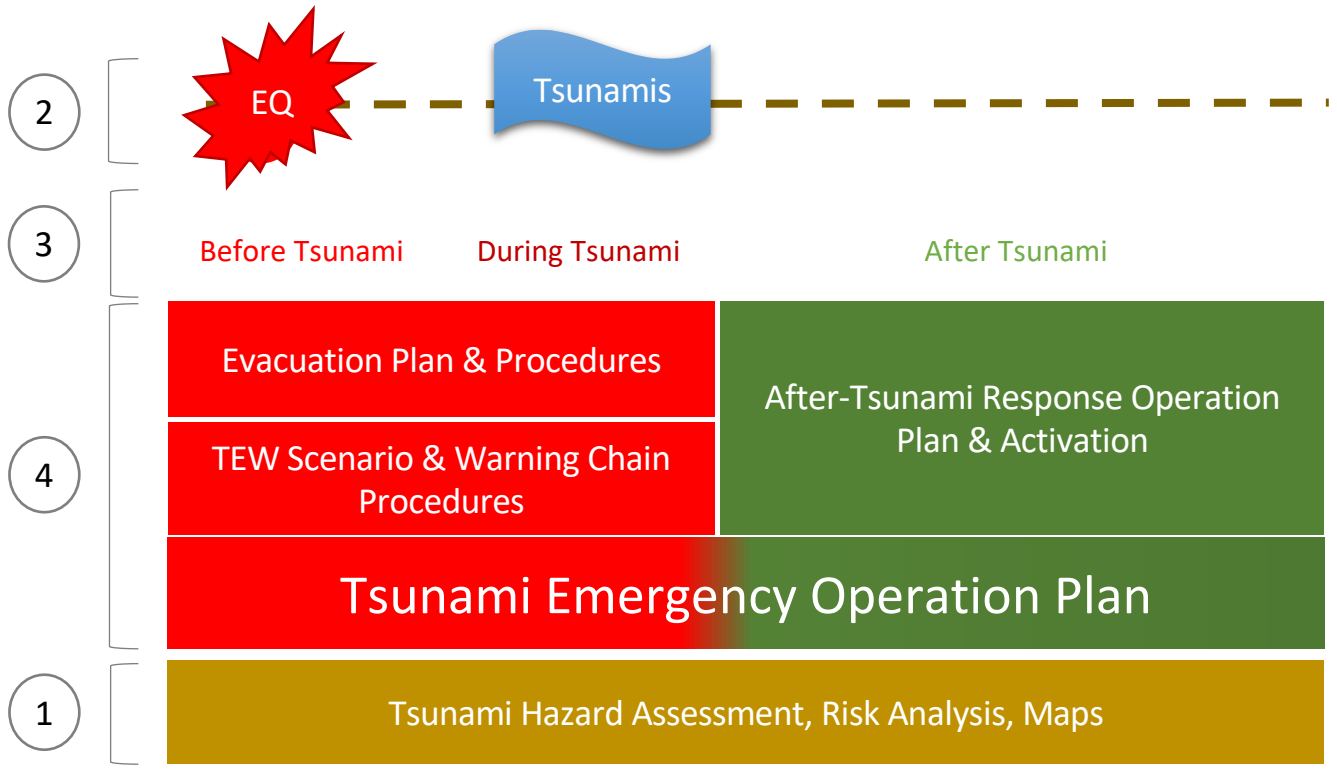
Scope and Focus in Tsunami Ready

1. Tsunami hazard maps are needed to help **identify priority responses and steps to reduce potential threats**

2. Three specific circumstances must be considered for tsunami hazard: 1) **Uncertainty**; 2) **Fast arrival time**; 3) **Long term impact**

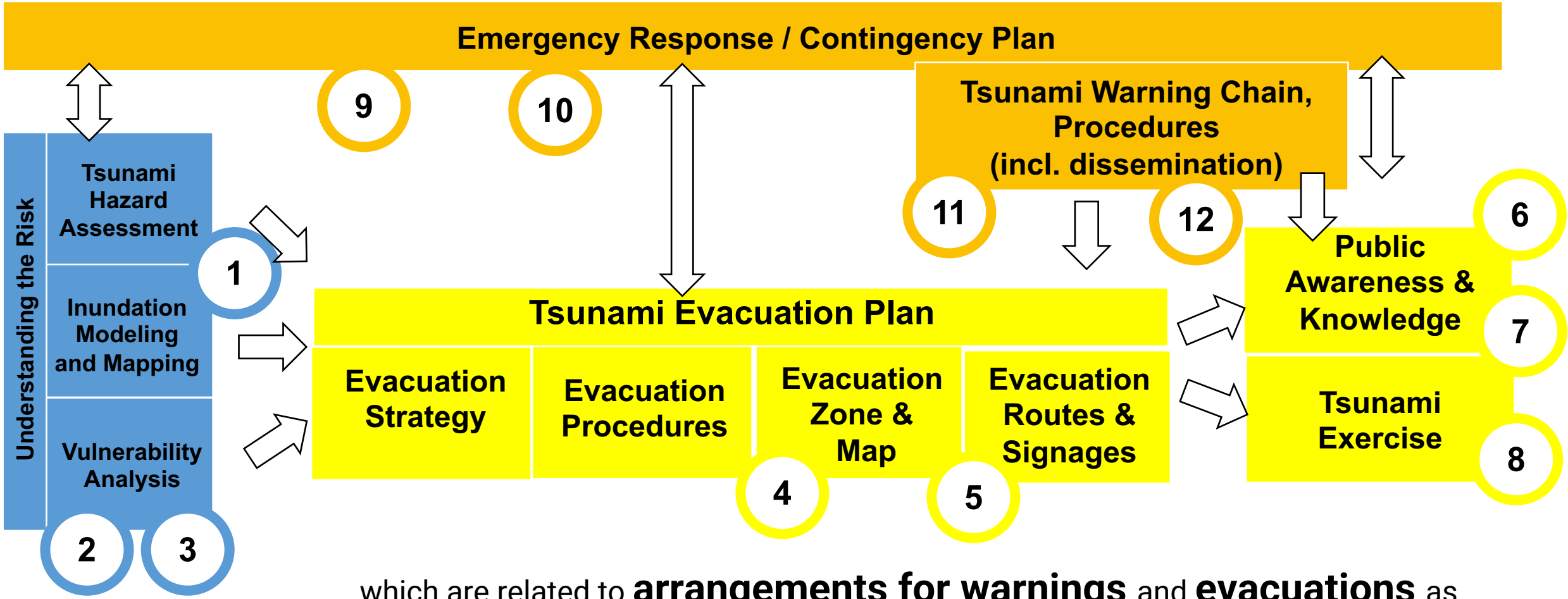
3. Focus mainly on the 2 key phases of emergency event (**Before Tsunami and During Tsunami**)

4. Describe **Early warning procedures to decide whether** or not to issue an evacuation order.



Evacuation Plan must be known by the community and institutions

ERP has links to all Tsunami Ready Indicators



… which are related to **arrangements for warnings** and **evacuations** as well as **public awareness of these arrangements**

TERP SOPs

Why are SOPs important?

SOPs lay the **foundations of effective, reliable warning and Re—response** systems

In tsunami, **rapid evaluation, warning, and response is essential** to save lives

Communications links between stakeholders **must be robust** or the warning chain will be broken

SOPs should be **approved, practiced and modified** as necessary – a “living document”

TERP SOPs

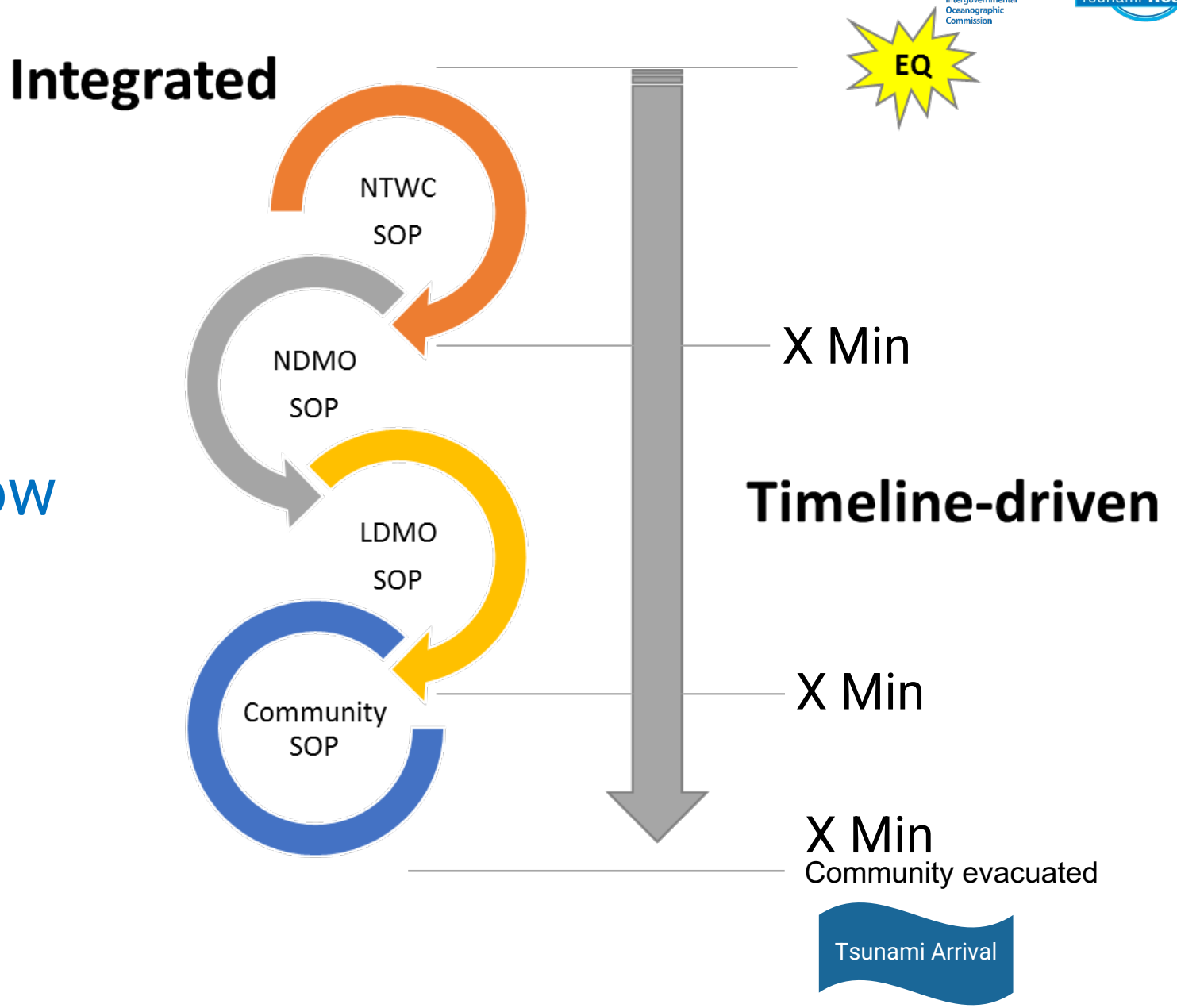
"A description and procedure on agreed steps by institutions/agencies/groups/teams used in coordinating who, what, when, where and how for tsunami early warning and response"*

- A **SOP is a written document** that describes the actions to be taken in a system or process.
- SOPs are **a set of written instructions for routine/repetitive organisation activities and detail work process** conducted/followed within an organisation
- SOPs document the way activities are **performed for consistent conformance to system requirements** and an organisation's mission

*From Indonesian Local SOP Workshops: Capacity Building for Development of Local SOPs for Tsunami Early Warning and Response. 2006-2007

TERP SOPs

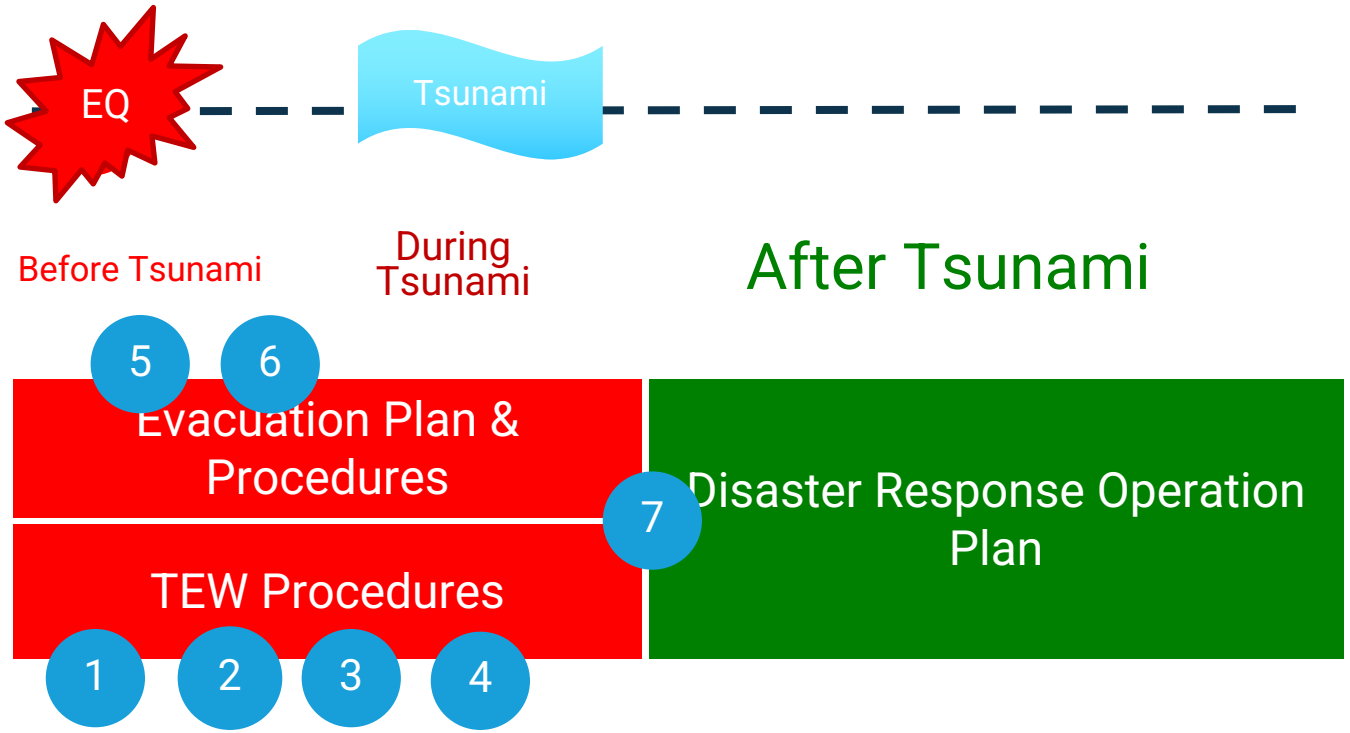
End-to-End Warning SOP – Information Flow



SOPs under TERP Tsunami Ready

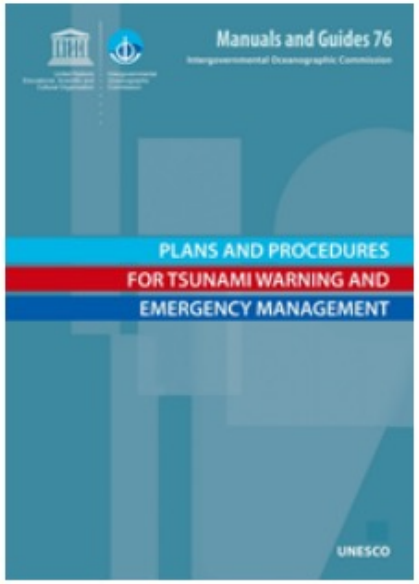
SOPs related to the TERP at local level, among others

1. SOPs for **receipt of warnings** and cancellation **messages from the NTWC**
2. SOPs for **decision making on evacuations**
3. SOPs for **public alerting**
4. SOPs for **media arrangements**
5. SOPs for **support of evacuation**
6. SOP for **traffic management**
7. SOP for **all clear and safe return**



Steps to develop TERP

Manual and Guide No 76



https://unesdoc.unesco.org/ark:/48223/pf0000256552

1. Acquire Required Information
2. Develop Response Plan
3. Develop SOPs
4. Develop Public Awareness

There are 4 basic sequential steps to develop a TERP:

- Steps 1 and 2 are concerned with developing the TERP based on the information that is specific to the community's circumstances as well as national references
- Step 3 relates to the development of Standard Operating Procedures (SOPs) for specific activities by agencies within the TERP
- Step 4 is vital to ensure that the community is aware of the TERP and understands what actions to take in the event the TERP is activated

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10. RESP-2:
The capacity to manage emergency response operations during a tsunami is in place

Introduction

In addition to having an Tsunami Emergency Operations Plan, communities should have the means to ensure that community officials can execute the functions based on the predetermined SOPs related to tsunami warning information and/or tsunami incidents. This may involve the use of an Emergency Operations Centre (EOC) of similar functions.

Emergency Operations Centre, Kos, Greece

National EOC, Oficina Nacional de Emergencia del Ministerio del Interior (ONEMI), Chile (Courtesy of ITIC)

St. Kitts Emergency Operations Center

Capacities needed to manage TERP during a tsunami

1. People **who will carry out** the emergency response operation
   - SOP
   - Knowledge
   - Skill
2. Facilities and Infrastructures **to implement the emergency response operations**
   - Tools
   - Equipment
   - Logistics

Arrangements needed to manage Tsunami emergency response operations during a tsunami

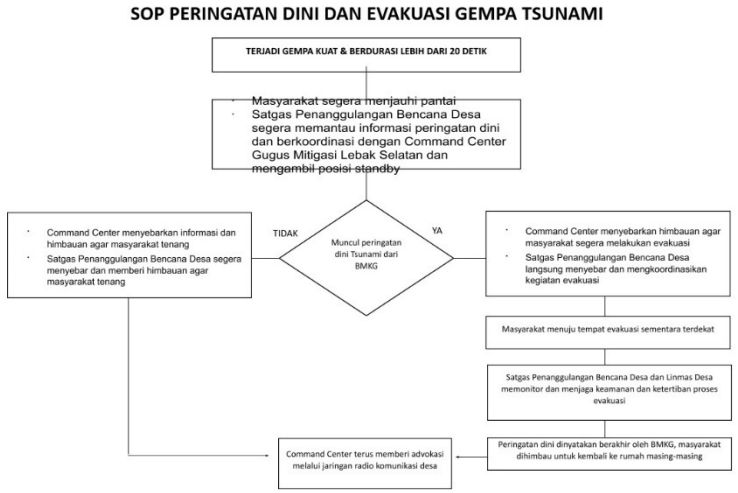
1. Has **24-hour operations and plan to activate ERC** for tsunami incidents
2. Has **warning reception and dissemination** capability
3. Has **ability and authority to activate the public alert** system
4. Maintains the **ability to communicate within and across jurisdictions**
5. Maintains **communications links with NTWC and/or N/L DMO**
6. Has **capacity to manage evacuations and respond** to the consequences of a tsunami

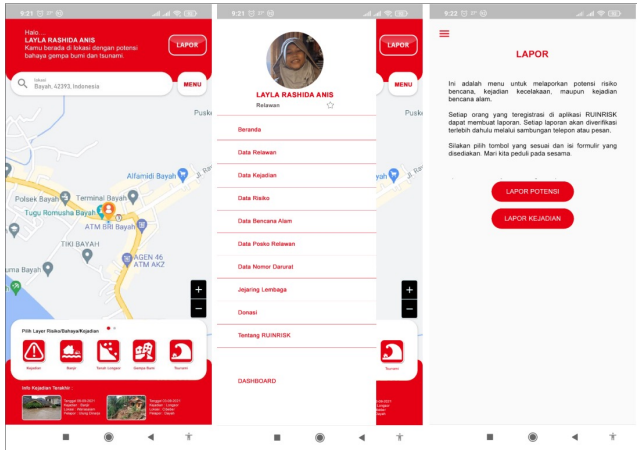
Arrangements needed to manage Tsunami Emergency Response Operations during a tsunami

✓The ERC roles that must be fulfilled are:

- A **local controller should be in charge and coordinates response** activities
- Appropriate and relevant agencies / organisations / section / team(s) should **be activated**
- Conduct **threat analysis** and to identify gaps and shortfalls
- Keep track of **process, procedures, to progress** to ensure continuity of operations

Capacities needed to manage emergency response operations during a tsunami

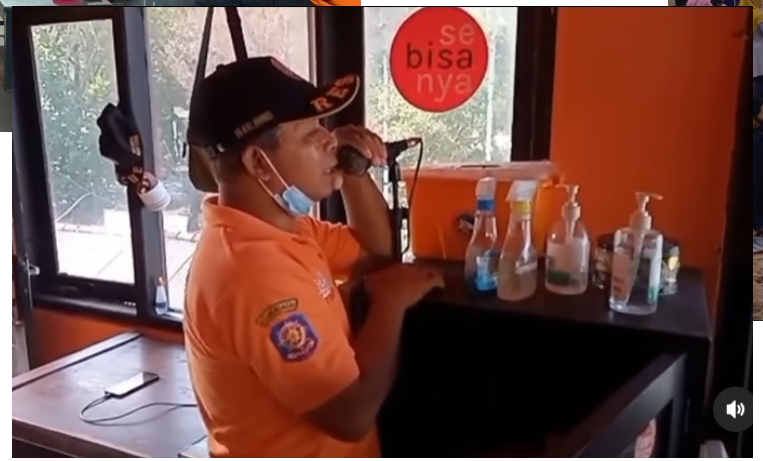




Continuous capacity building and training

Capacities needed to manage emergency response operations during a tsunami

Regular Exercise and 24/7



Capacities needed to manage emergency response operations during a tsunami

Continues maintenance and Update of Equipment

Pangandaran Village Alert Car

Smart Poles at four locations

TAGANA Pangandaran Disaster Preparedness Equipment

Thank you
Salamat po

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