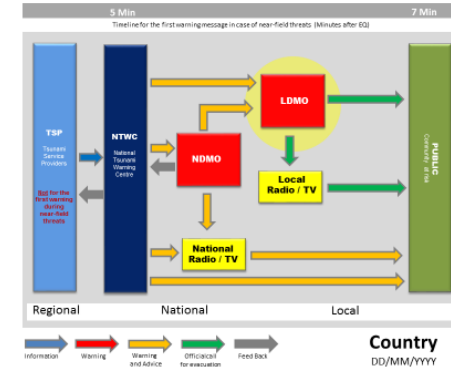


Feedback on current status of Tsunami Warning Chains

in the Western Indian Ocean countries

Preparation Meeting for SOP Workshop
1 June 2023

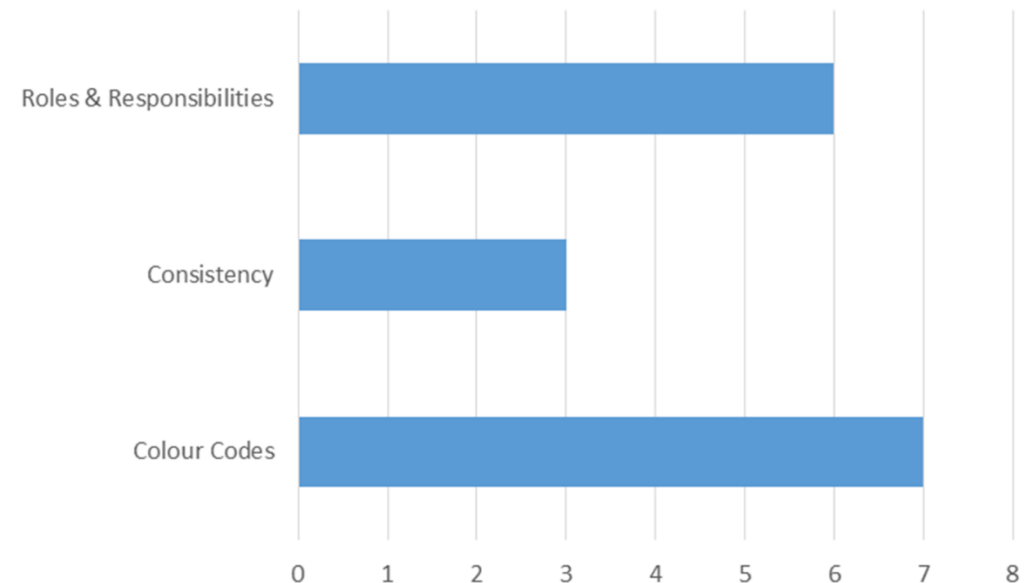
Harald Spahn
UNESCO Consultant

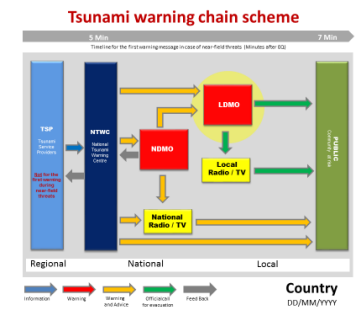


Status of Tsunami Warning Chains

Some general remarks

- **Warning Chains graphics have been developed in all WIO countries**
- **They provide a good overview of the current set-up** and at the same time also allow to identify issues which still need to be followed-up
- **Warning chain graphics are a powerful communication tool and should therefore be self-explanatory**, that's why it is important to assure that flows and colour codes are consistent.
- **Reviewing the existing warning chain graphics** (from an external consultant perspective) **have led to a number of observations.** These refer to Roles and Responsibilities and to issues regarding Consistency and Colour Coding.



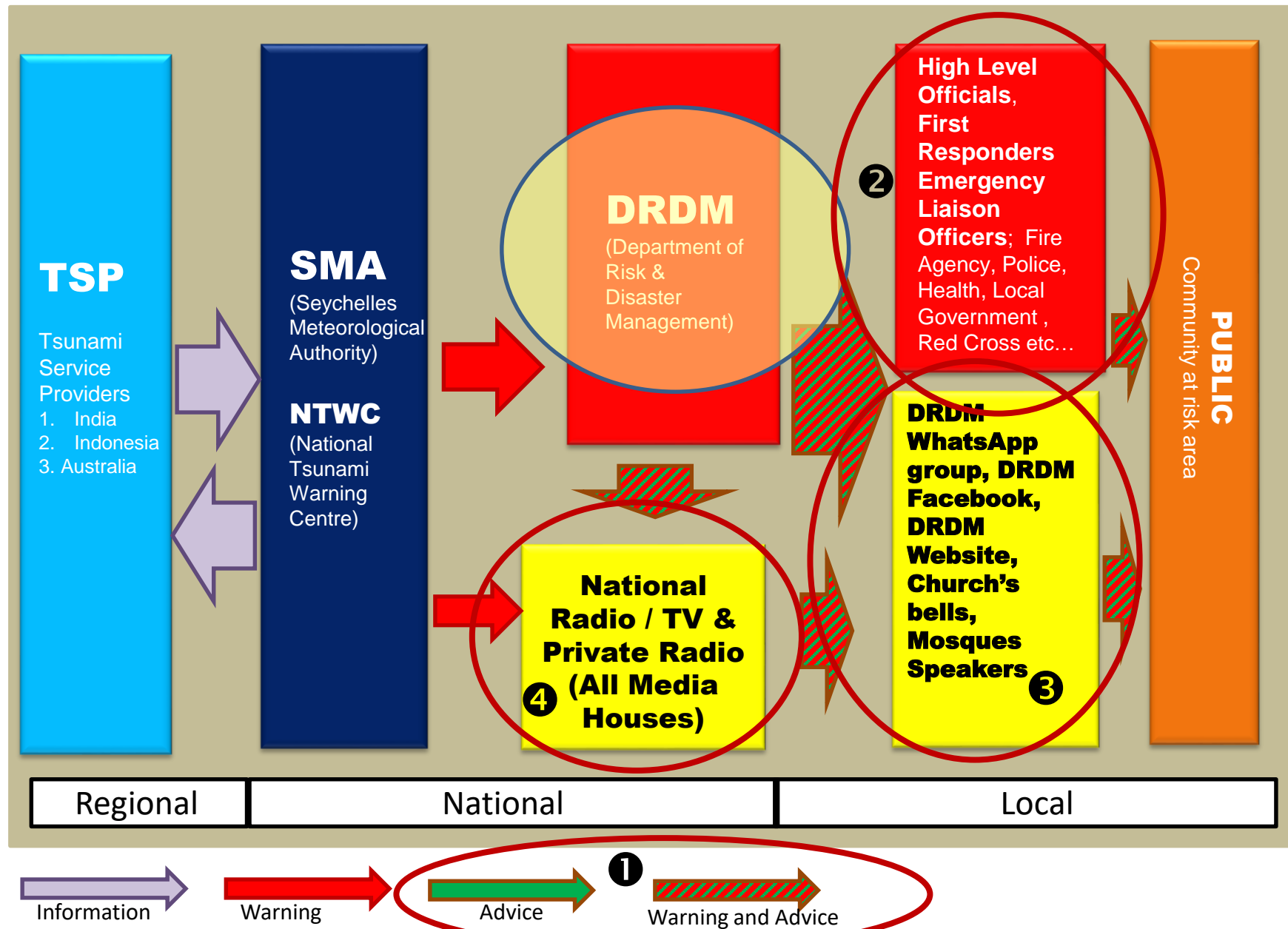


Consolidating the Tsunami Warning Chains

Aspects to be considered

1. **Consistency?** Are the flows consistent? Decision making? Colour codes?
2. **Can the chain be shortened?** Tsunami warning chains should be as short as possible. Each step in the warning chain takes time and is a possible point of failure.
3. **Redundancy?** Robust warning chains include parallel flows of warnings to assure redundancy in case of failure at one point. Does the community at risk receives the warning from multiple sources? Are the contents of messages from different sources well aligned?
4. **In line with time?** Is the proposed **time line** well aligned with information inputs (i.e. from TSPs and minimum ETAs)? Does the time line allows enough time for community response?
5. **Can this be realistically implemented in practice?** Is the proposed flow of the warning chain feasible in the time available? Are all institutions 24/7? Do they have sufficient human resources to operate the warning chain?
6. **Agreed and understood by all actors involved?**

1. Consistency? Are the flows consistent? Decision making? Colour codes?



Colour Codes and Definitions

Colour code

Definition



TSP Information to NTWC



Warning by NTWC (without advice attached)



Warning message that include an **Advice** issued by NTWC. Ideally the advice has been agreed upon with the NDMO. Content of advice usually depends on the respective warning level.



Warning and/or **Advice** messages that will include an Official Call for Evacuation issued by the mandated authority in case it is required. This implies a separate decision making process by the respective authority and issuing a specific message which includes warning information and a call for evacuation if required.



Feedback information between NTWC and TSP or between other institutions involved in the warning chain

The **Timeline** indicates the targeted deadline to send out the **first warning message** by NTWC and the time when it should arrive at the community at risk

- Alert communication

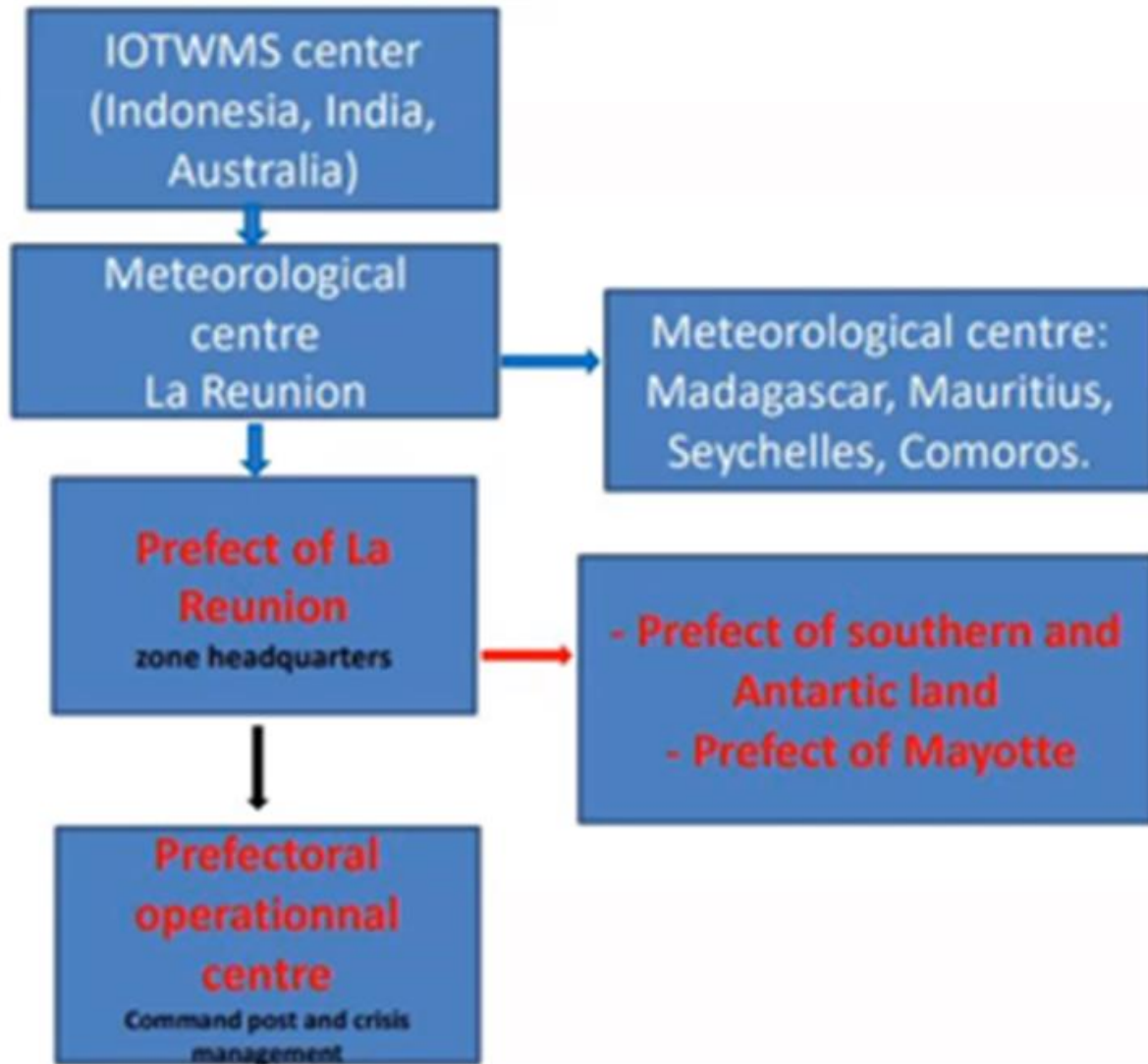
Inform



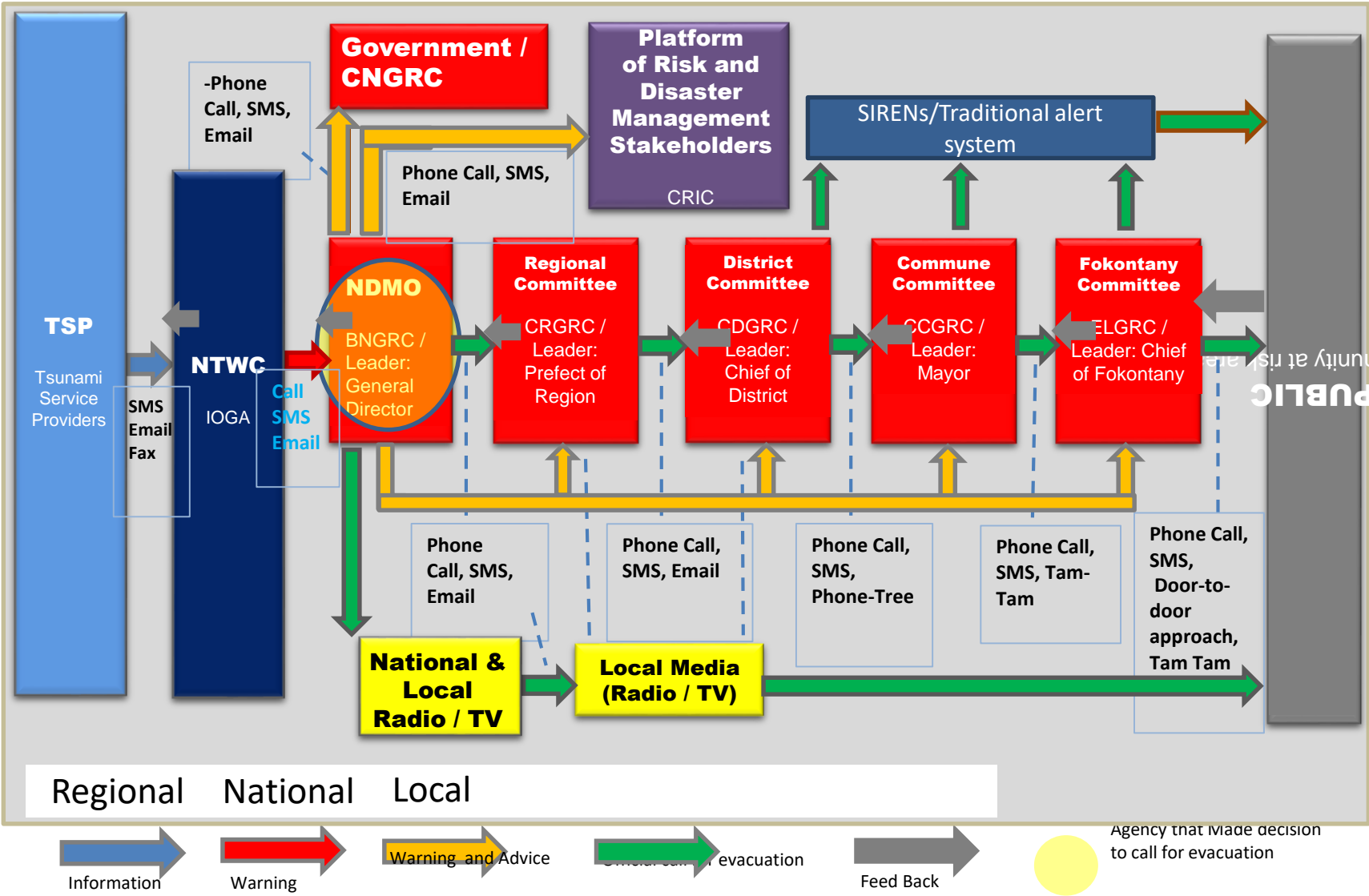
Command and control



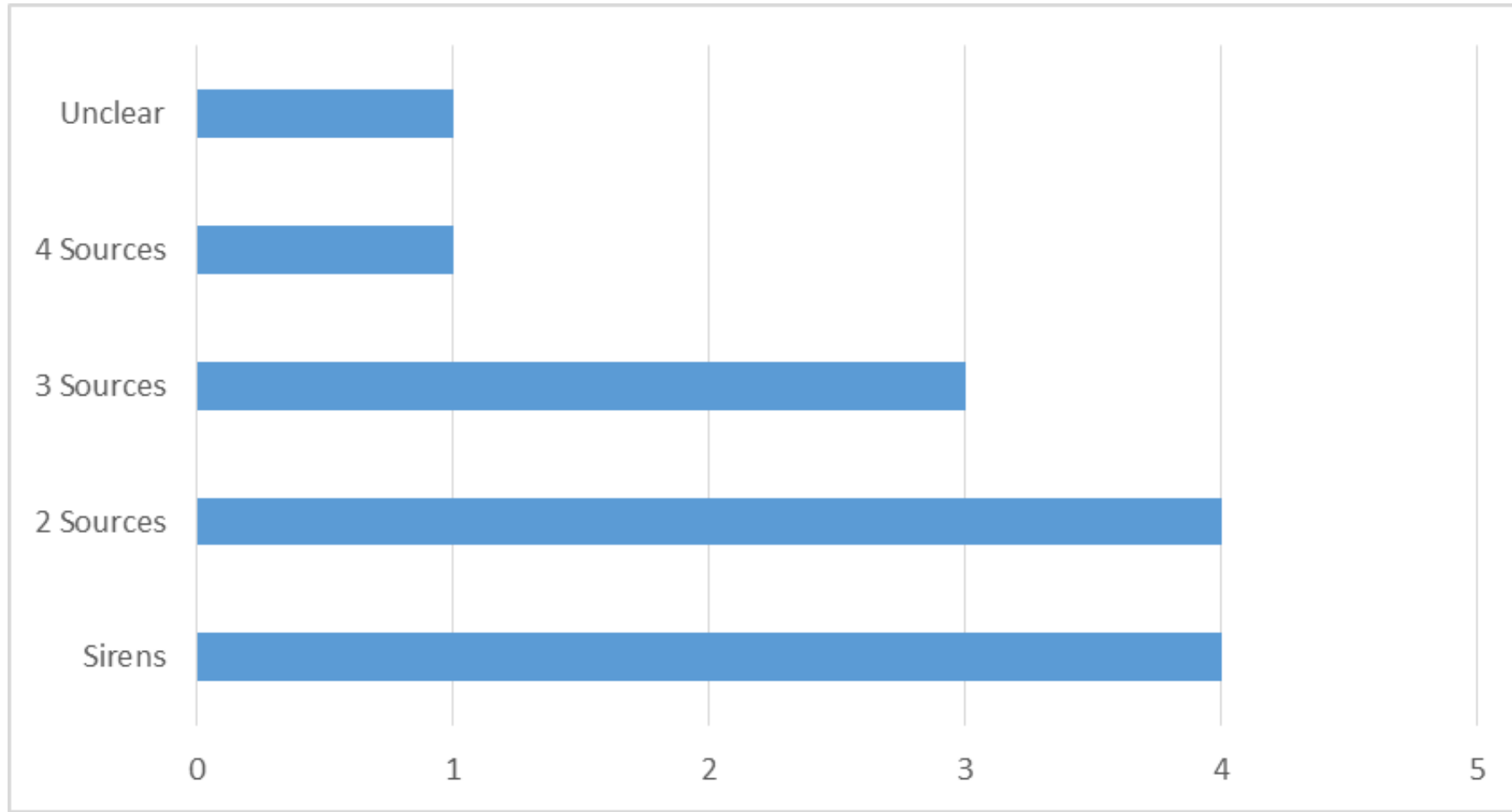
Order and coordinates



2. Can the chain be shortened? Tsunami warning chains should be as short as possible. Each step in the warning chain takes time and is a possible point of failure.



3. Redundancy? Does the community at risk receives the warning from multiple sources? Are the contents of messages from different sources well aligned?

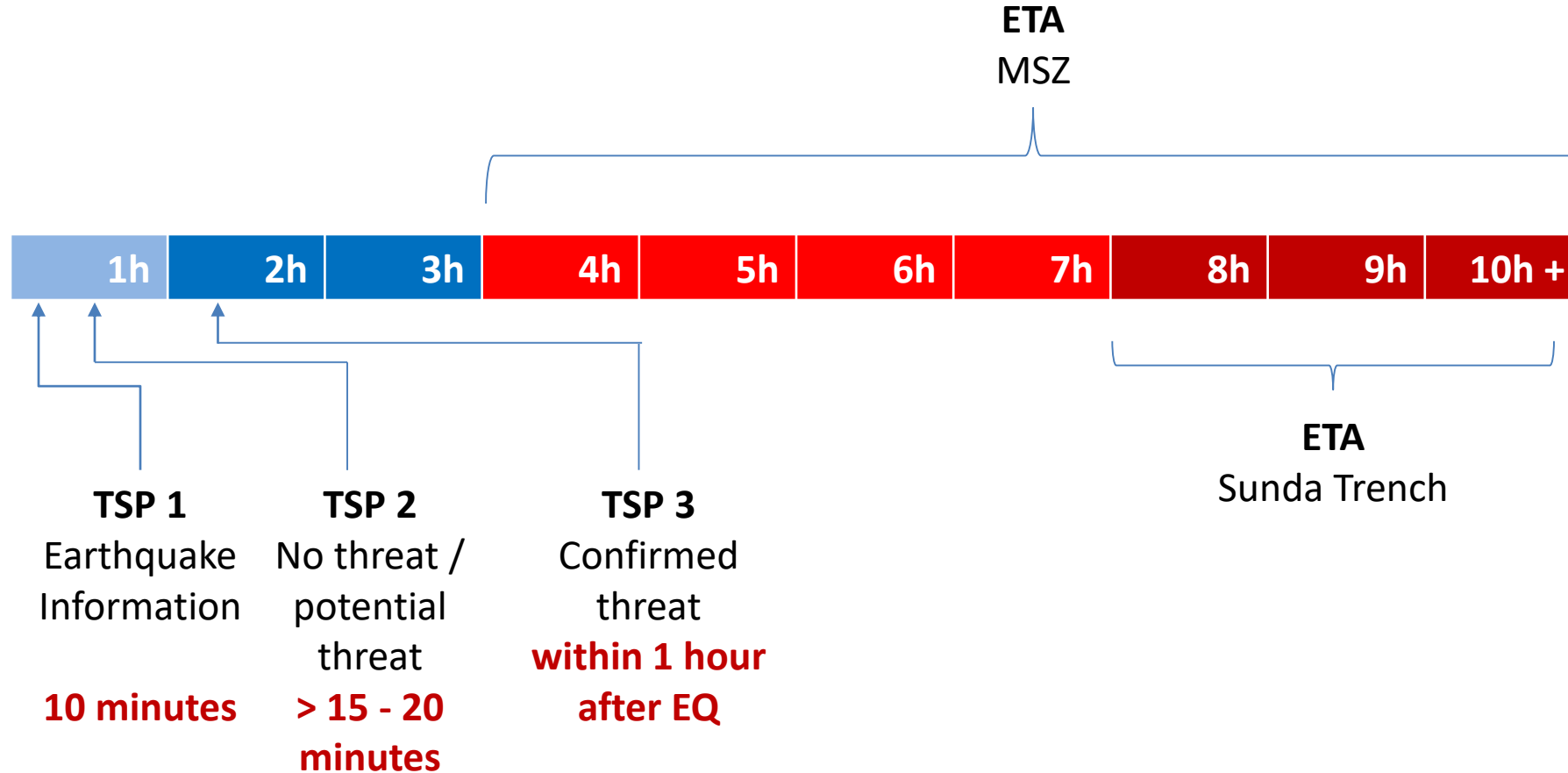


Sources of official warnings reaching out directly to the Communities at Risk (NTWC, NDMO, LDMO, Media)

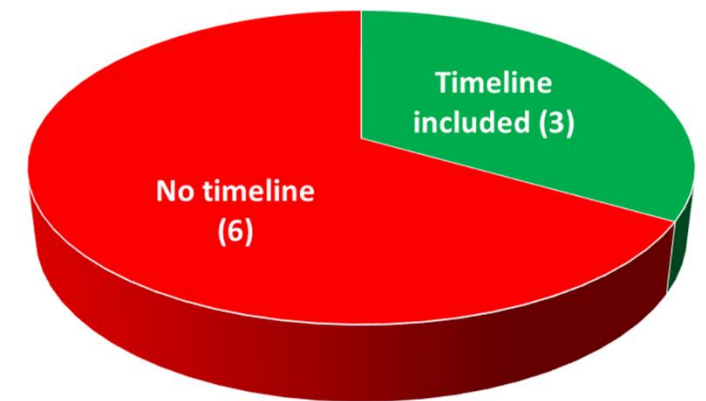
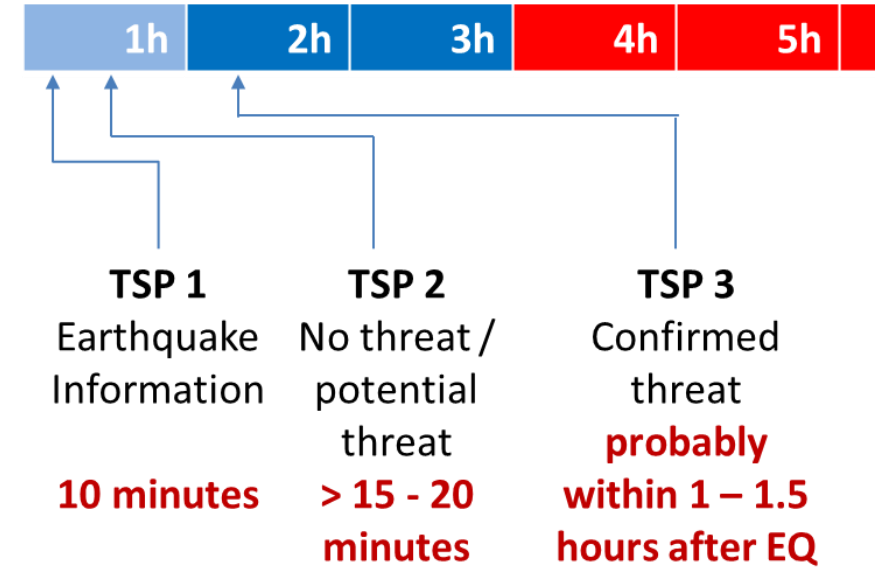
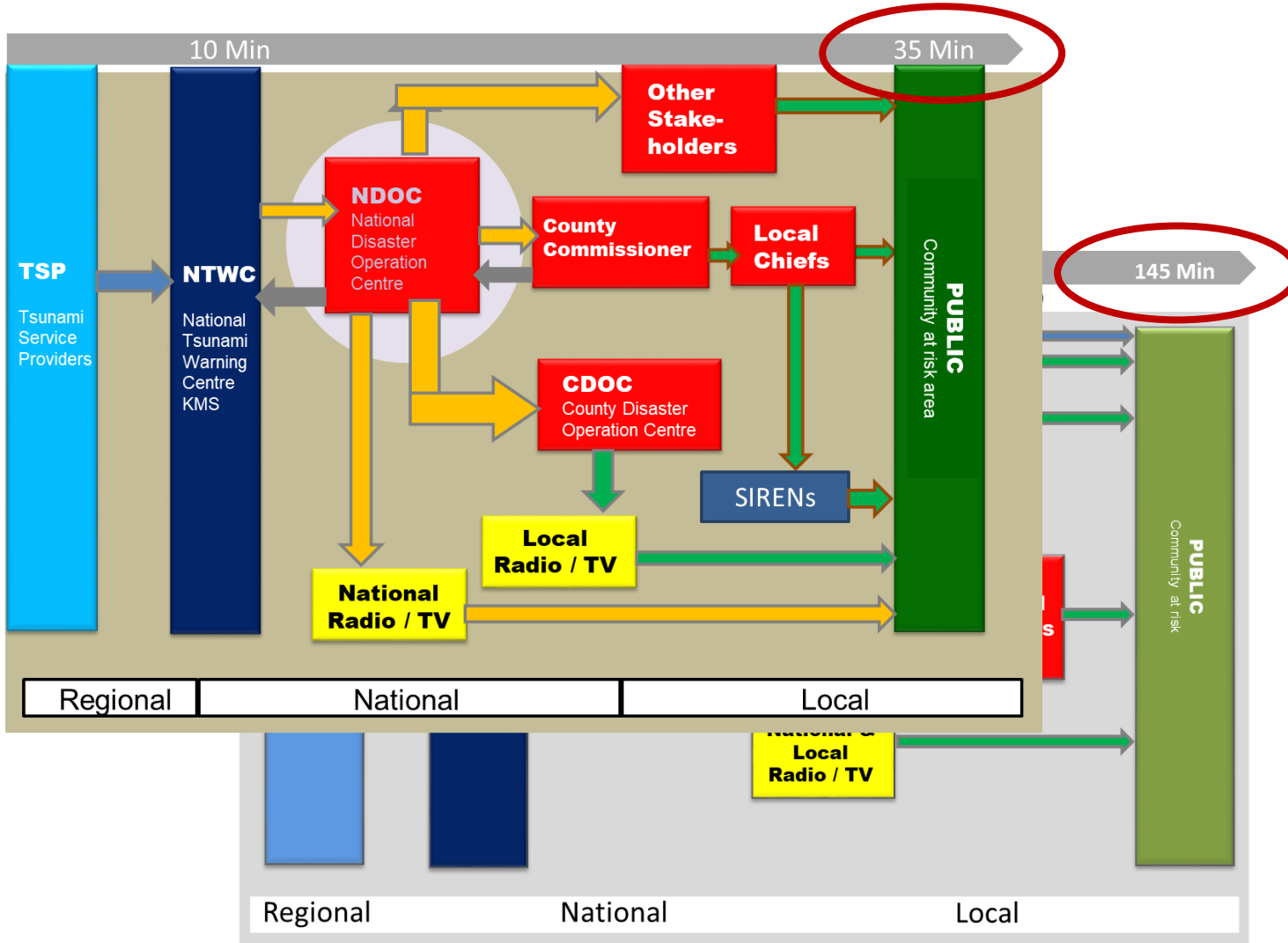
4. In line with time? Is the proposed time line well aligned with information inputs (i.e. from TSPs and minimum ETAs? Does the time line allows enough time for community response?

ETA - MSZ						
Somalia		Kenya Seychelles	Comoros Madagascar Mozambique Tanzania	Mauritius Réunion		South Africa
3h	4h	5h	6h	7h	8h	9h +
				Mauritius Réunion Seychelles Somalia	Comoros Kenya Madagascar Mozambique	Tanzania South Africa
ETA - Sunda Trench						

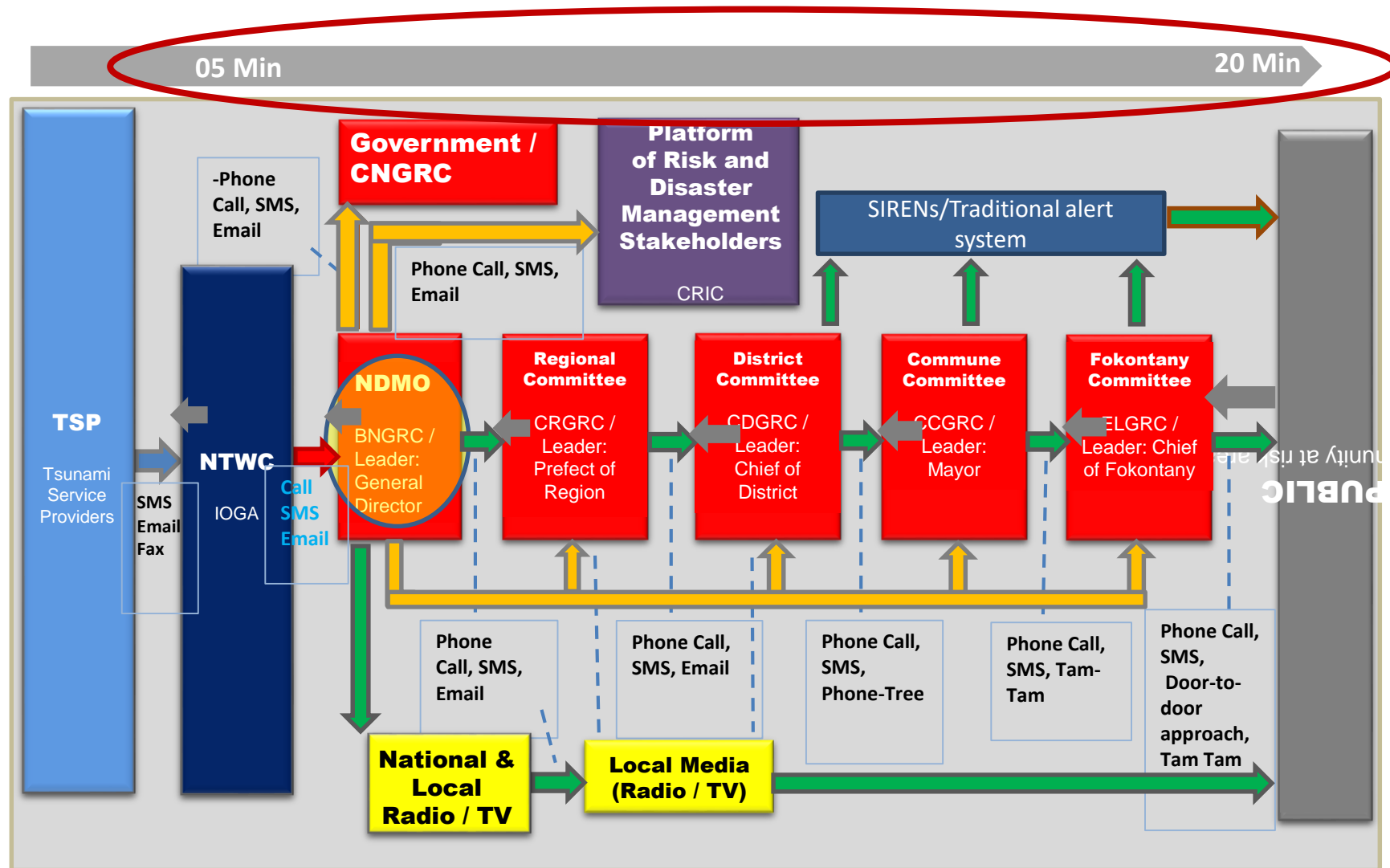
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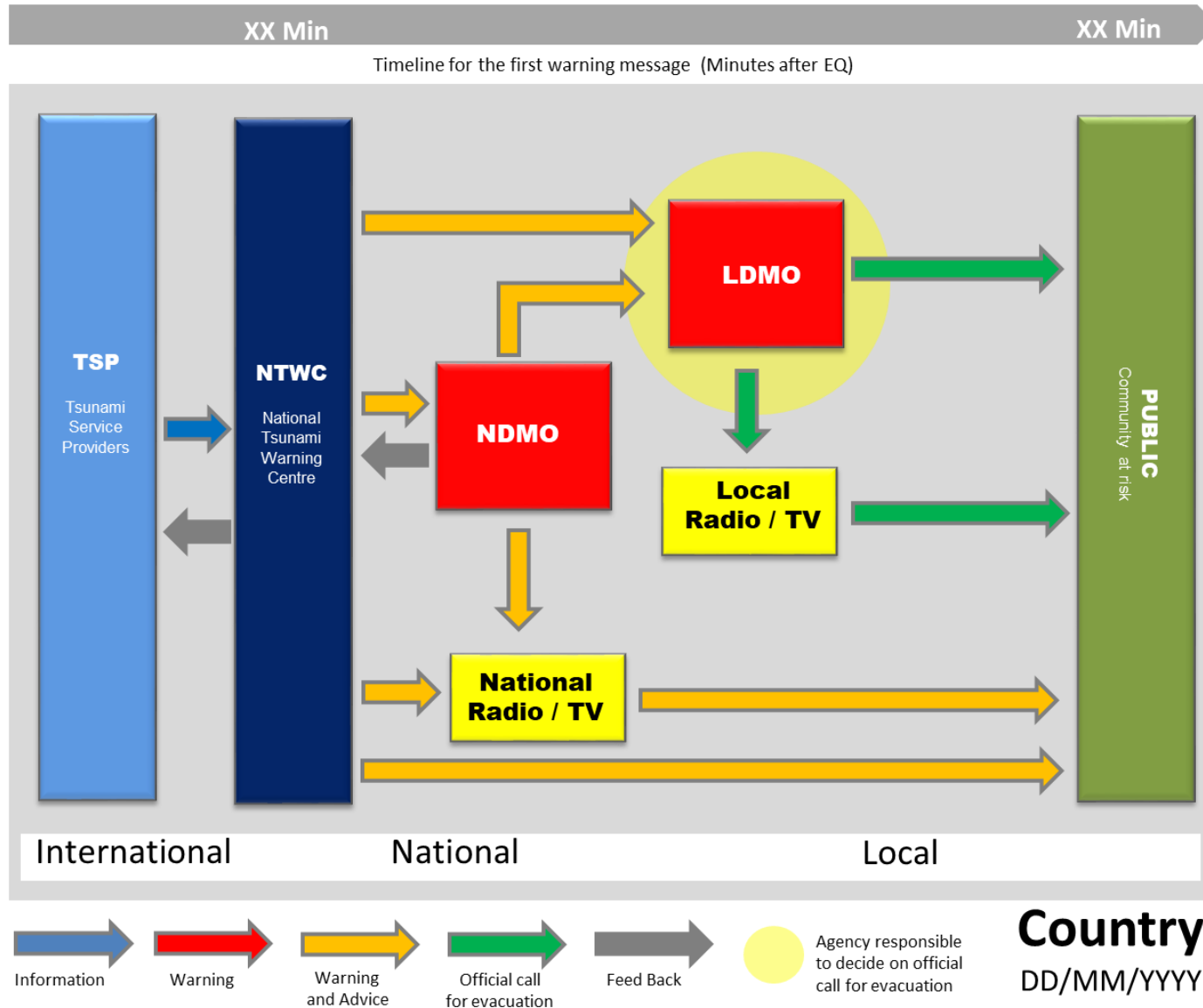
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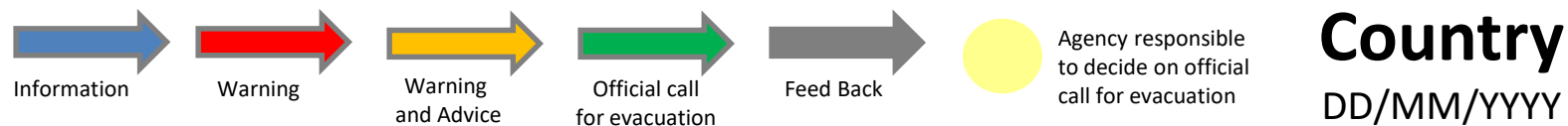
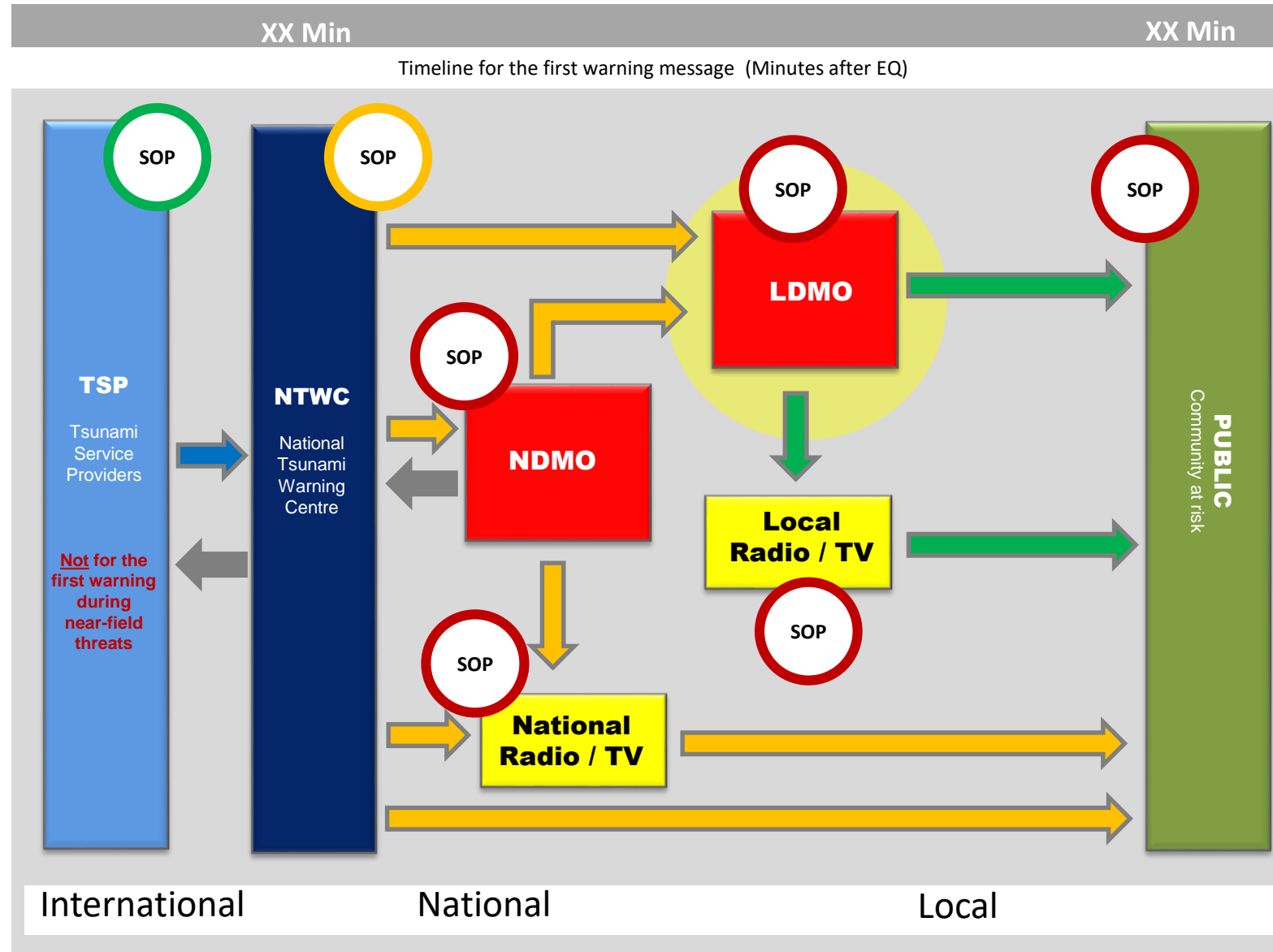
5. Can this be realistically implemented in practice? Is the proposed flow of the warning chain feasible in the time available? Are all institutions 24/7? Do they have sufficient human resources to operate the warning chain?



6. Agreed and understood by all actors involved?



SOPs - Operating the tsunami warning chain



Colour Codes and Definitions

Colour code

Definition



Existing SOP



Existing SOP, which needs still to be improved



SOP not yet existing

A vibrant, stylized illustration of a tropical beach. In the foreground, there's a sandy beach with some small rocks and a few green bushes. The ocean is a bright blue, with gentle waves lapping at the shore. In the middle ground, there's a small town or village with several buildings, including a prominent white lighthouse with a red top. The background features rolling green hills and mountains under a clear, light blue sky. The overall style is clean and modern, with a focus on natural beauty and coastal architecture.

Thanks for your attention