



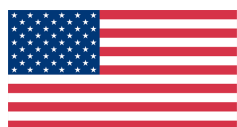
UNESCO/IOC – NOAA ITIC Training Program in Hawaii (ITP-Hawaii)
TSUNAMI EARLY WARNING SYSTEMS
AND THE PACIFIC TSUNAMI WARNING CENTER (PTWC) ENHANCED PRODUCTS
TSUNAMI EVACUATION PLANNING AND UNESCO IOC TSUNAMI READY PROGRAMME
7-18 August 2023, Honolulu, Hawaii USA

13.2 Improving Response and Managing Information Flow

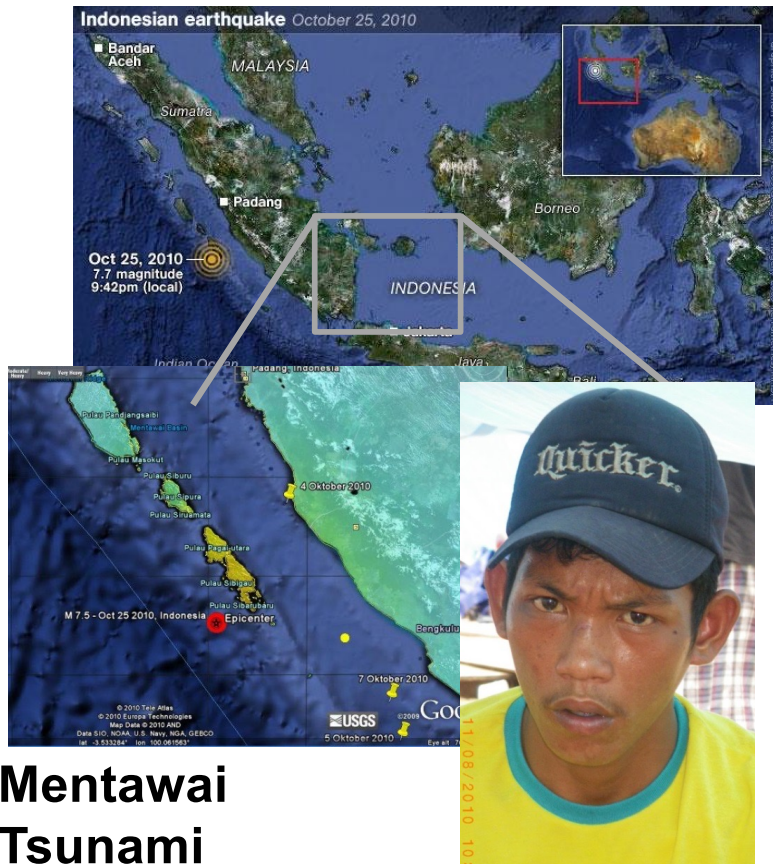
Media and Social Media - Good Practices

Ardito Kodijat

IOC/UNESCO - Indian Ocean Tsunami Information Centre
UNESCO Office Jakarta
a.kodijat@unesco.org



Broadcast Media as Part of the Early Warning Chain



Mentawai Tsunami

25 October 2010
Death ± 500 People

“I was watching the television (MetroTV) when the earth shook. I went out, saw my neighbours, but no body went out from their house. I went back inside, made a cup of coffee and continue to watch the television. **I saw the running text of the tsunami warning.** I went out again. I was outside when the wave swept me and brought me to the forest. I lost my consciousness until the next morning”

Fredi, 23, Muntei Baru-baru – Mentawai
(interviewed by Eko Yulianto, LIPI 2010)

Media (radio, television)

- Convey Official Warnings (National & Local)
- ***But also:***
- Convey Unofficial Warnings
- ***Therefore:***
- Can cause or counter public response

International media can cause public confusion



Broadcast Media as Tsunami Early Warning Chain

- **Wide Accessibility**
- **Speed**
- **24/7**
- **Accurate and reliable**
- **Live Updates**
- **Skilled Human Resource**
- **Established Infrastructure**
- **Established Broadcasting SOP**
- **Experienced in sudden Breaking News**
- **Provide Guidance**
- **Educating means**



Weakness & Challenges

- Electricity cut-off due to the disaster
- Areas where electricity is still scarce
- Disaster happened late at night → People are asleep, and the TV / Radio are Off



Setting Up Media as Tsunami Early Warning Chain

- **Establish Regulatory Framework**
- **Formalized cooperation and collaboration between NTWC and broadcast media**
- **Establish multi-communication system**
- **Establish EW broadcasting SOP**
- **Education and training**
- **Regular communication test**
- **Early warning exercises and improvements**
- **Evaluation after real event and improvements**

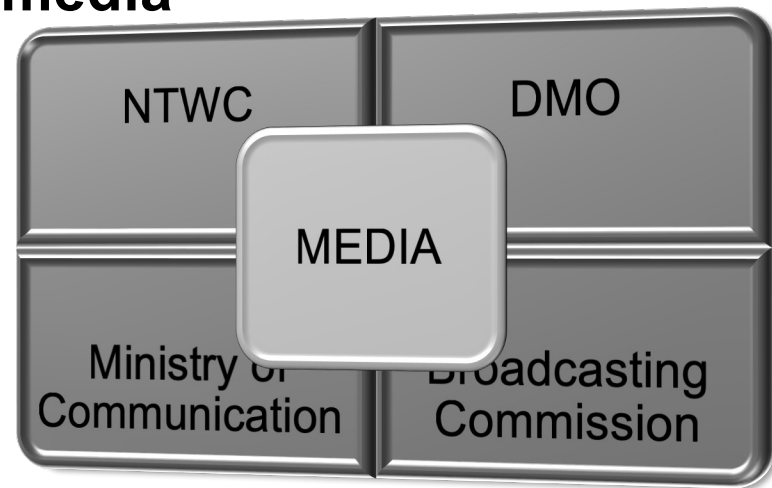
Regulatory Framework

- **Commonalities of warning broadcast by different broadcasting media**
- **Guides the broadcasting media in broadcasting early warning**
- **Control and monitoring system as early warning broadcaster**



Formal Cooperation

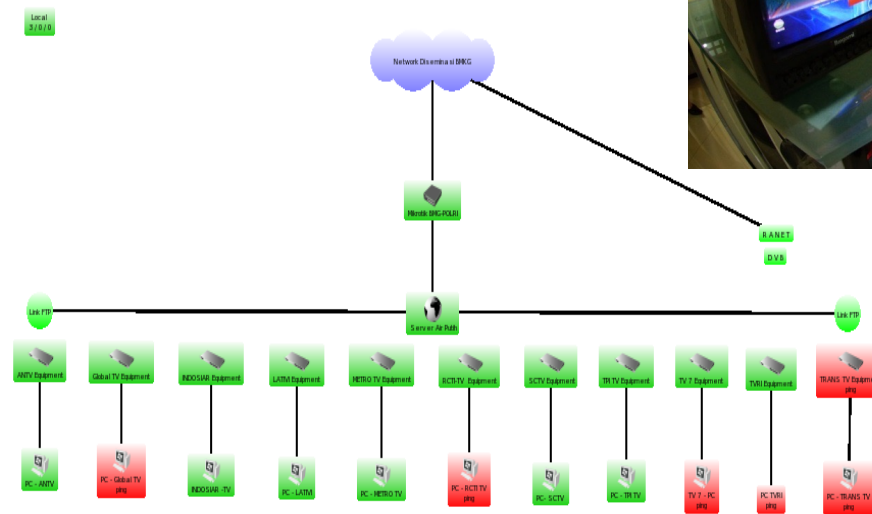
- **Ensures Commitment between warning center and broadcasting media**
- **Strengthen collaboration between warning center and broadcasting media**



Establish multi-communication system

- Ensures direct and reliable communication system between warning center and broadcasting media

- SMS
- Email
- Phone
- Fax
- Website
- WRS



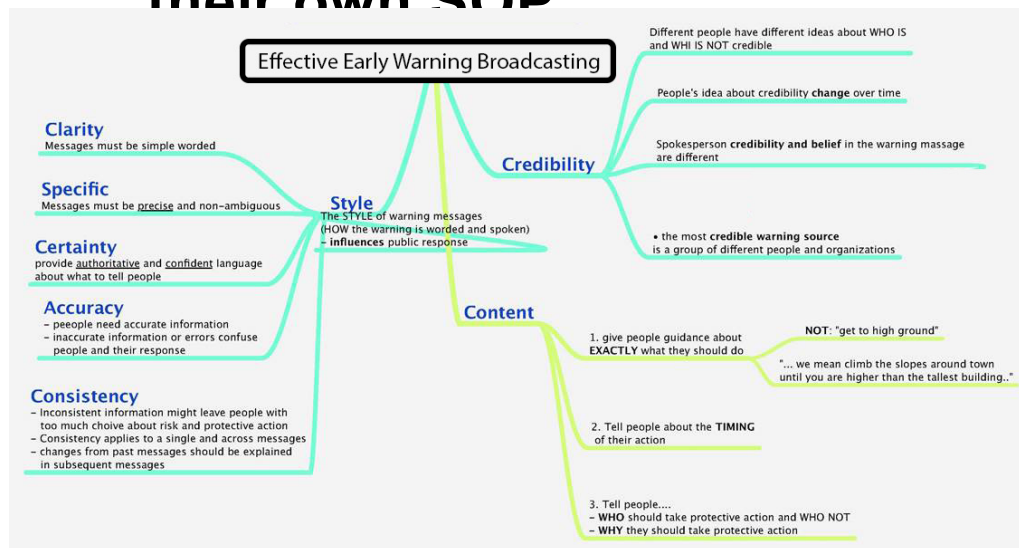
Establish EW broadcasting SOP

- Ensures the early warning broadcasting is part of the organization system
- Ensures standardized and step by step process and procedures in the broadcasting media
- Ensure the SOP meet the urgency and uniqueness of tsunami warning and emergency



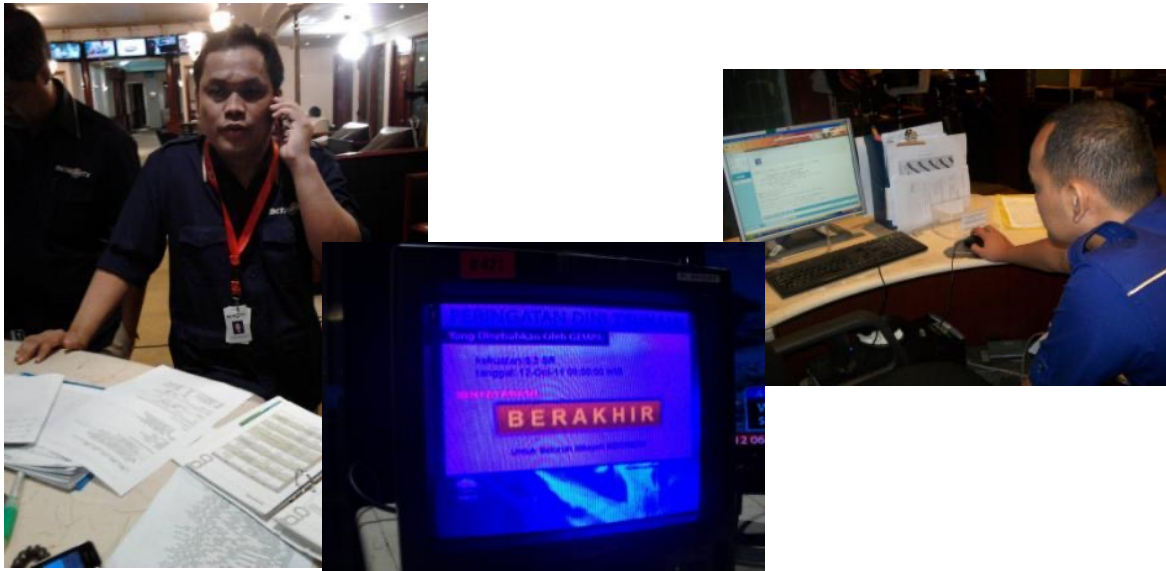
Education and training

- Ensures clear understanding of tsunami hazard, tsunami risk, warning messages, EW SOP, and their own SOP



Regular communication test

- **Communication test between NTWC and Media**
- **To ensure the communication works in time of needed**



Early warning exercises and improvements

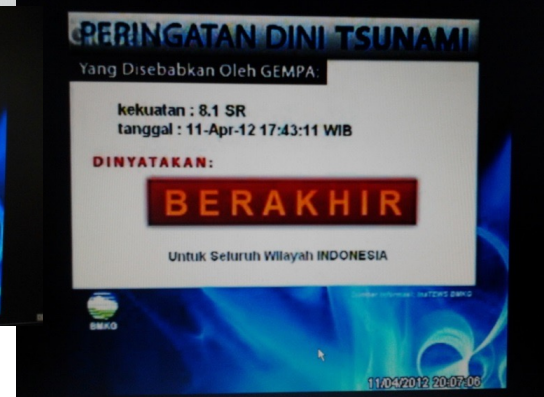
- SOP Training
- IOWave Exercise



Evaluation after real event and improvements

- To learn from actual event and do improvements

- LIPI
- BMKG
- BNPB
- BPPT
- KKP
- RISTEK
- GIZ
- UNESCO JTIC
- UNDP
- Universitas Syiahkuala
 - Universitas Andalas
- Universitas Bung Hatta
 - KOGAMI



Challenge in Broadcasting Media as TEWS Chain

- Role and responsibility beyond the warning
- National vs Local TV
- Language
- Diversity in Broadcast Media Characteristics
- Public and Private Broadcasting Media

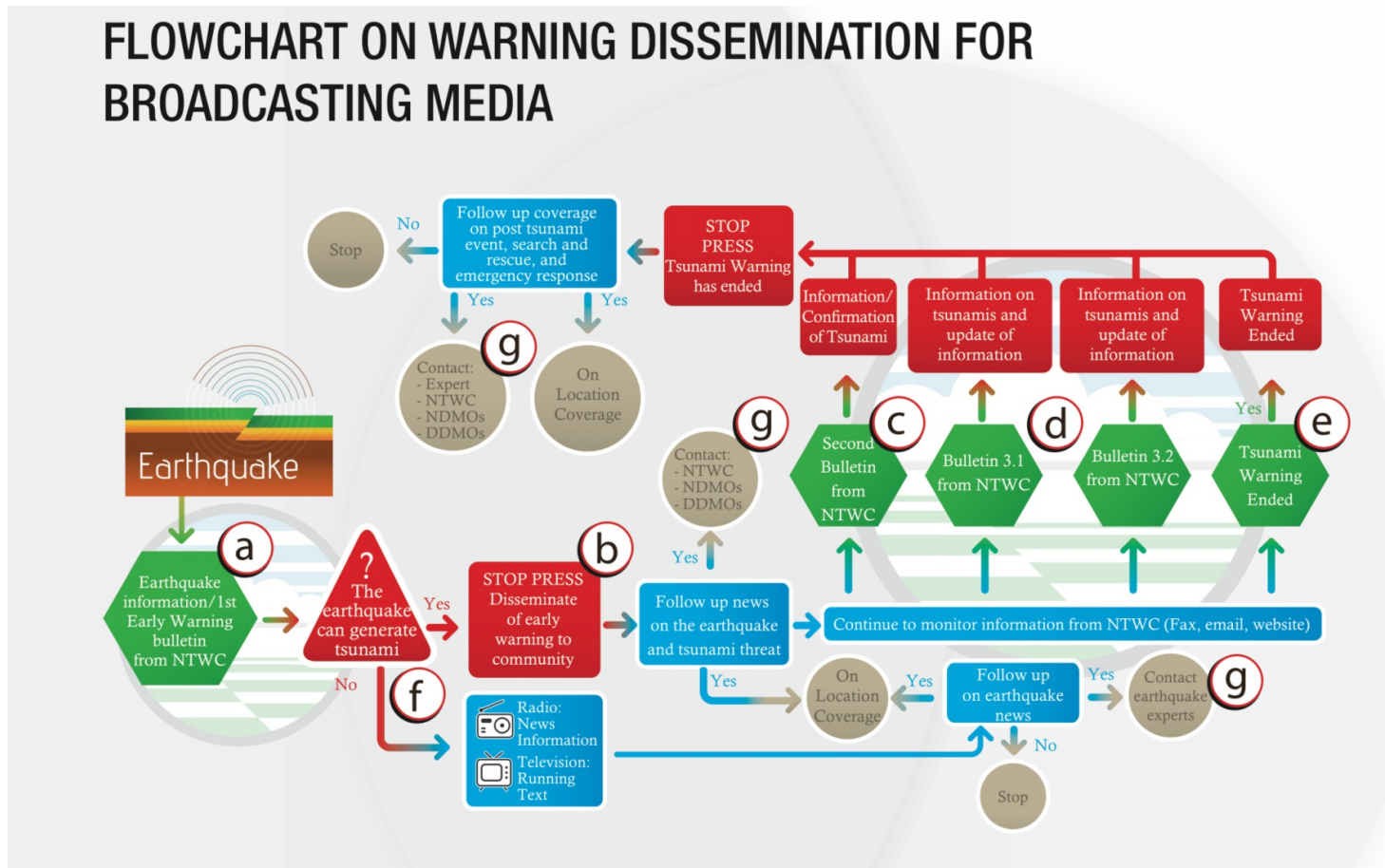


Challenge in developing SOP Broadcasting Media

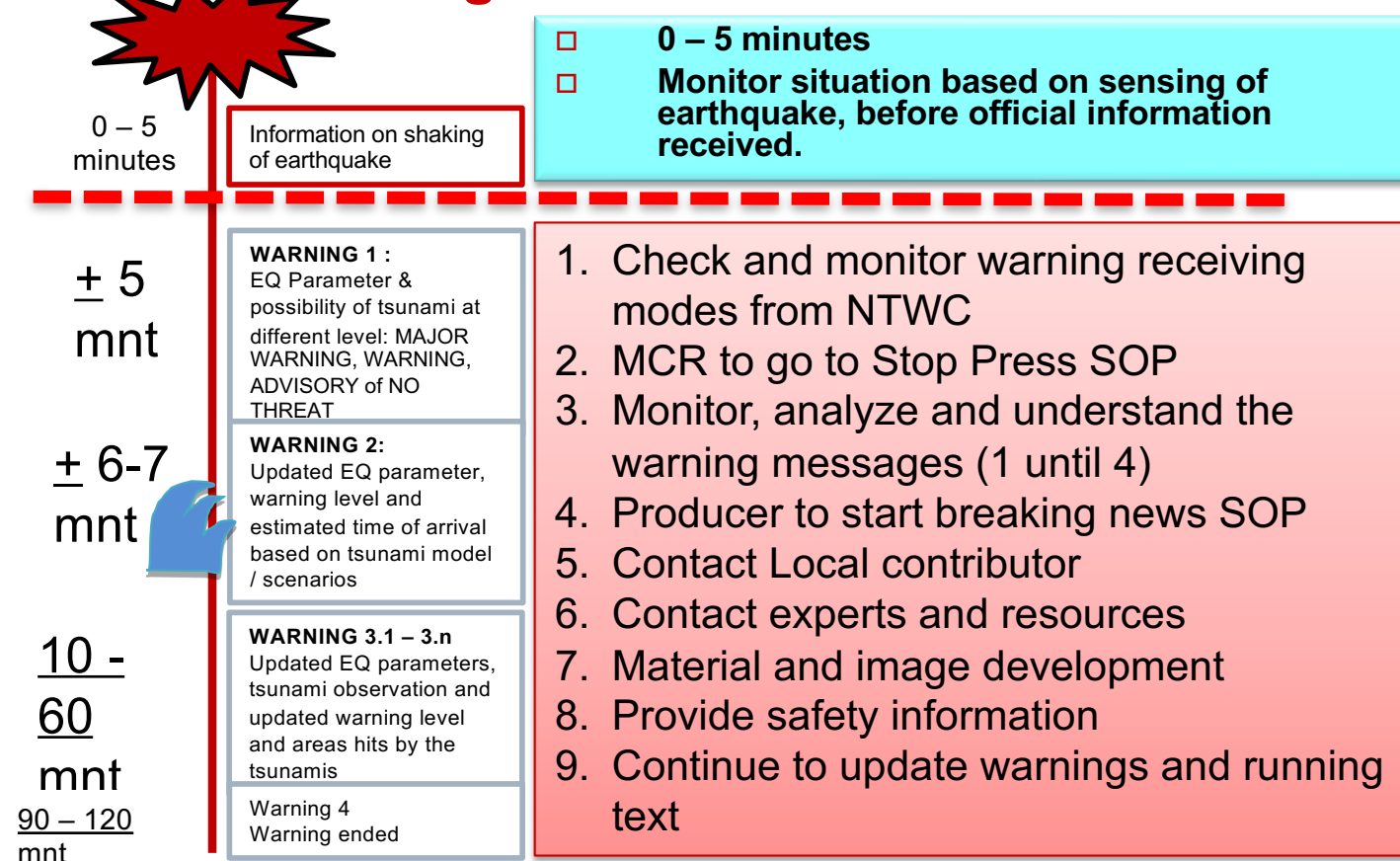
- **The Source of TEW messages**
 - Tsunami Warning Centers or Disaster Management Offices
 - Official warning – International information
- **Decision Making Process in Media**
- **Understanding the warning message**
 - Warning bulletin
 - Warning level
- **Understanding tim-lines**
 - Local, Regional, and Ocean Wide
- **SOP for local tsunami vs distance tsunami**
- **Ending of early warning**

Establish EW broadcasting SOP

FLOWCHART ON WARNING DISSEMINATION FOR BROADCASTING MEDIA



EW Broadcasting SOP



EW Broadcasting SOP

(Observation from local contributor)

Timeline	Description	What	Who	Note	
<div style="border-left: 2px solid red; border-bottom: 2px solid red; padding-left: 5px; padding-bottom: 5px;"> Up to 5 minutes after the EQ </div>	EQ Occurs	<ul style="list-style-type: none"> Monitor NTWC communication mode Get detailed information from local contributor → to decide breaking news Preparation for the Stop Press, Running text, and breaking news 	Duty Officer	WRS, SMS, Email, and Fax	
	00:00:00	Received warning from NTWC	Analyze the message (Potential tsunami or not). If yes, go to "Stop Press"	MCR on Duty and Duty officer	WRS Switch SMS (dedicated Mobile phone)
	00:00:30-00:01:00		Stop Press Mode	MCR on Duty	WRS Switch: Freeze Pane and High tone for 30 second



EW Broadcasting SOP

(No observation from local contributor)

Timeline	Description	What	Who	Note
00:00:00 (+ time from EQ)	Received warning 1 from NTWC	Analyze the message (Potential tsunami or not). If yes, go to “Stop Press”	MCR on Duty	WRS, SMS (dedicated mobile phone)
00:00:30 – 00:01:00		Stop Press Mode	MCR on Duty	WRS Switch: Freeze Pane and High tone for 30 second
00:00:00 – 00:02:00		Monitor NTWC communication mode	Duty officer	SMS, Email, Fax
00:00:00 – 00:02:00		Contact Producer on duty and news team	Duty officer	By phone
00:00:00 – 00:05:00	Check warning 2 from NTWC	Monitor NTWC communication mode	Duty officer	SMS, Email, Fax
00:02:00 – 00:10:00		Preparation for breaking new	Producer on Duty and News team	

Online Media and Social Media in Tsunami Warning Chain





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Thank You

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