End To End Tsunami Warning – Stakeholders, Roles & Responsibilities, SOPs, Linkages

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Outline

- Stakeholders
- Linked by SOPs
End-to-End Tsunami Warning

EQ Tsunami

Country Alert System

Emergency Alert System & Mass Media

Natl / Provincial / Local Govt

Public

TWC

Int'l / Nat'l

ITIC, SeismicReady Consulting 2009, after Japan Cabinet Office 2006
End-to-End Tsunami Warning

Stakeholders

- Regional Tsunami Warning Centres (RTWC)
- National Tsunami Warning Centres (NTWC)
- Disaster Management Offices (DMO)/Local Authorities
- Emergency Services
- Media
- Public
Regional Warning Centres (Intl RTWC)

(PTWC, US NTWC (formerly WC/ATWC)

- Regional Monitoring & Detection (24/7)
- International collation/sharing of data
- Issue Regional Threat Advice to National Tsunami Warning Centres
- Cancel Regional Threat
National Warning Centres (NTWC)

- Local (Country-specific) Monitoring & Detection (24/7) using RTWC or natl data streams
- Receive RTWC Alerts (TWFP)
- Assess information to determine local threat
- Issue Warnings to DMO’s, media & agencies
- Cancel National Warnings
- Research & Public Education (with stakeholders)
Disaster Management Offices
(National and Local Authorities)

- Receive Warnings from NTWC
- Activate local public alert systems as needed
- Decide on & Manage Evacuations
- Communicate ‘All Clear’ (safe to return)
- Signage
- Public Education (with other stakeholders)
Emergency Services

- Support DMO/Local Authorities with
  - Public alerting
  - Evacuation
  - Law & Order
  - Response after tsunami has struck (Search and Rescue, etc)
Media (radio, television)

- Convey Official Warnings (National & Local)
  
  *But also:*

- Convey Unofficial Warnings
  
  *Therefore:*

- Can cause or counter public response

*International media can mis-report warning regions/countries causing public confusion*
Public

- End Receiver of Warnings
- Convey Official and Unofficial Warnings
- To minimize their confusion, they must be educated to understand:
  - Official Warnings (how will they be warned)
  - Natural Warnings (what to look out for)
  - Where and What to do
    - Evacuation zones
    - Routes & Safe zones
  - How to respond if evacuation zones are not defined
End-to-End Tsunami Warning

Stakeholder Relationships

PUBLIC MEDIA DMO NTWC / TWFP RTWC / ITWC
End-to-End Warning SOP – Activities

- **NTWC RTWC msg Receipt, Natl Assess & Notify SOP**
- **Evacuation, Emergency Svcs SOPs**
- EQ +0 min
- Hazard ?
- Safety Threat ?
- Yes !
- T+15
- Wave Attacks
- Lives Saved

**RTWC Detect, Assess & Notify SOP**

**DMO Receipt, Evac Decide, & Notify SOP**

**Public Responds**
- Public Aware
- Pre-event
  - Signage, Evac Maps
  - Natural Warnings
  - Exercises
Stakeholder Coordination is Essential

**TSUNAMI COORDINATION COMMITTEE**
Hazard Assessment
Warning Coordination & EM
Preparedness & Mitigation

**Warning Center**

**Emergency Management**
1st Responders (police, fire, water safety)
medical svcs, search & rescue

**Science and Engineering**

**Civil Society & NGOs:**
- Community organizations: (social, gender, cultural, age, language, religious …)
- Disaster response & relief
- Trade, commerce, workers

**Government Agencies:**
- Regional Planning
- Social Infrastructure Works
- Agriculture & Forestry
- Health & Sanitation
- Environment, Transportation…

**Local Communities**
Mass Media
Energy, Telecomm
Tourism
Private Sector
International Agencies
Thank You

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