Emergency Broadcasting

Collaboration with the government on disaster mitigation

Public Awareness and Outreach on Tsunami Hazard, March 11-12, 2013

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NHK (Japan Broadcasting Corporation)
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Great East Japan Earthquake M9.0
Japan Meteorological Agency and NHK

- Earthquake early warning
- Tsunami warning
- Weather warnings
## NHK Emergency Procedure for Earthquake & Tsunami

### JMA Seismic Intensity Information

<table>
<thead>
<tr>
<th>JMA Seismic Intensity levels</th>
<th>NHK Emergency Operation</th>
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</thead>
<tbody>
<tr>
<td>7 ~ 6 lower</td>
<td>Breaking news on all 7 channels</td>
</tr>
<tr>
<td>5 upper 5 lower</td>
<td>Breaking news (depending on situations)</td>
</tr>
<tr>
<td>3~4</td>
<td>TV Subscript and AM1</td>
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</table>
Earthquake Early Warning System

When strong tremors are expected, the JMA issues Earthquake Early warning.
Earthquake Early Warning System

Detect the Primary-wave.

"Epicenter" "Magnitude" "Seismic intensity" estimated.

NHK announce "possible strong tremors"

Estimate intensity after the quake occurred → not a prediction
Aired on Any Programs

Broadcast "automatically" within 1 second.

JMA  NHK

TV

RADIO

Chime & Scripts

Chime & Automatic voice
How many seconds left before tremors?

- **Miyako**: 20 seconds
- **Kesen-numa**: 10 seconds
- **Ishinomaki**: 10 seconds
- **Sendai**: 15 seconds
- **Tokyo**: 65 seconds

The Great East Japan Earthquake
NHK will transmit signal in special emergency cases such as warning of large-scale of tsunami.

TVs and radios will be automatically activated by the signal.

EWS has carried out 21 times since 1985. All of them for tsunamis.
Automatic Picture Generation System

Earthquake information (epicenter, magnitude, intensity)

Tsunami Warning (height and arrival times)

Generated automatically

NHK

JMA
Automatic Script Generation System

Scripts are automatically generated in a few seconds

Earthquake information
Tsunami Warning

JMA

data
NHK Seismic Intensity Meters

73 locations nationwide

→ Data gathered up to Tokyo within 1.0 min.
1983 Nihon-kai-chubu Earthquake

19 minutes to broadcast

JMA

Tel & Fax

NHK

14 min. to data processing

5 min. to broadcast
Tsunami Information System improvement

Before: 19 minutes

JMA: 14 min. to data processing → Tel & Fax (5 min. to broadcast)

After: 3 minutes

JMA: 3 min. to data processing → Data transmission → NHK broadcast immediately

Just push one button!
Disaster Drills

Presenters and staff in the Tokyo News room do drill every night.

Local stations carry out the practical training.
Simulation Trainings

The headquarter and local stations do drills simulating disasters.
Ex. large earthquakes, tsunamis, volcanic eruptions, typhoon, and floods.
1: Reinforce broadcasting systems against for next major quakes.

2: Back-up to continue broadcasting

3: Improve announcing comments to early evacuation

4: Provide various information with all channels.
Japan Meteorological Agency

On 3.11:
Initially forecasted the tsunami as three to six meters. But actually more than 10 meters high.

Now:
Not to use exact height measurements but rather refer as a “huge tsunami.”
1: Reinforce broadcasting systems

- Not easily identified by people with color-vision defects.
- NHK changed colors of map with specialists of the Color Universal Design Organization.

Improvement of Tsunami Warning Maps
Improvement of Tsunami Warning Maps

Before

After

- All commercial broadcasters use same colors
1: Reinforce broadcasting systems
3: Improve announcing comments

Urge people to evacuate by stressing a sense of crisis.

“Warning for massive tsunami is issued. Tsunami may surge higher than expected. Please evacuate.”

“Warning for huge tsunami is issued. Run away now. Remember the Great East Japan Earthquake and flee for your life immediately to higher places. No stopping or turning back.”
4: Provide various information

- Data broadcasting
- One-segment broadcasting
- Mobile-Tablets
- Internet

Live streaming
SNS

Anytime, anywhere, easier access for NHK!
Possible major earthquakes

- The Great East Japan Earthquake
- Tokai Earthquake
- Tonankai and Nankai Earthquakes
- Chubu-Kinki Earthquakes
- Trench type Earthquakes in the Vicinity of the Japan and Chishima Trenches
- Tokyo Inland Earthquakes
Thank you for your attention!
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