

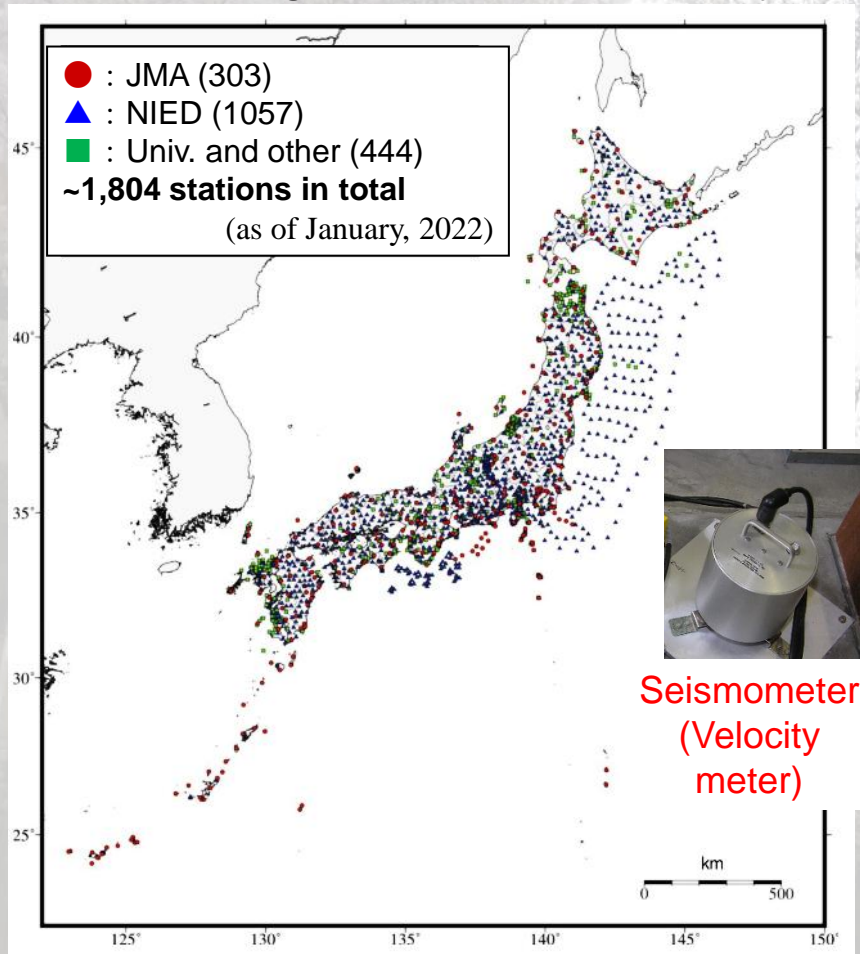
National Progress Report

Japan

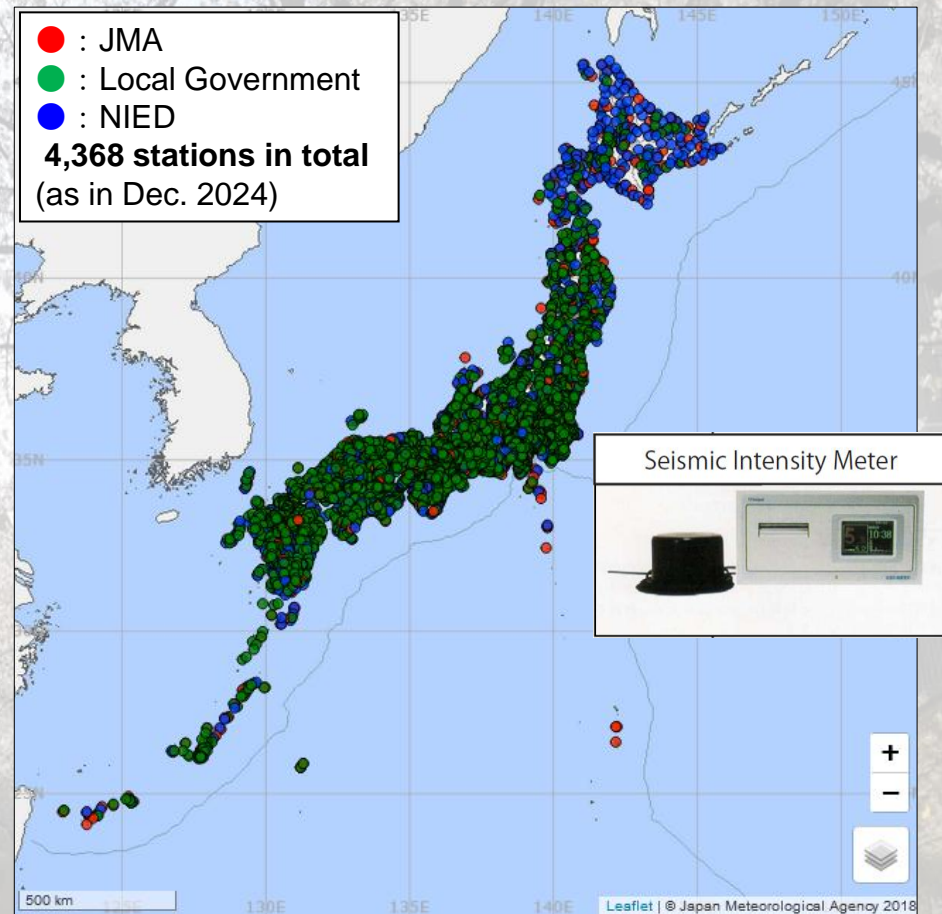
OKAGAKI Akira
Japan Meteorological Agency
(JMA)

Earthquake Monitoring

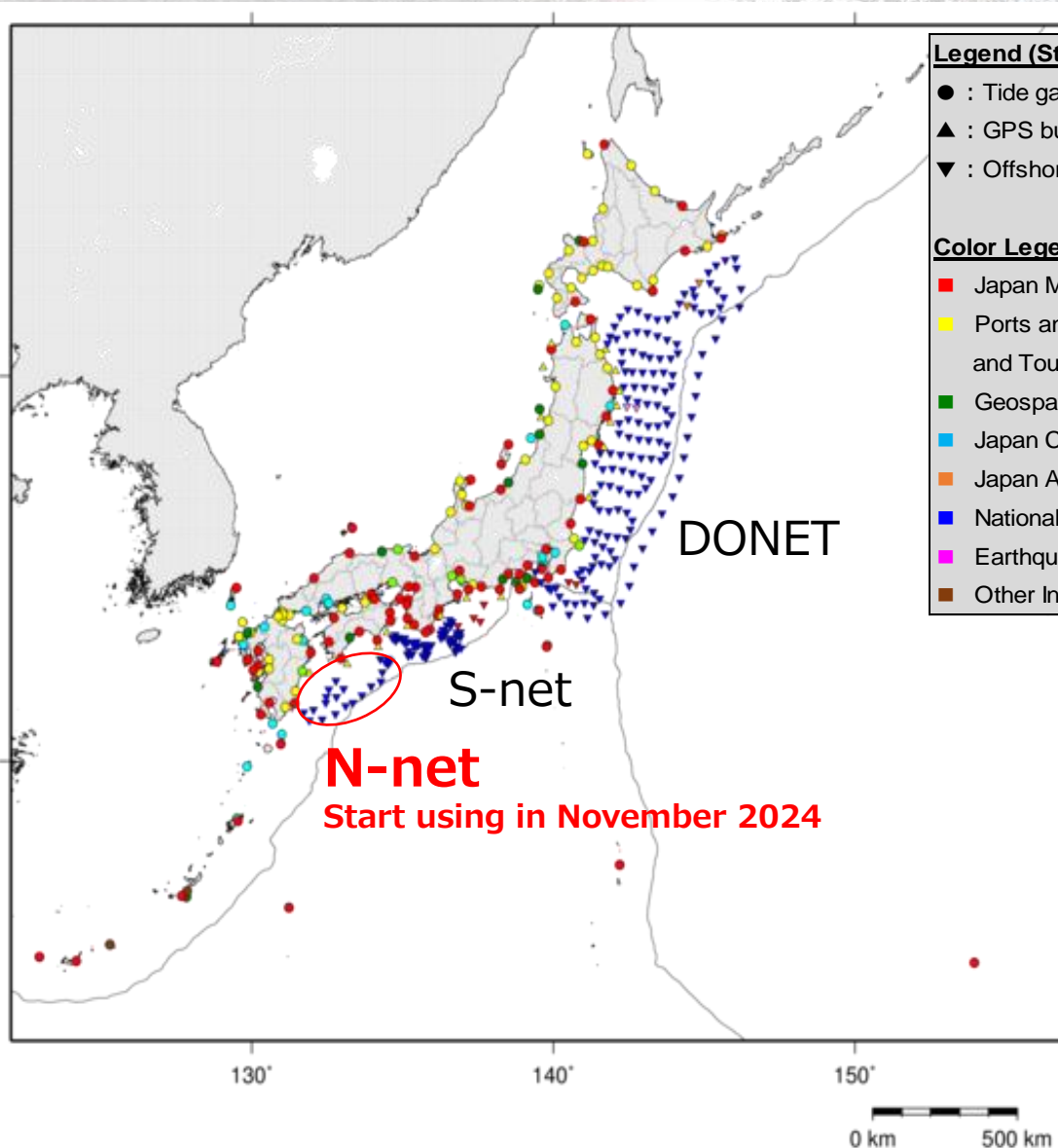
Monitoring of Earthquake Activity



Seismic Intensity



Sea Level Monitoring

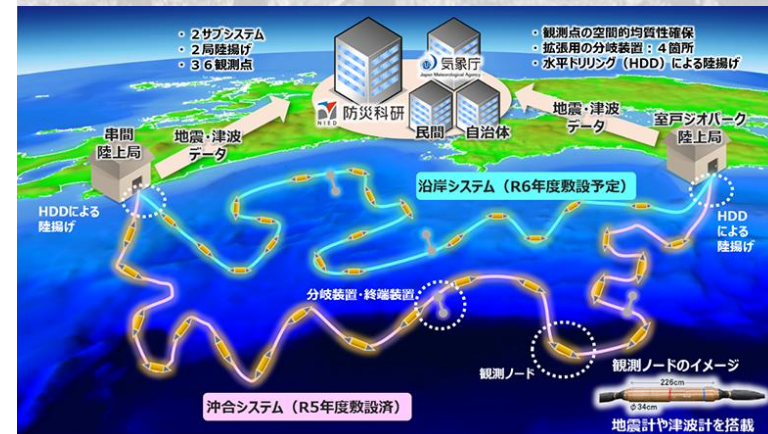


Legend (Station Types)

- : Tide gauges / tsunami meters
- ▲ : GPS buoys
- ▼ : Offshore-water-pressure gauges (Cable)

Color Legend (Institutions)

- Japan Meteorological Agency (JMA)
- Ports and Harbours Bureau (PHB) of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT)
- Geospatial Information Authority of Japan (GSI)
- Japan Coast Guard (JCG)
- Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
- National Research Institute for Earth Science and Disaster Resilience (NIED)
- Earthquake Research Institute (ERI), the University of Tokyo
- Other Institutions



N-net

Source: NIED website

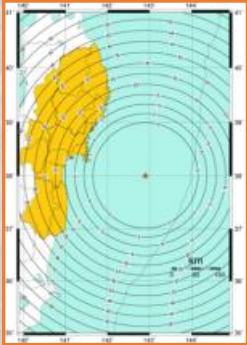
Warnings and Information

✓ JMA issues various types of information on earthquakes and tsunami.

Earthquake !

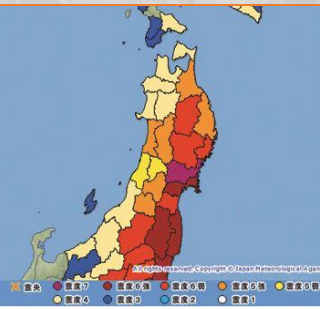
Several seconds

Earthquake Early Warning



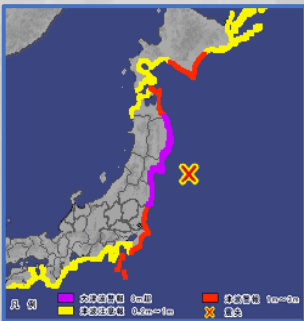
Seismic Intensity Information

90 sec.

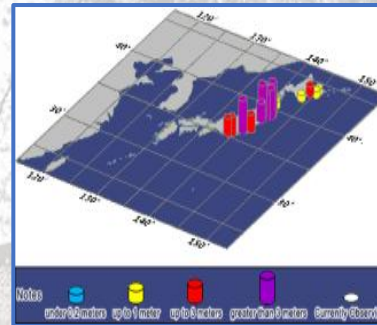


3 min.

Tsunami Warning/ Advisory



Tsunami Information (Tsunami Observations)



5 min.

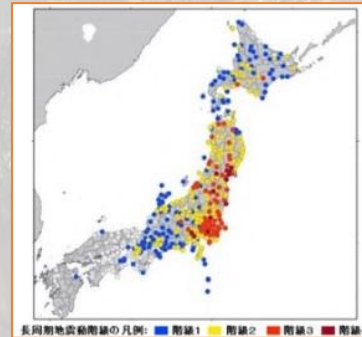
Earthquake and Seismic Intensity Information



Tsunami Observed

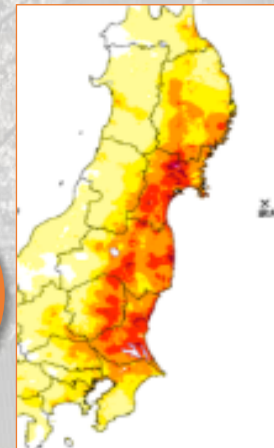
10 min.

Information on Long-Period Ground Motion



Estimated Seismic Intensity Distribution Map

15 min.



The 2024 Noto Peninsula Earthquake

At 16:10 on Jan. 1, 2024 (JST)
the earthquake occurred.

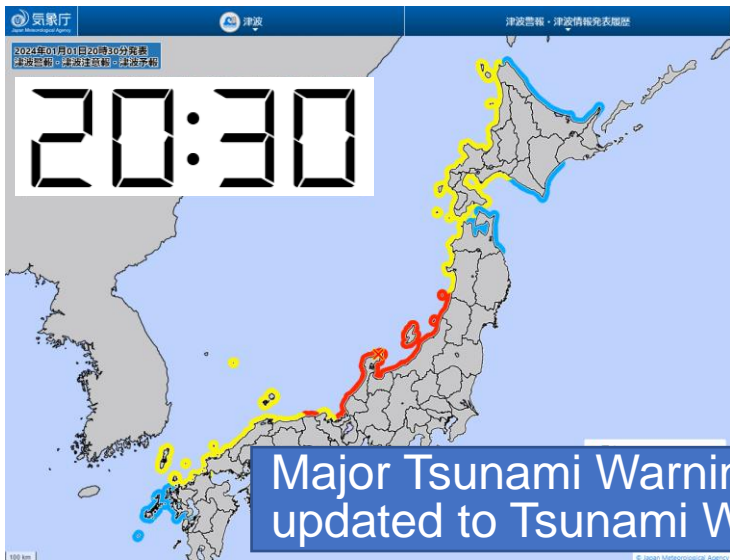


Magnitude 7.4
very shallow

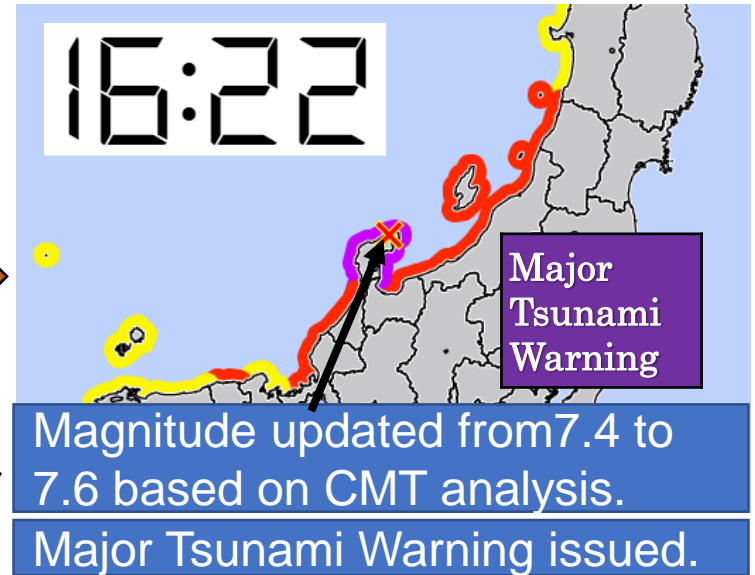
**Tsunami
Warning**

**Tsunami
Advisory**

Tsunami Warnings issued.



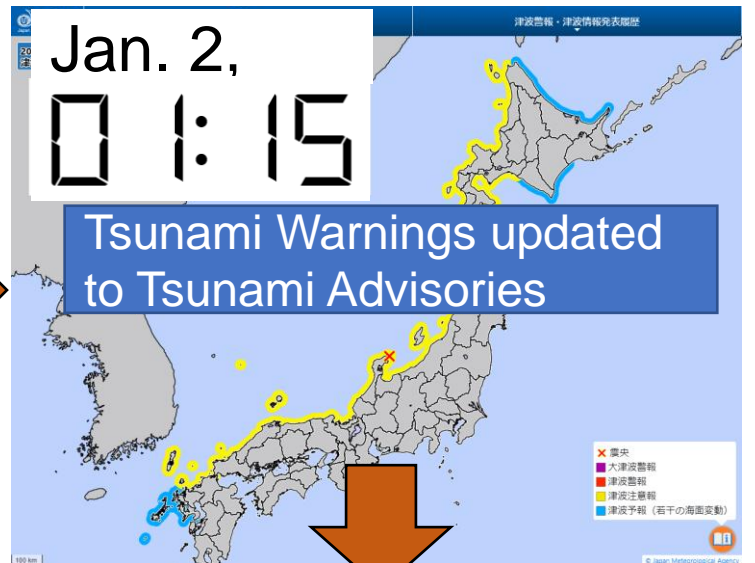
Major Tsunami Warning
updated to Tsunami Warning



**Major
Tsunami
Warning**

Magnitude updated from 7.4 to
7.6 based on CMT analysis.

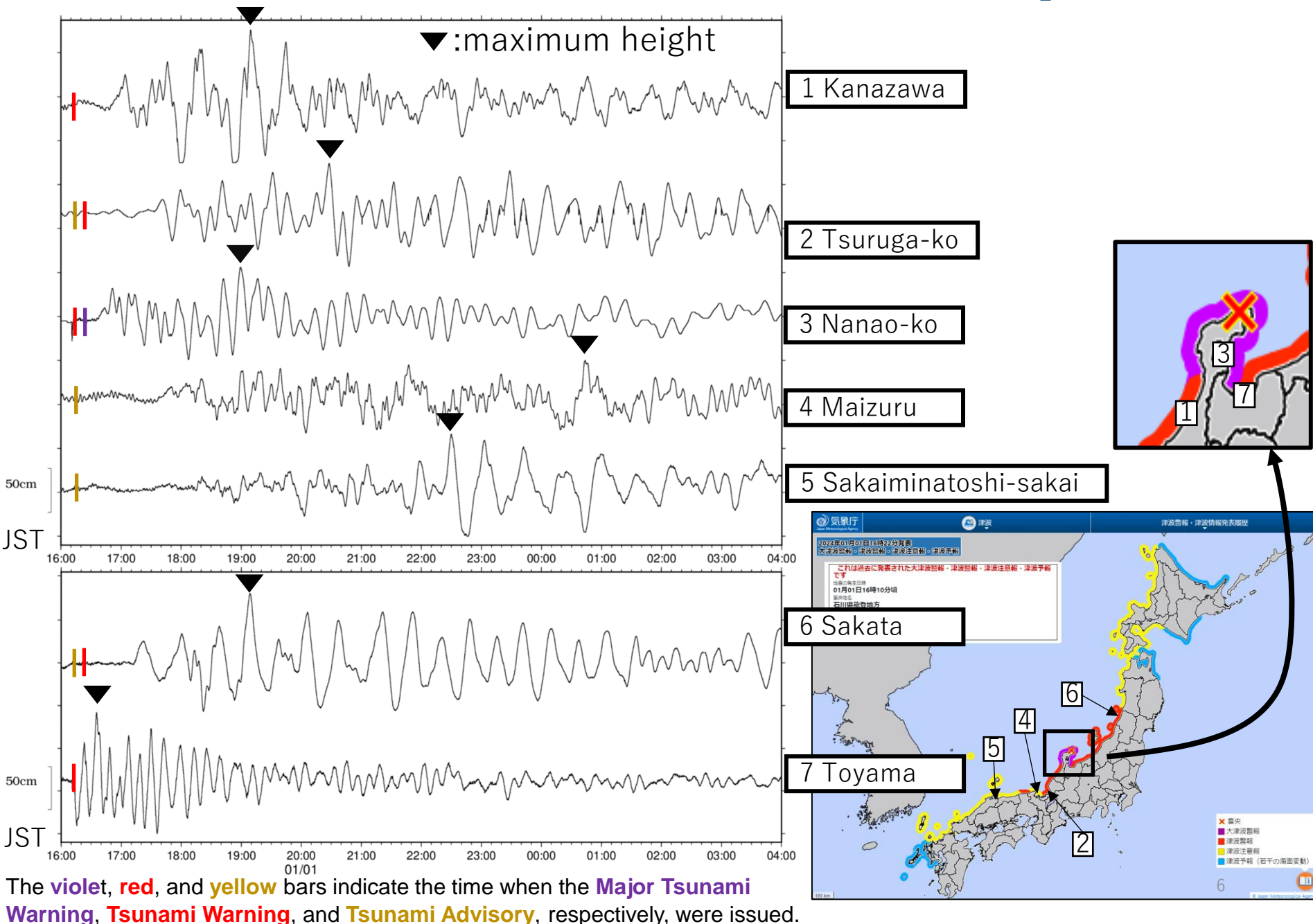
Major Tsunami Warning issued.



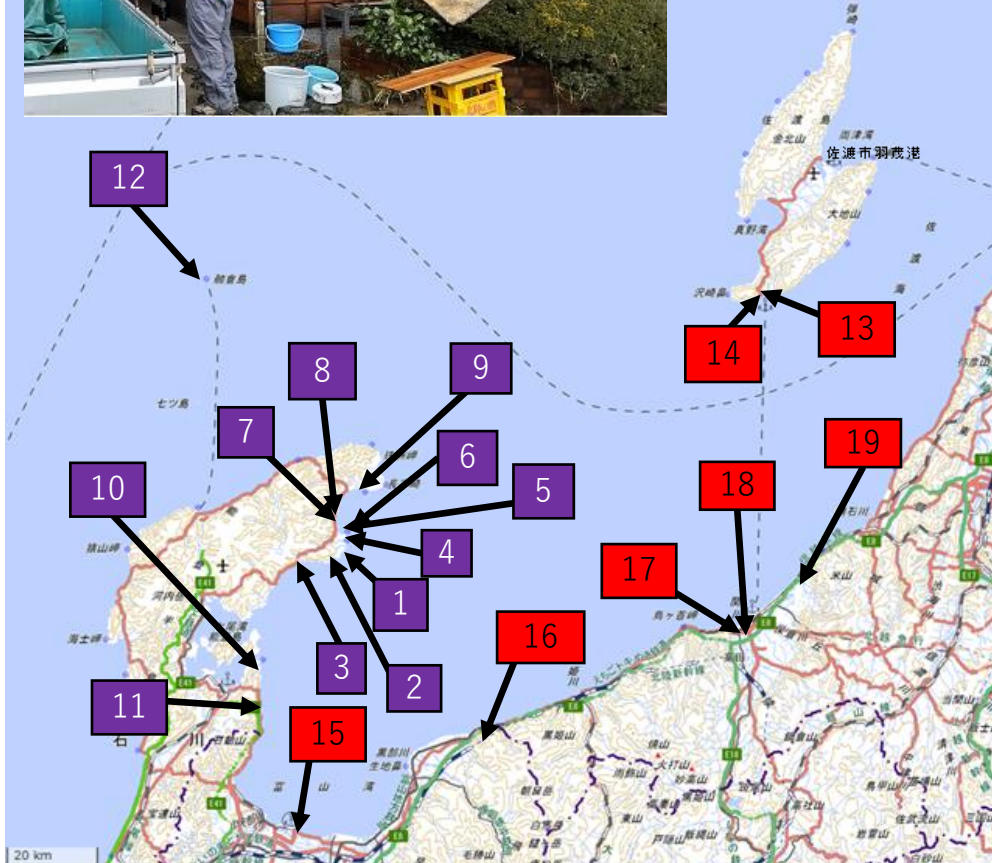
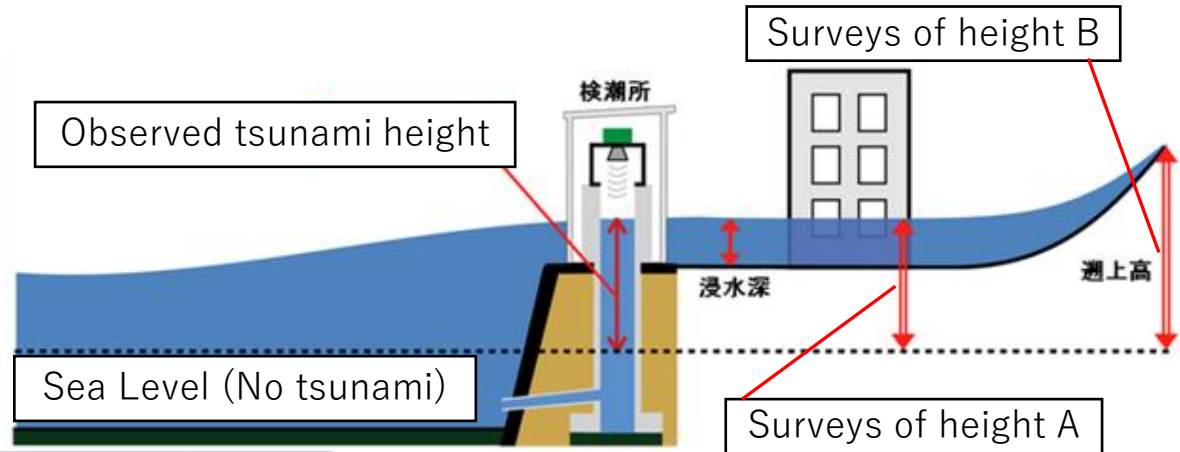
Tsunami Warnings updated
to Tsunami Advisories

Jan. 2, 10:00,
all Tsunami Advisories canceled.

The 2024 Noto Peninsula Earthquake



The 2024 Noto Peninsula Earthquake



Points where Major
Tsunami Warning
issued

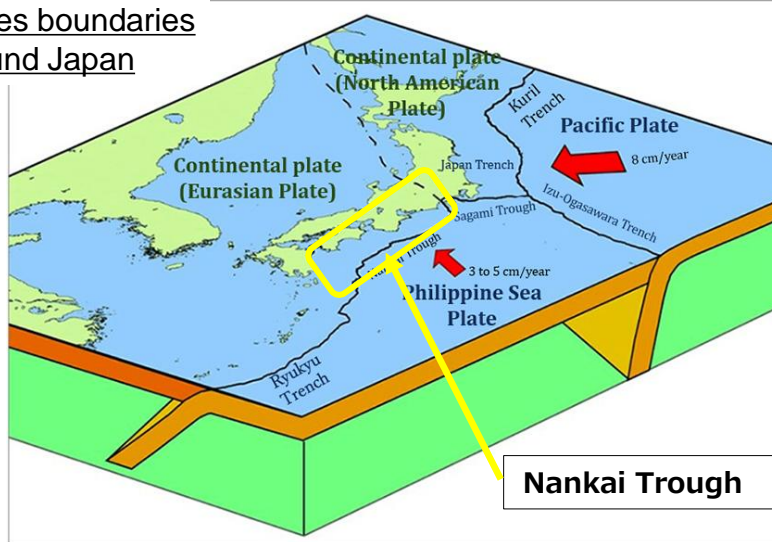
	Height	Survey
1	4.7m	A
2	2.2m	A
3	1.3m	A
4	4.0m	A
5	3.1m	A
6	1.7m	B
7	2.7m	A
8	2.9m	A
9	4.3m	A
10	1.8m	A
11	2.4m	B
12	2.9m	A

Points where
Tsunami Warning
issued

	Height	Survey
13	3.8m	A
14	1.9m	A
15	1.5m	B
16	1.4m	A
17	4.5m	B
18	5.8m	B
19	2.9m	B

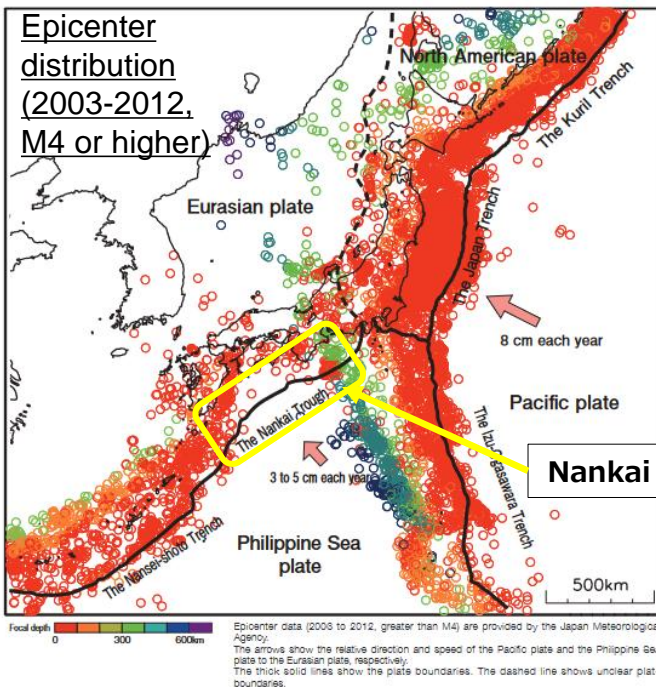
Nankai Trough Earthquake Extra Information

Plates boundaries around Japan

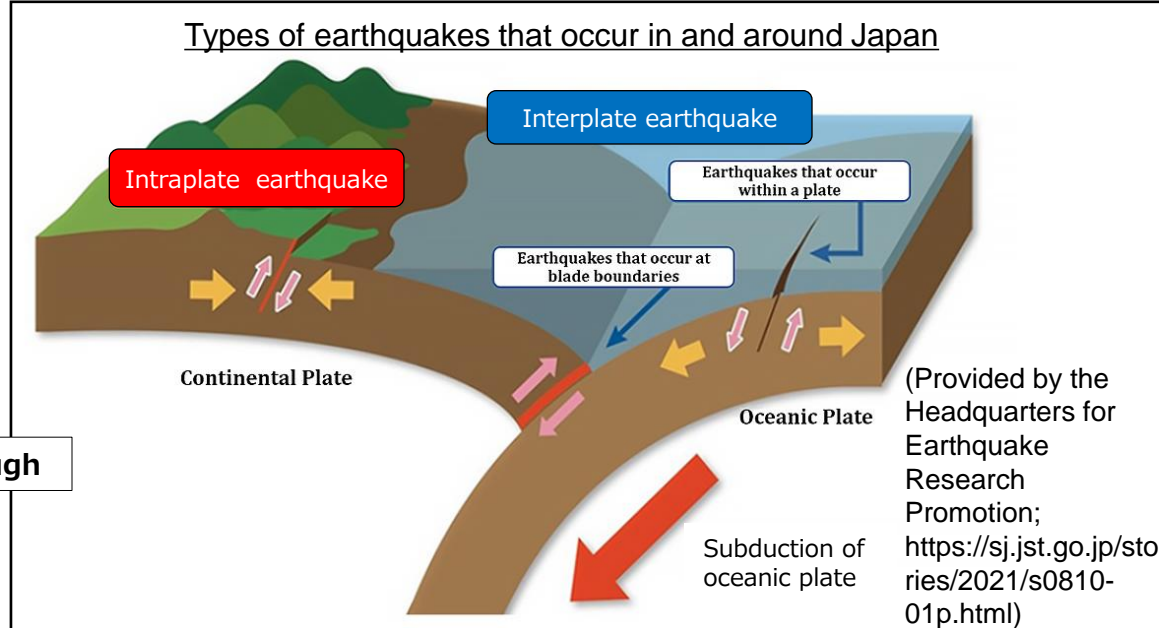


- ✓ Nankai Trough is located where the Philippine Sea plate subducts under the continental plate at the southwest of Japan.
- ✓ Nankai Trough Earthquakes occur with a cycle of roughly 100-150 years.
- ✓ The number of victims is estimated to be up to 323,000.

Epicenter distribution (2003-2012, M4 or higher)



Types of earthquakes that occur in and around Japan



(Modified from "Understanding Earthquakes" by the Headquarters for Earthquake Research Promotion)

Nankai Trough Earthquake Extra Information

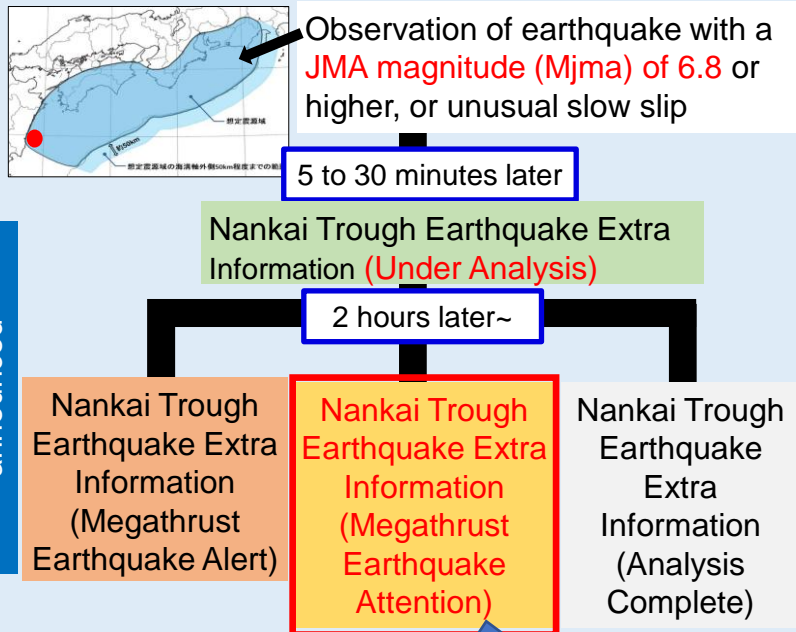
- On 8 August 2024, an earthquake M7.1 occurred in the Nankai Trough Earthquake area.
- JMA convened a committee of seismic experts to discuss the expected potential for earthquake occurring, and issued Nankai Trough Earthquake Extra Information for the first time since it began operations in 2019.



Joint press-conference by the chair of the committee, and JMA

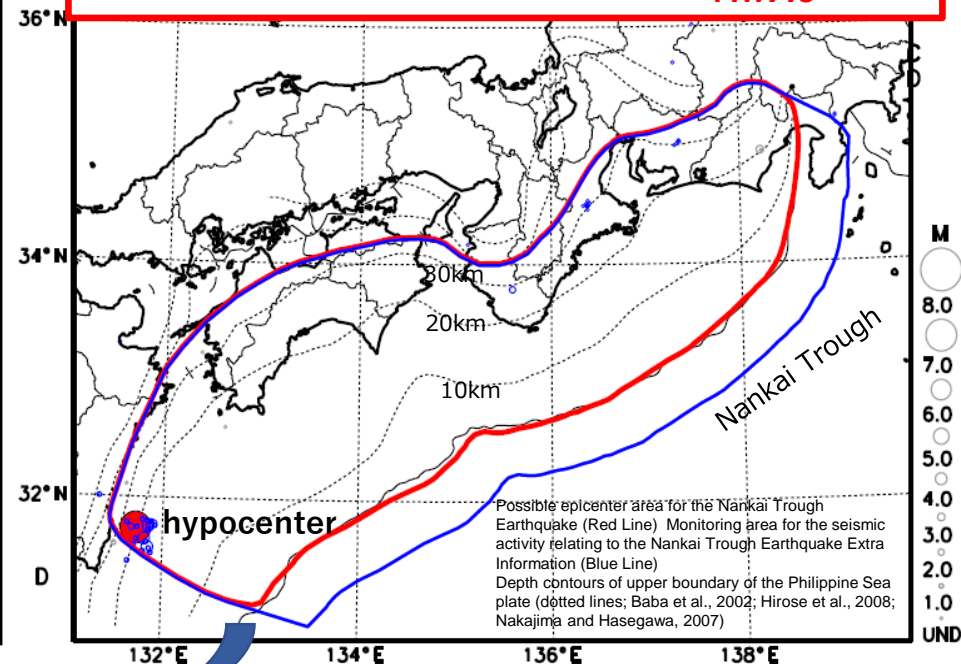
Procedure for Nankai Trough Earthquake Extra Information

(Modified from Earthquake Research Committee, 2013)



8 August 2024, 16:42(JST) Mjma7.1 Focal depth: 31 km








Mw7.0



Nankai Trough Earthquake Extra Information

(Disaster prevention Measures)

✓ The disaster prevention measures that people should take are linked to the keywords.

Keyword (About 2 hours later)	Nankai Trough Earthquake Extra Information (Megathrust Earthquake Alert)	Nankai Trough Earthquake Extra Information (Megathrust Earthquake Attention)	Nankai Trough Earthquake Extra Information (Analysis Complete)
(Earliest) About 2 hours later	<ul style="list-style-type: none"> • Remain prepared for an earthquake on a daily basis • Act in advance if it may not be possible to evacuate before a tsunami arrives <div> <p>evacuation in advance for vulnerable people</p>  </div>	<ul style="list-style-type: none"> • Remain prepared for an earthquake on a daily basis <div> <p>carrying of emergency bag and helmet at all the time</p>  <p>Keeping of a pair of comfortable shoes by your bed</p>  </div>	<ul style="list-style-type: none"> • Consider the potential for earthquakes in your daily routine <div> <p>commuting to school</p>  <p>walking</p>  <p>commuting to work</p>  </div>
1 week later	<ul style="list-style-type: none"> • Remain prepared for an earthquake on a daily basis 	<ul style="list-style-type: none"> • Consider the potential for earthquakes in your daily routine <div> <p>commuting to school and work</p>  </div>	
2 weeks later	<ul style="list-style-type: none"> • Consider the potential for earthquakes in your daily routine 		

✓ JMA is working to raise public awareness of the Earthquake and related information, especially on what to do when information is released.

New leaflets
now available in
14 languages



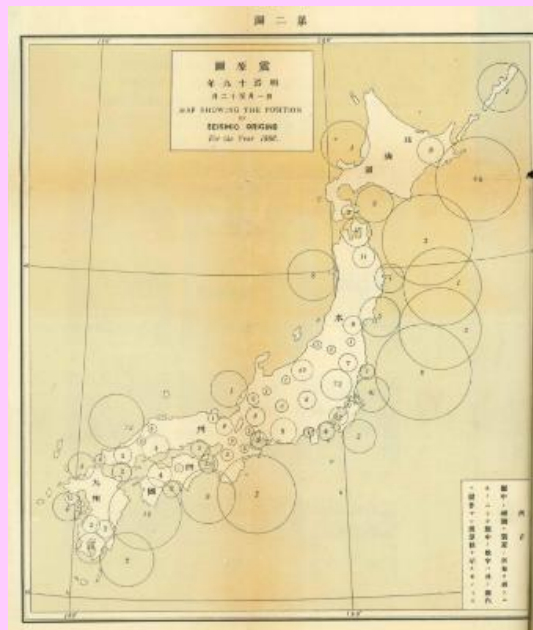
<https://www.jma.go.jp/jma/en/Activities/earthquake.html>

Thank you for your kind attention.

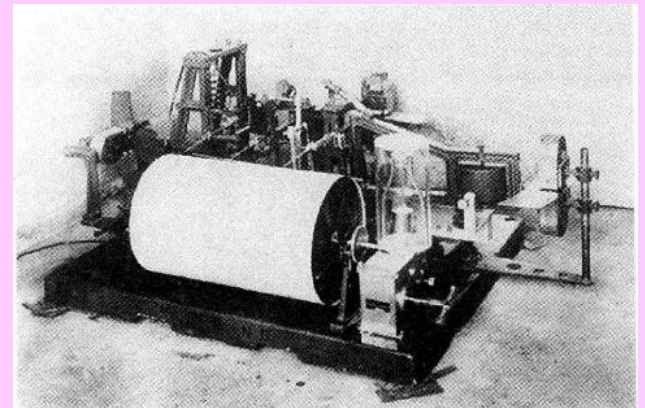
150th Anniversary of the Japan Meteorological Agency



Operation Room in 1964



Epicenter Map in 1886



Strong-motion Seismograph