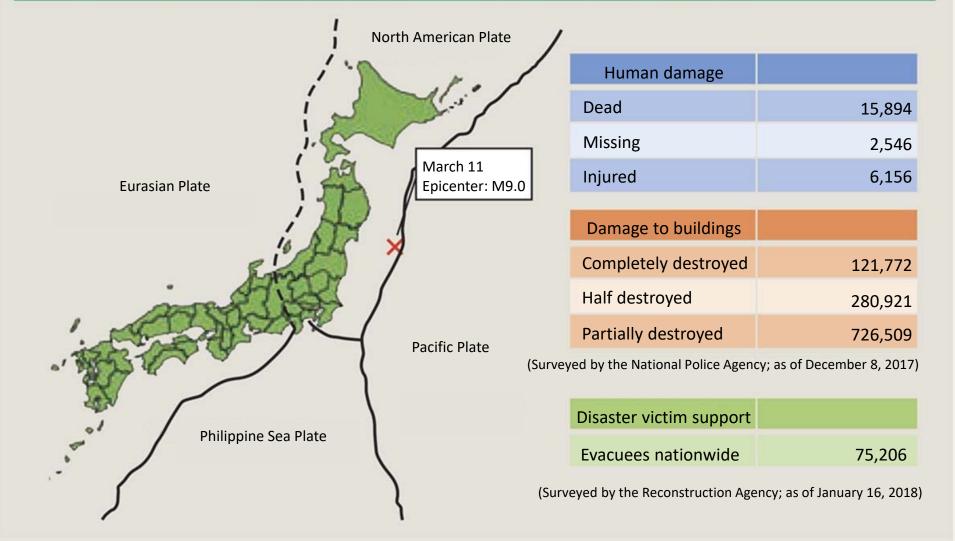
## Damage due to the Great East Japan Earthquake

- A 9.0-magnitude earthquake occurred off the coast of Sanriku at 14:46 p.m. on Friday, March 11, 2011. The Earthquake and subsequent tsunami caused severe damage mainly to the Tohoku region.
- $\bigcirc$  The earthquake was the largest ever recorded in Japan and the fourth biggest in the world since 1900.



Fukushima Daiichi Nuclear Power Station (NPS) Accident

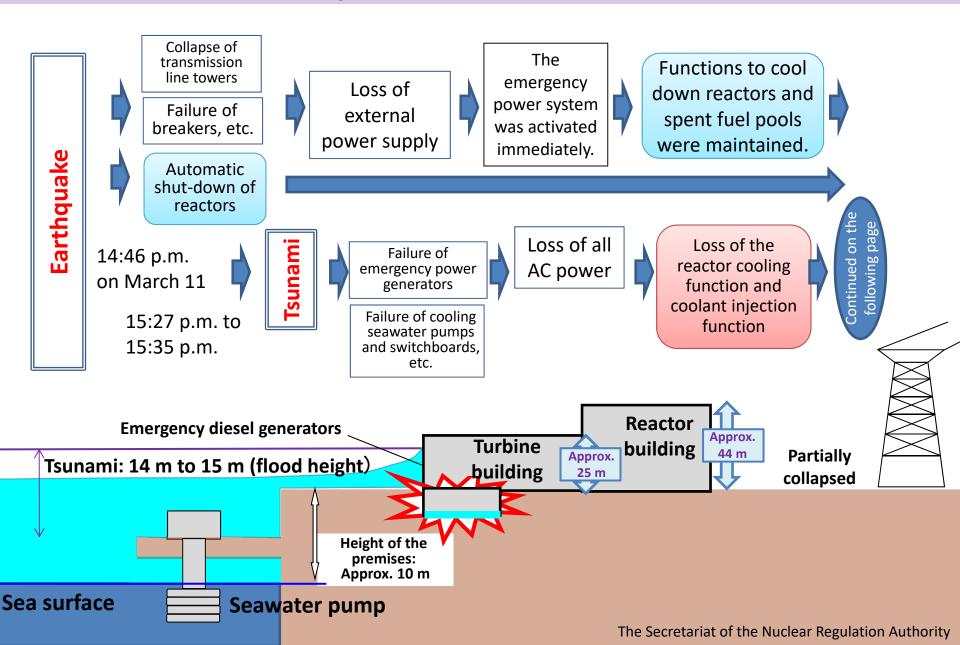
### **Accident at the Nuclear Power Station**



Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS Unit 3 (shot from the air)

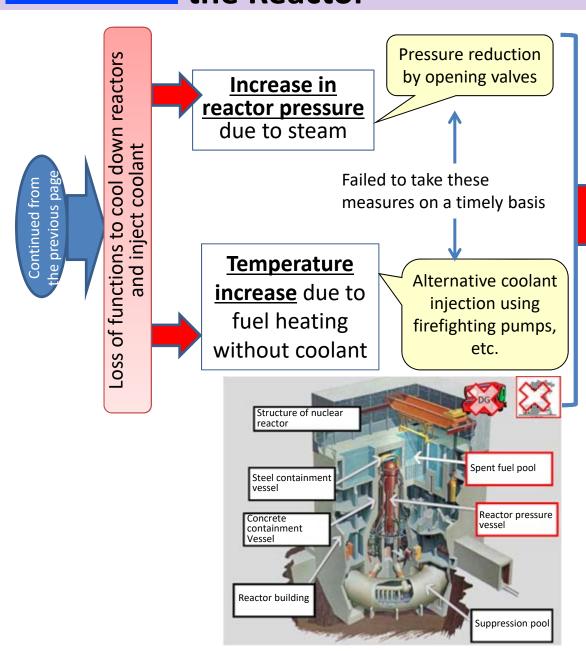
(Shot on March 16, 2011; Provided by TEPCO)

# Factors of the Accident: (Estimated) Influence of the Earthquake and Tsunami



Fukushima Daiichi Nuclear Power Station (NPS) Accident

### Factors of the Accident: (Estimated) Status within the Reactor



#### Events that occurred

- ➤ Generation of hydrogen due to waterzirconium reaction
  - → Hydrogen explosion
- **≻**Overheat of core fuel
  - **→**Core melt
- ➤ Deterioration of air tightness at the pressure vessel penetrator
  - →Part of the melted fuel flowed down from the pressure vessel to the containment vessel.
- Deterioration of the containment vessel
  - →Outflow of high-level radioactivecontaminated water
  - → Discharge of radioactive materials into the air

#### Almost avoided

- **♦** Steam explosion
- **♦** Recriticality
- ◆ Fuel damage due to evaporation of coolant in the spent fuel pool

The Secretariat of the Nuclear Regulation Authority