

# ASSESSMENT of the FUKUSHIMA NUCLEAR ACCIDENT

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# the CHALLENGE:

- Immense Earthquake
- Tsunami Impacts a Large Nuclear Facility
- Evaluate the Impact to US Interests in Japan

# the SOLUTION:

- US Consequence Management Teams

# NATURAL DISASTER & NUCLEAR EVENT OVERVIEW

CONSEQUENCES

ASSESSMENT ACTIVITIES

NATURAL DISASTER &  
NUCLEAR EVENT OVERVIEW

CONSEQUENCES

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# NATURAL DISASTER & NUCLEAR EVENT OVERVIEW

CONSEQUENCES

**ASSESSMENT ACTIVITIES**

# NATURAL DISASTER & NUCLEAR EVENT OVERVIEW

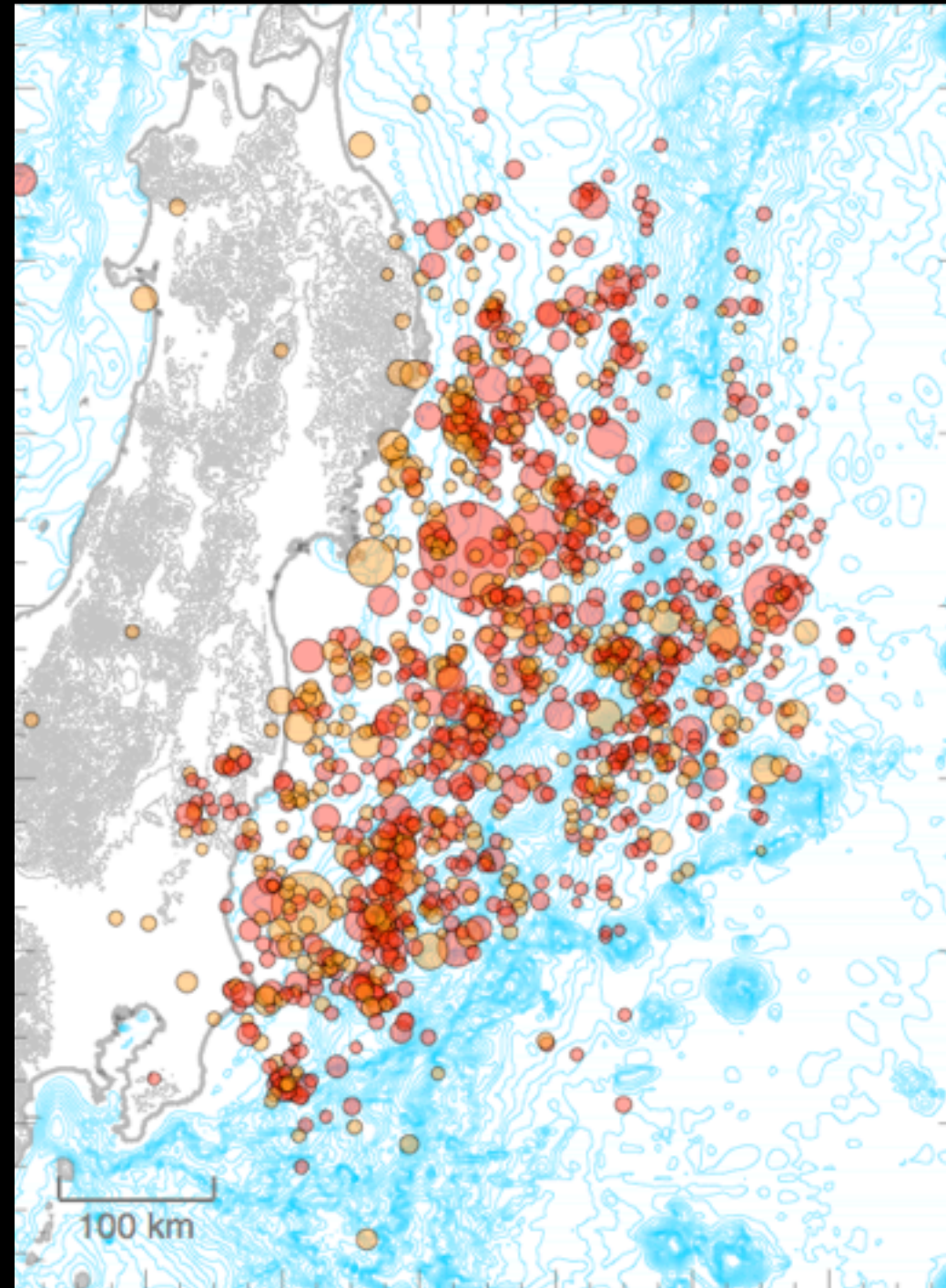
# EARTHQUAKES in JAPAN

A faint, light gray outline map of Japan is positioned in the background, extending from the top right towards the bottom left. It shows the four main islands: Hokkaido, Honshu, Shikoku, and Kyushu, along with numerous smaller islands and the surrounding sea.

- M 9.0 on 3-11-2011
- M > 7, 5 times
- M > 6, 72 times
- M > 5, 423 times

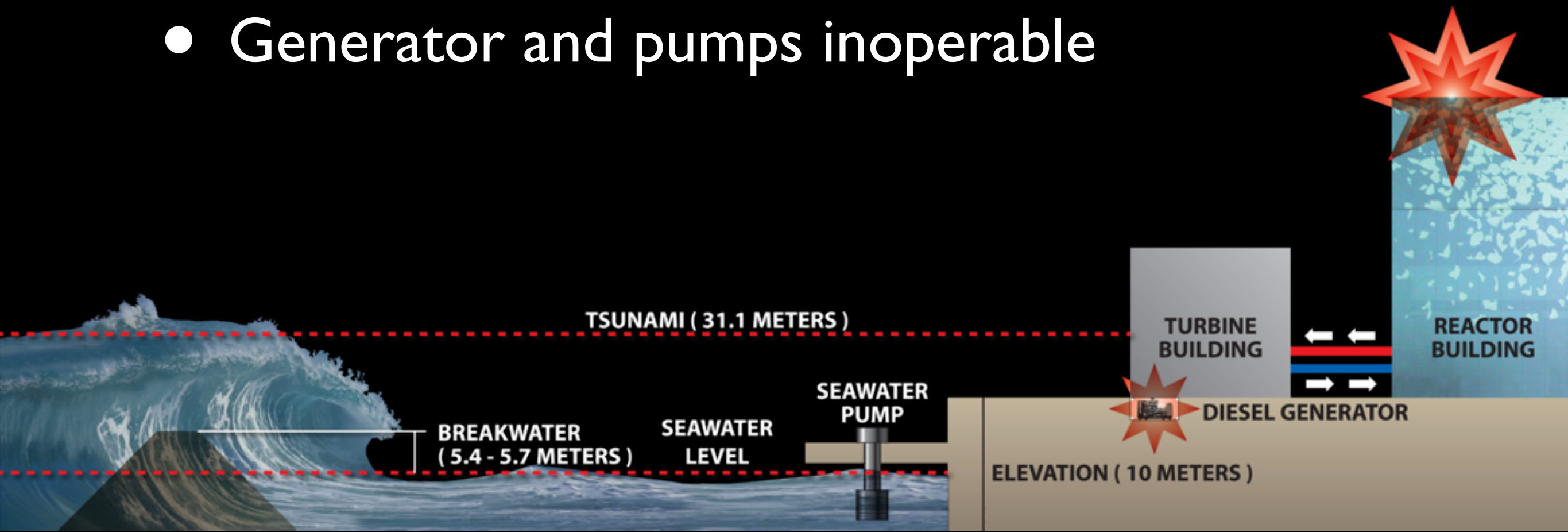


# M 9.0 AFTERSHOCKS



# the TSUNAMI

- 13.1 meters tall
- Plant breakwater was 5.4 to 5.7 meters
- Generator and pumps inoperable





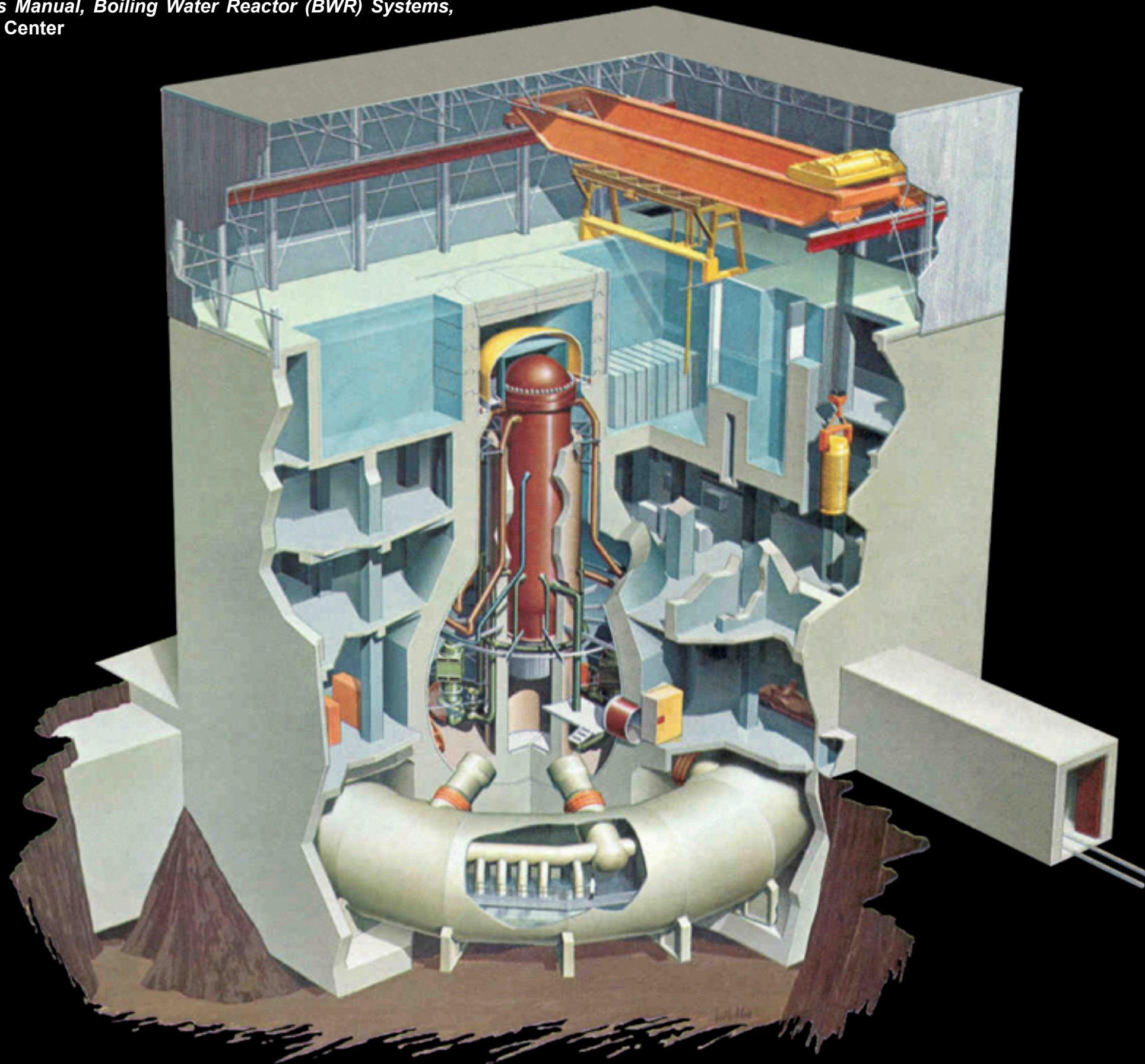
# FUKUSHIMA DAIICHI SITE



# BEFORE

Kyodo News/AP Photo





BWR



Credit: Ministry of Economy, Trade and Industry (MEXT)

# AFTER







# AFTER



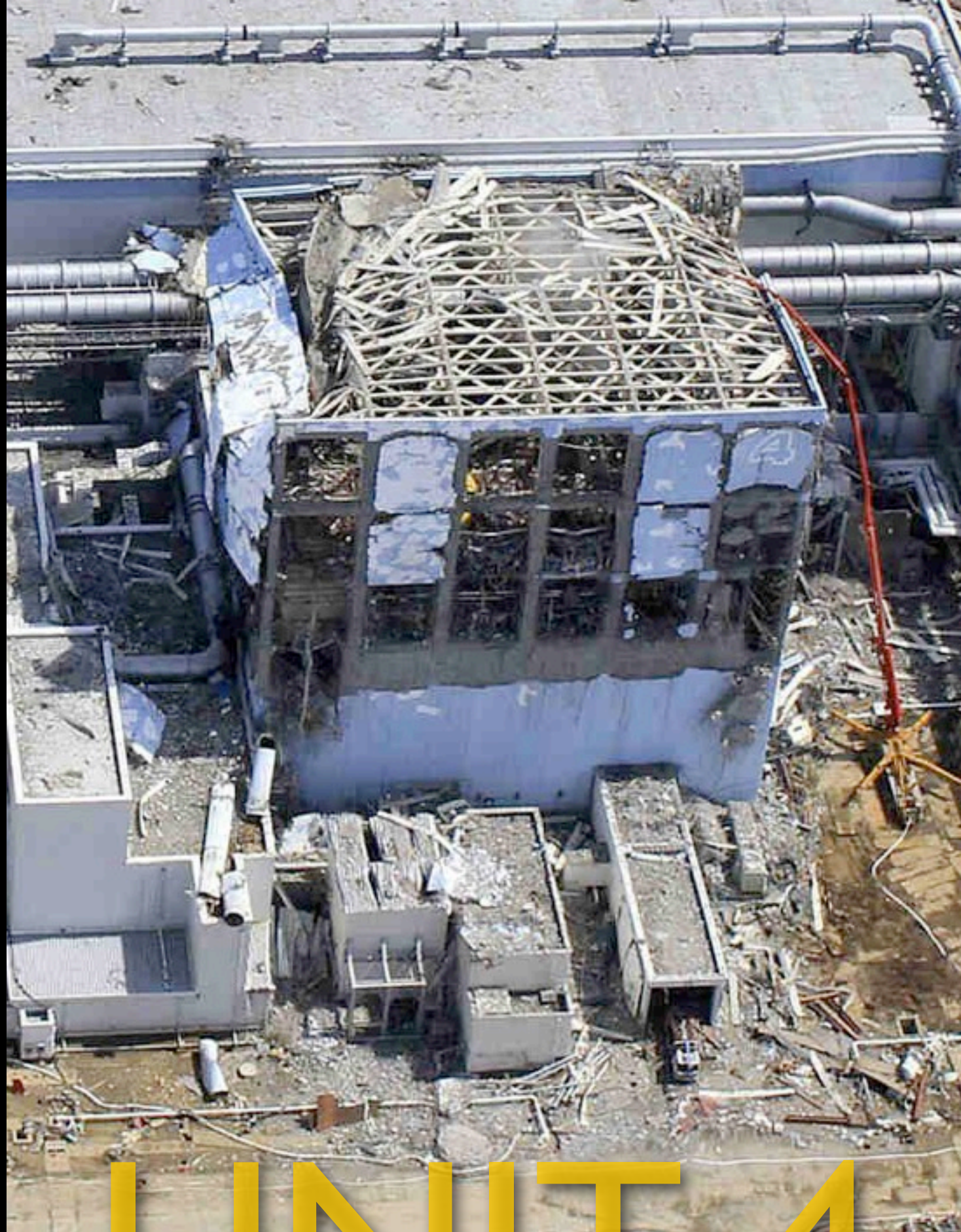


# UNIT 3



# UNIT 3





# UNIT 4





# UNITS 3&4



# UNITS 3&4



# March 2011 event timeline

fri	sat	sun	mon	tues	wed	...	fri	...	mon
11	12	13	14	15	16		18		21

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# *Challenges* **ASSESSMENT ~~ACTIVITIES~~**

**EARLY PHASE assessment**

INTERMEDIATE PHASE assessment

LATE PHASE assessment

Aerial Data (3/17 - 4/29/2011)  
Exposure Rate at 1 Meter

> 12.5 mR/hr   2.17 - 12.5 mR/hr   1.19 - 2.17 mR/hr   0.25 - 1.19 mR/hr   0.03 - 0.25 mR/hr   < 0.03 mR/hr



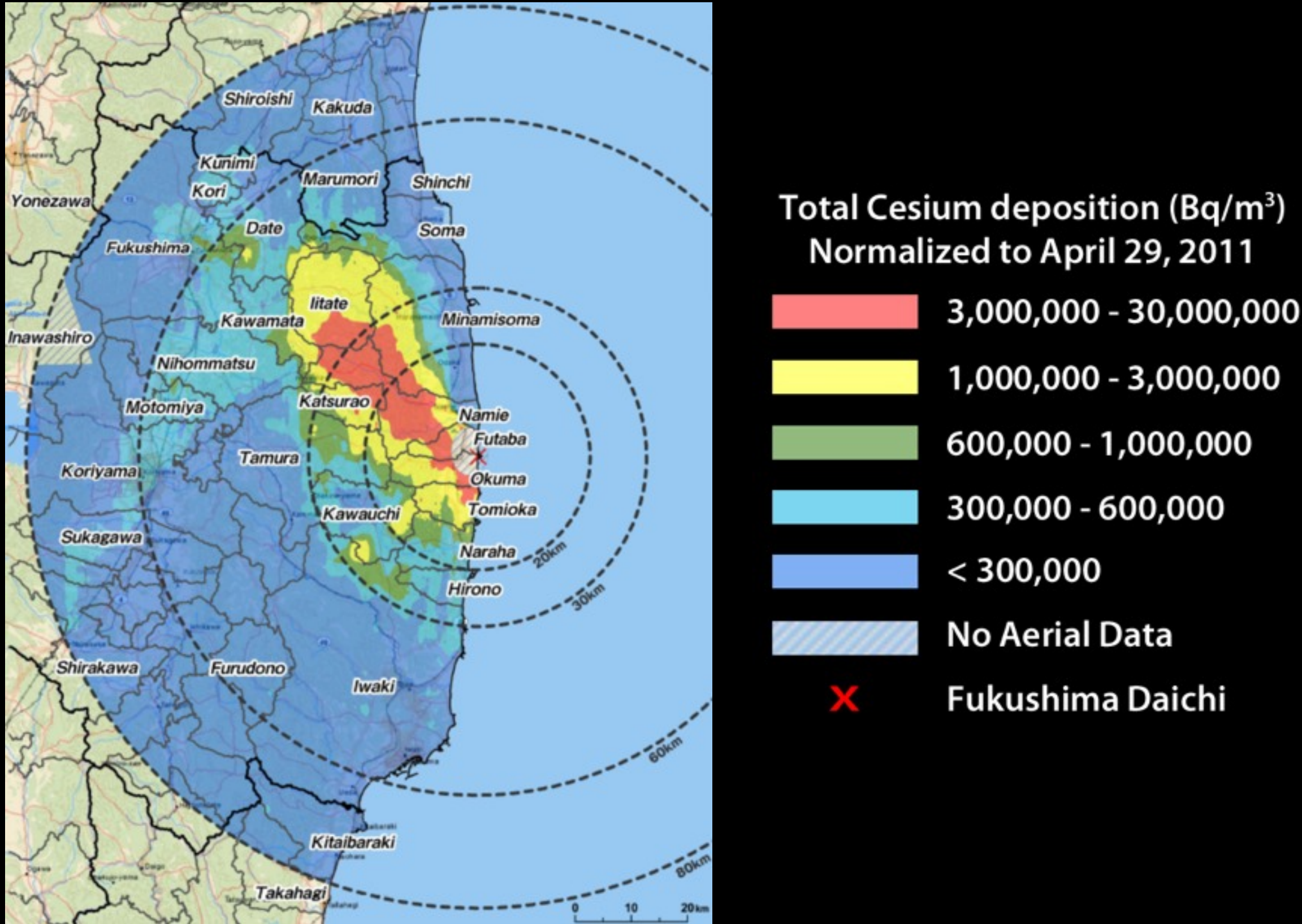
# ARIAL MONITORING SURVEY

EARLY PHASE assessment

# INTERMEDIATE PHASE assessment

LATE PHASE assessment





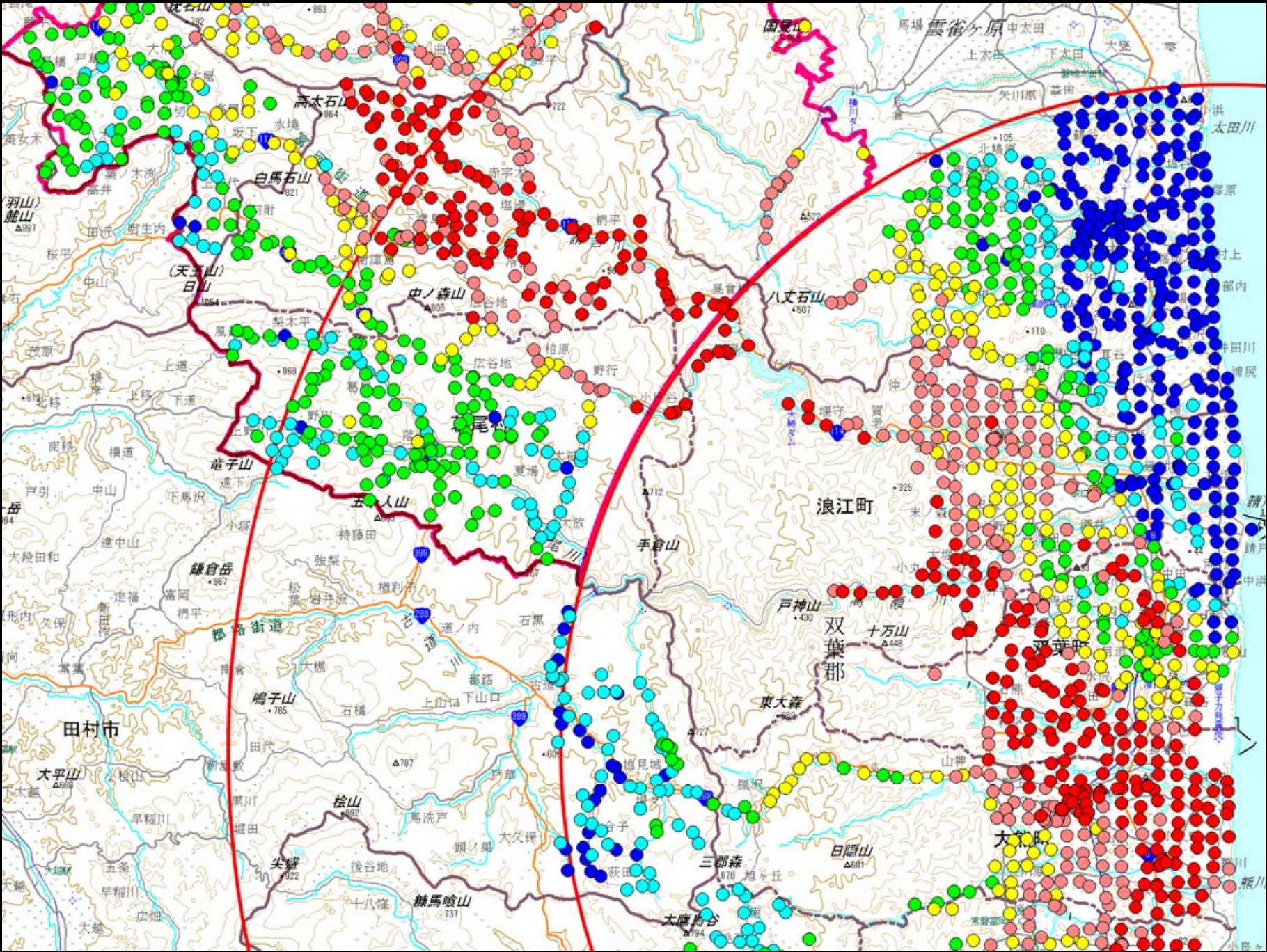
# ARIAL MEASURING RESULTS

EARLY PHASE assessment

INTERMEDIATE PHASE assessment

**LATE PHASE assessment**



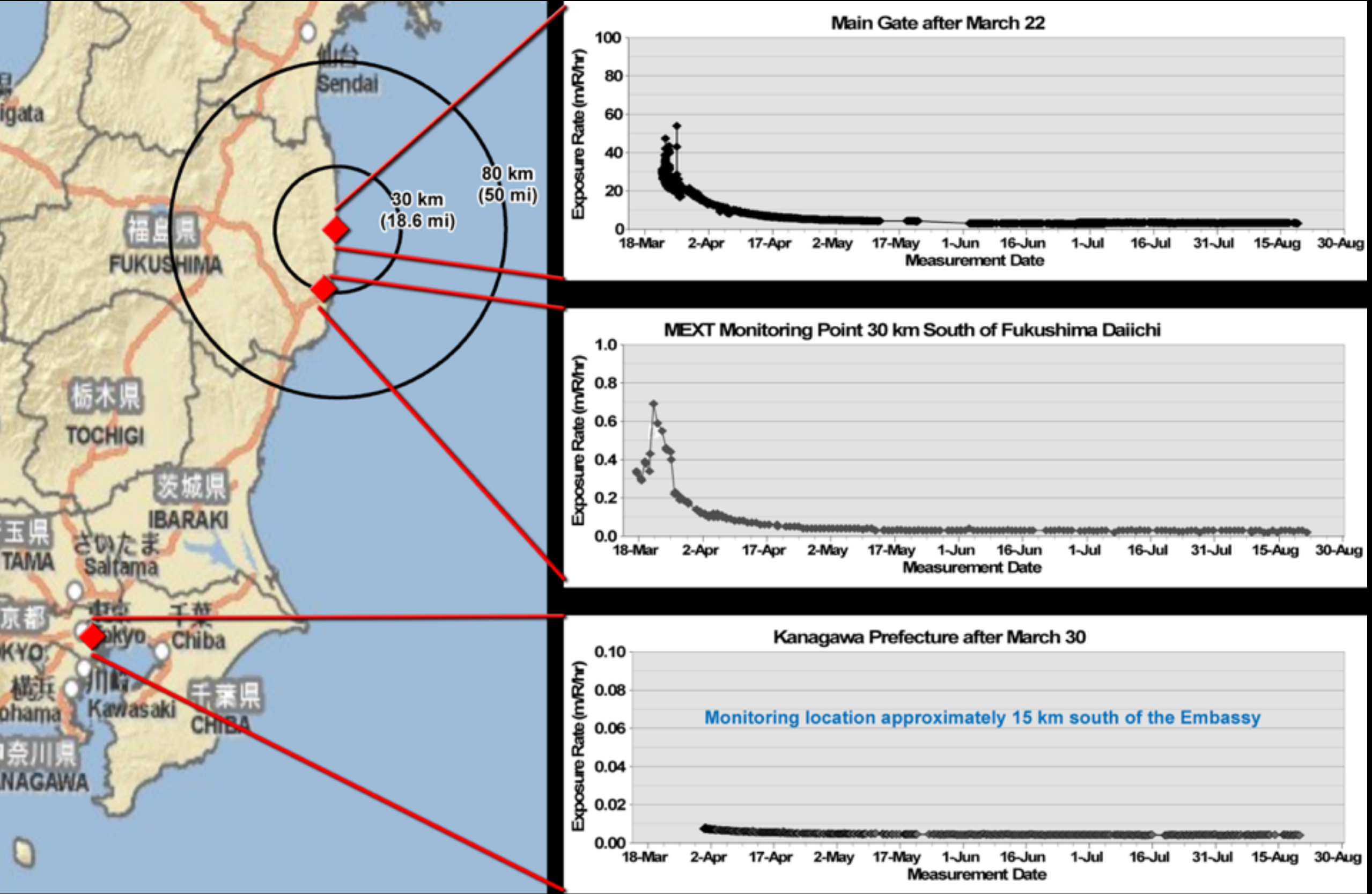


# LATE PHASE EQUIVALENT DOSE RATE





19 R&D ITEMS  
for DECOMMISSIONING



# EXPOSURE RATE TRENDS

Thank You