

Updates of the Accident at the Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi Nuclear Power Plant

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Executive Meeting of the International Framework for Nuclear Energy
Cooperation (IFNEC)

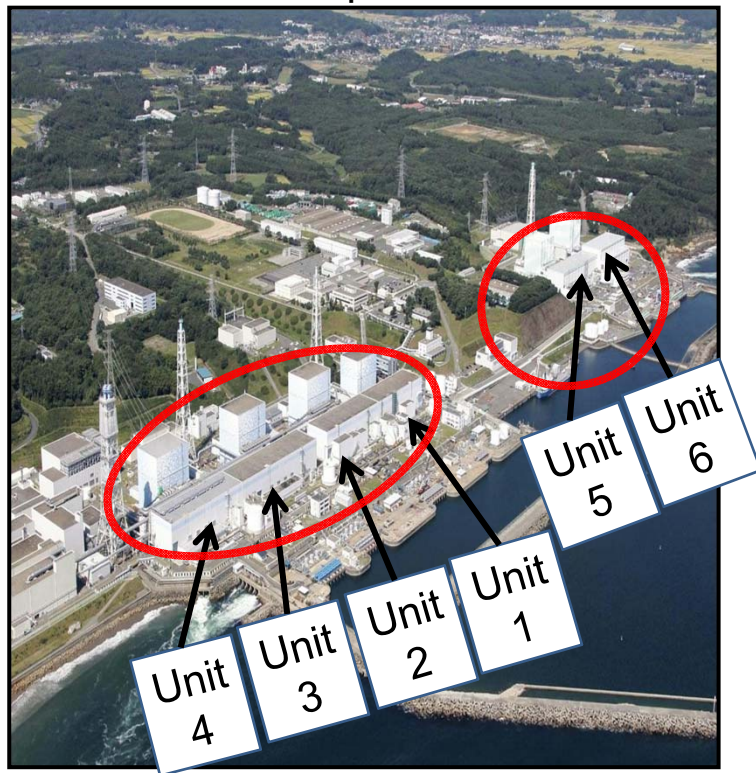
March 11 Event

- The Great East-Japan Earthquake and the resulting tsunamis struck the Fukushima Daiichi Nuclear Power Plant of TEPCO on March 11, 2011. This caused a nuclear accident that was unprecedented: the simultaneous progression of accidents at multiple units and the continuation of accident over an extended period of time.
- The fact that this accident has raised concerns around the world about the safety of nuclear power generation is a matter which Japan takes with the utmost seriousness and remorse.
- In the face of this hardship, Japan has received support and expressions of solidarity from around the world. I would like to express Japan's sincere gratitude to you.
- Japan will disclose to the international community all the information related to this accident, in both swift and accurate manner. We have already presented two reports to the IAEA on the course of events.

Overview of Fukushima-Daiichi NPP

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Reactor Type	BWR-3	BWR-4	BWR-4	BWR-4	BWR-4	BWR-5
PCV Model	Mark-I	Mark-I	Mark-I	Mark-I	Mark-I	Mark-II
Electric Output (MWe)	460	784	784	784	784	1100
Commercial Operation	1971,3	1974,7	1976,3	1978,10	1978,4	1979,10

Before the Earthquake and Tsunamis



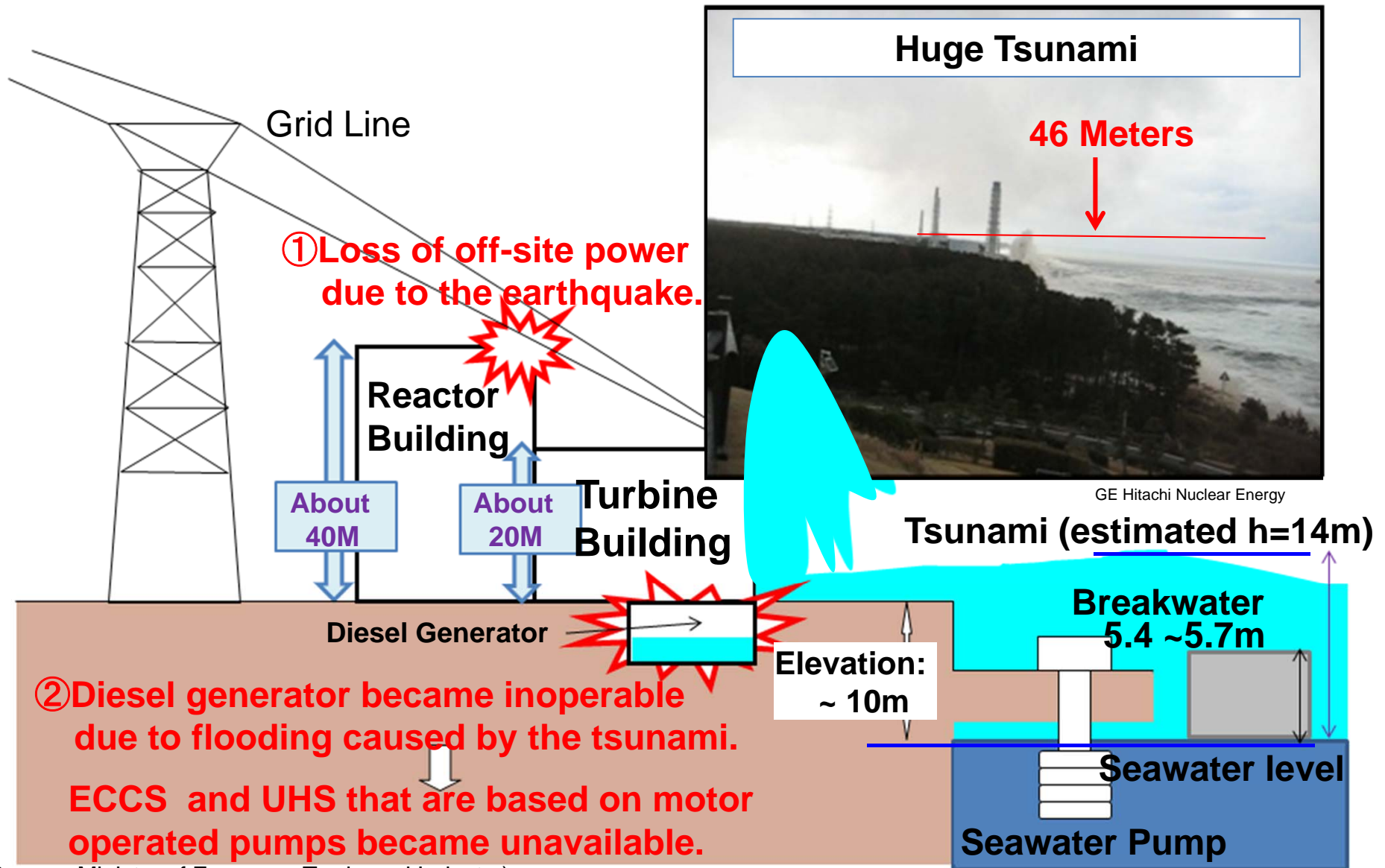
(Source: TEPCO)

After the Earthquake and Tsunamis



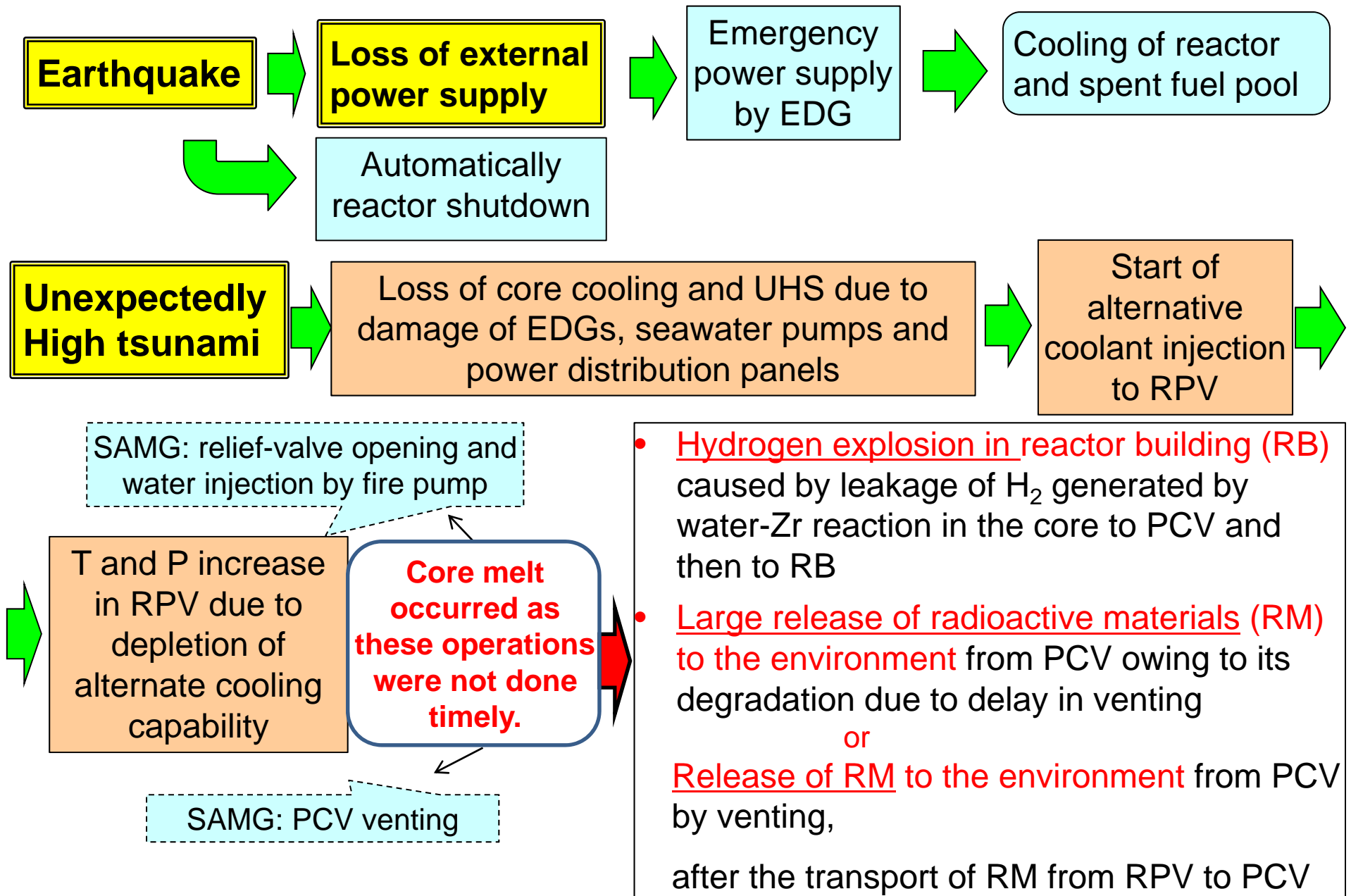
(Source: Air Photo Service Inc (Myoko, Niigata Japan))

Damage of Fukushima Daiichi NPP due to Earthquake and Tsunami



(Source: Ministry of Economy, Trade and Industry)

Accident Sequences

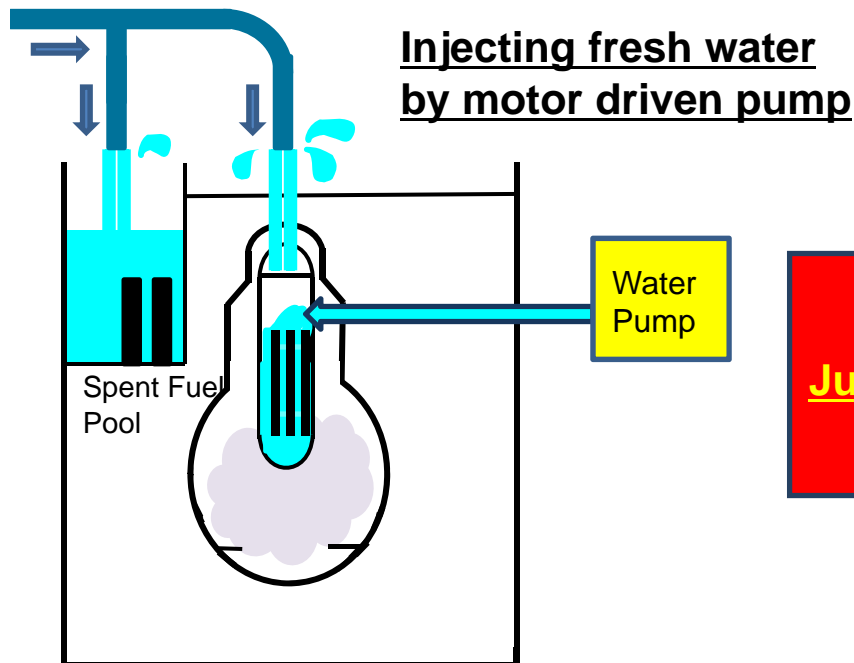


Cool Down of the Reactors

- Sustainable Reactor Cooling System -

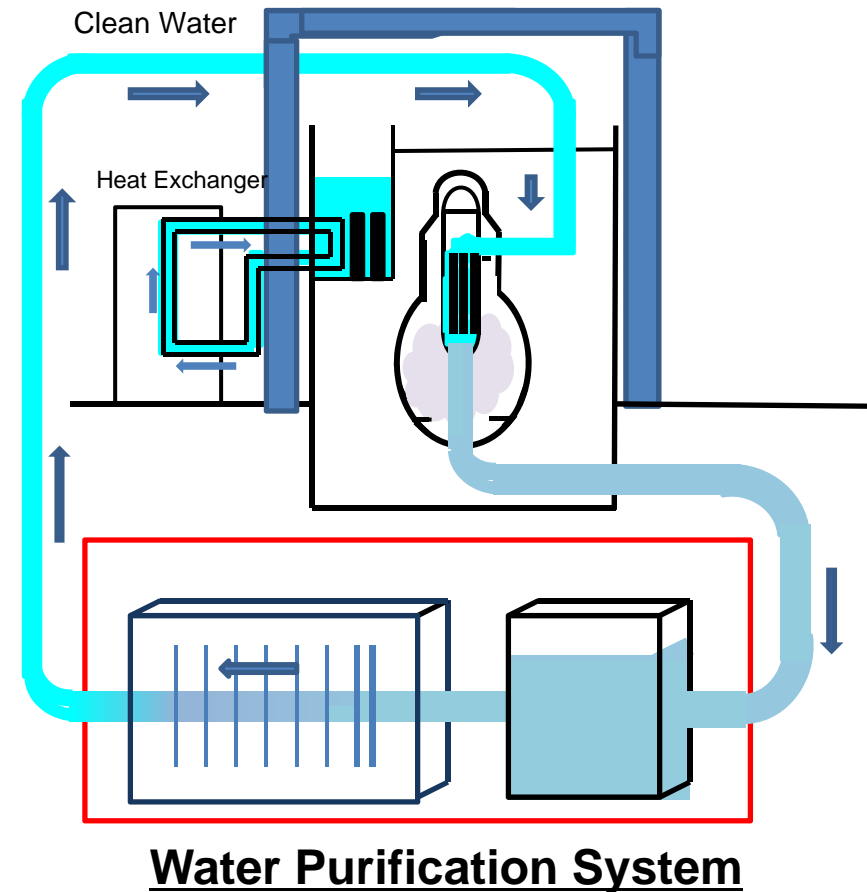
**Provisional Cooling
by Spraying and Injecting Water**

Spraying fresh water

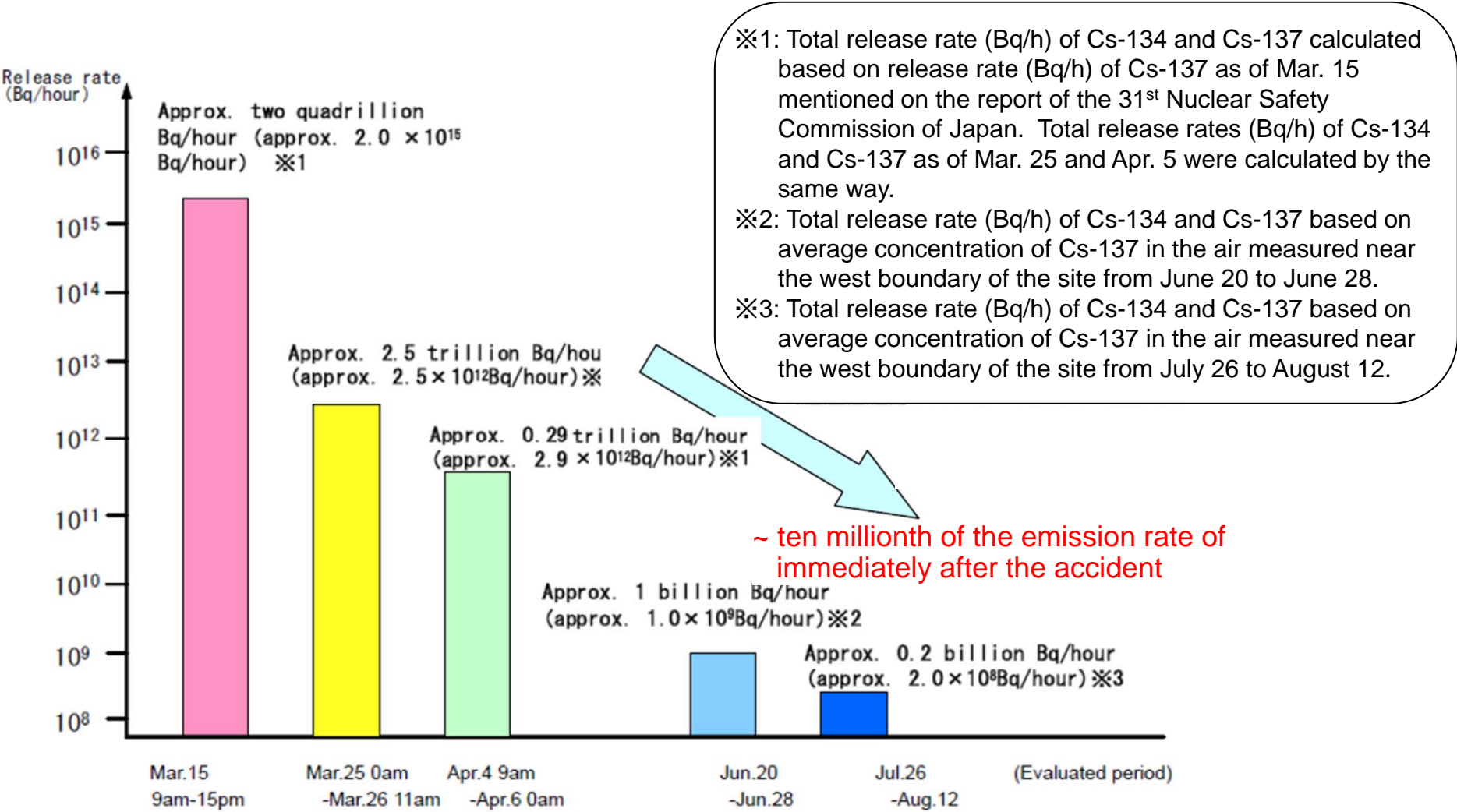


July 2nd

**Steady and Sustainable Cooling
by Circulating water**



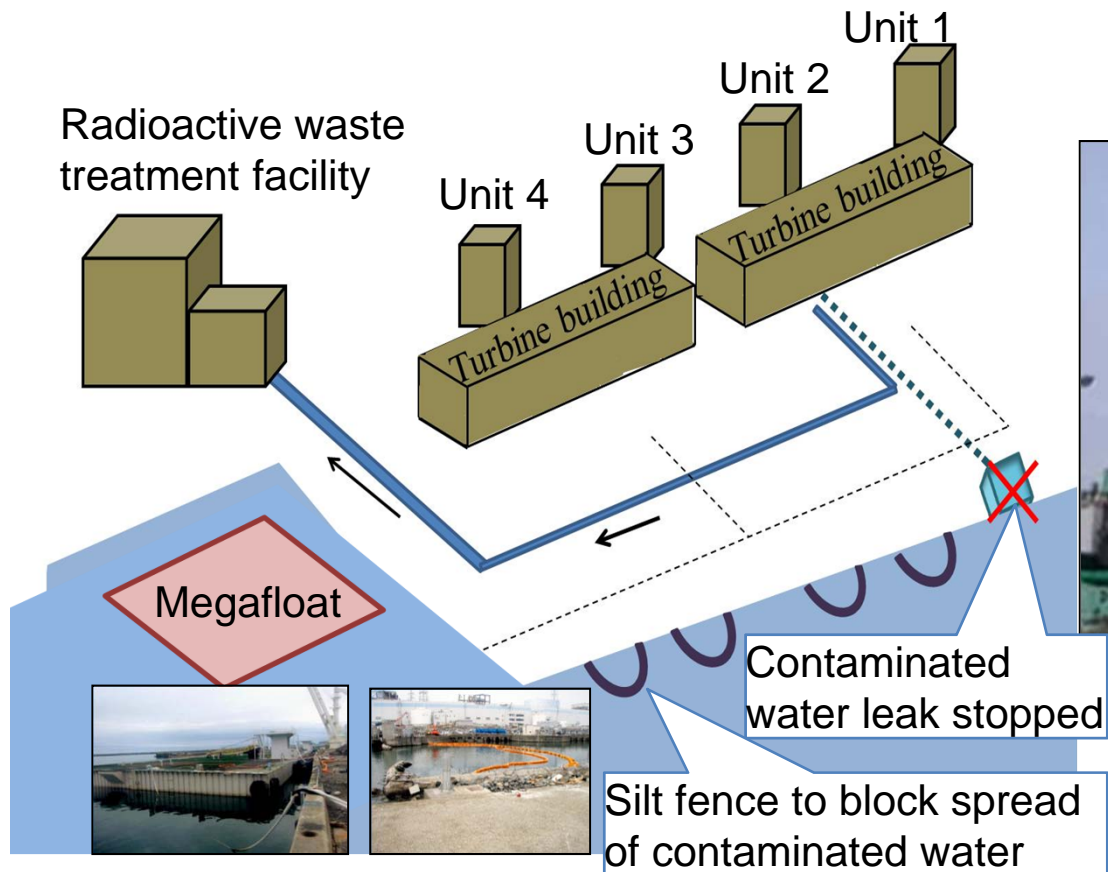
Release Rate of Radioactive Materials from Units 1 to 3 of the Fukushima Daiichi NPP Became Sufficiently low.



(Source: Government-TEPCO Integrated Response Office)

Containment of the Spread of Radioactive Materials (sea, soil and atmosphere)

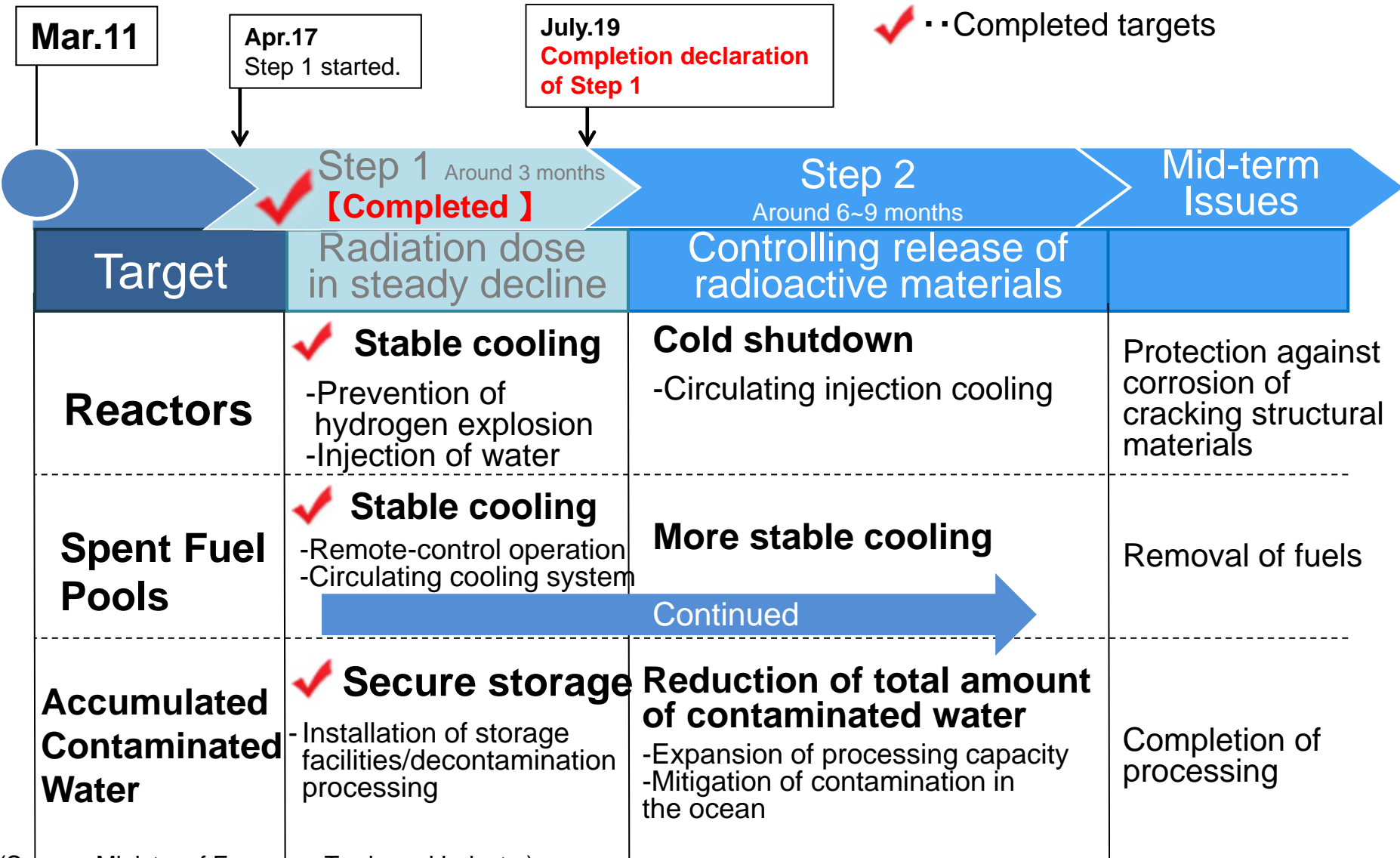
The Japanese Government and TEPCO are making the utmost efforts to prevent the dispersion of radioactive materials to the atmosphere, soil and water.



Spraying synthetic materials



Roadmap towards Restoration from the Accident



(Source: Ministry of Economy, Trade and Industry)

Beyond Stabilization Phase

1. Removal of SF from the SFPs

- SF remain covered by water during and after the accident: sipping analysis suggests that SF is mostly intact, though some might be damaged by falling objects due to hydrogen explosion*

2. Decontamination of the Reactor Buildings

3. Removal of core debris from RPVs and CVs

4. Decommissioning of the Plant

4. Disposal of generated wastes at final disposal facilities

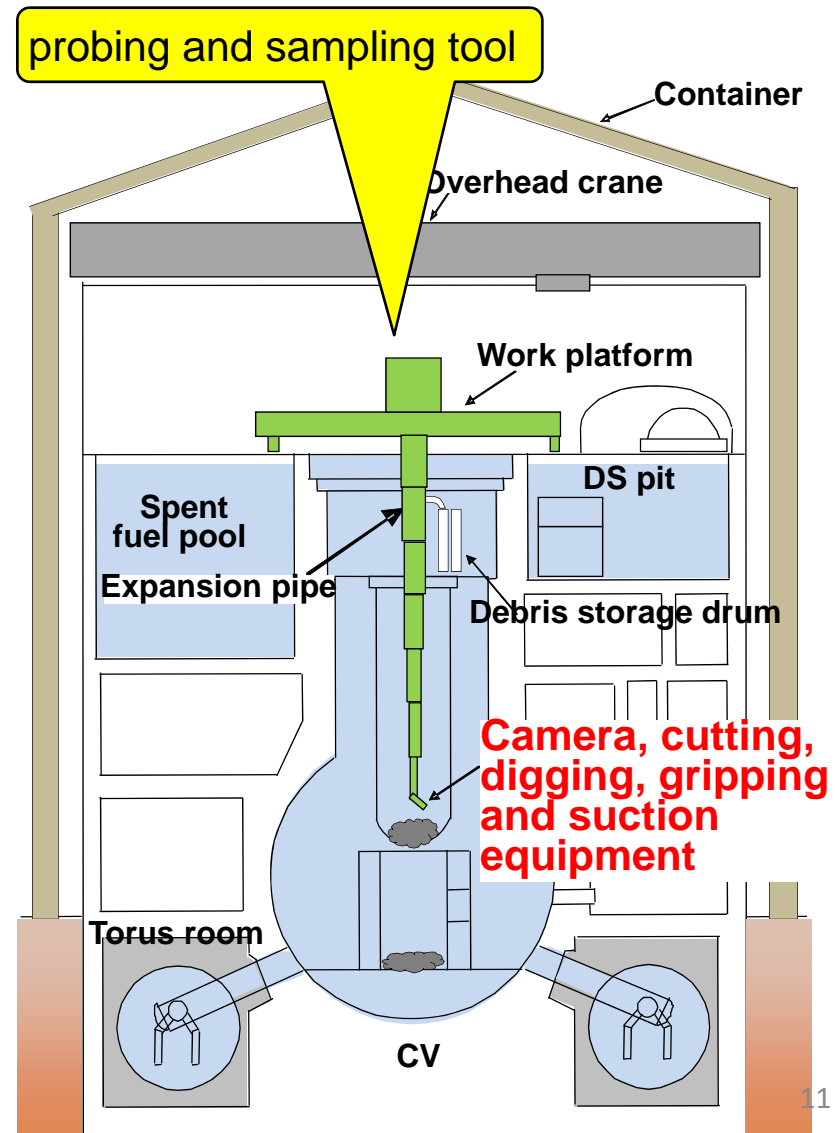
An Idea of Arrangement to Remove Core Debris and Necessary Technologies

Activity

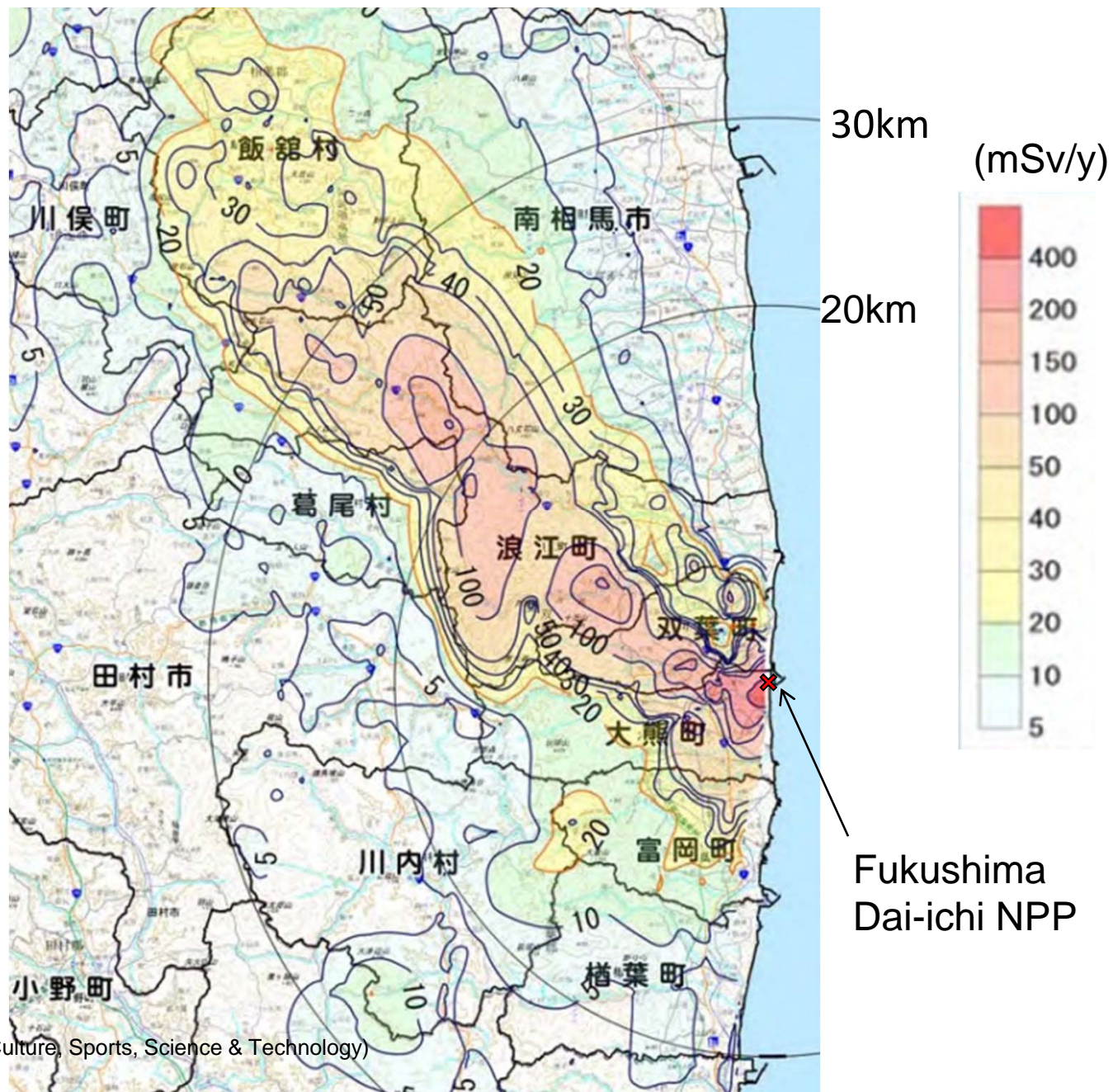
Probing the inside of RPV and taking samples

Necessary Technology R&D

Remote probing and sampling tool workable in high radiation area



Highly Contaminated Areas



(Source: Ministry of Education, Culture, Sports, Science & Technology)

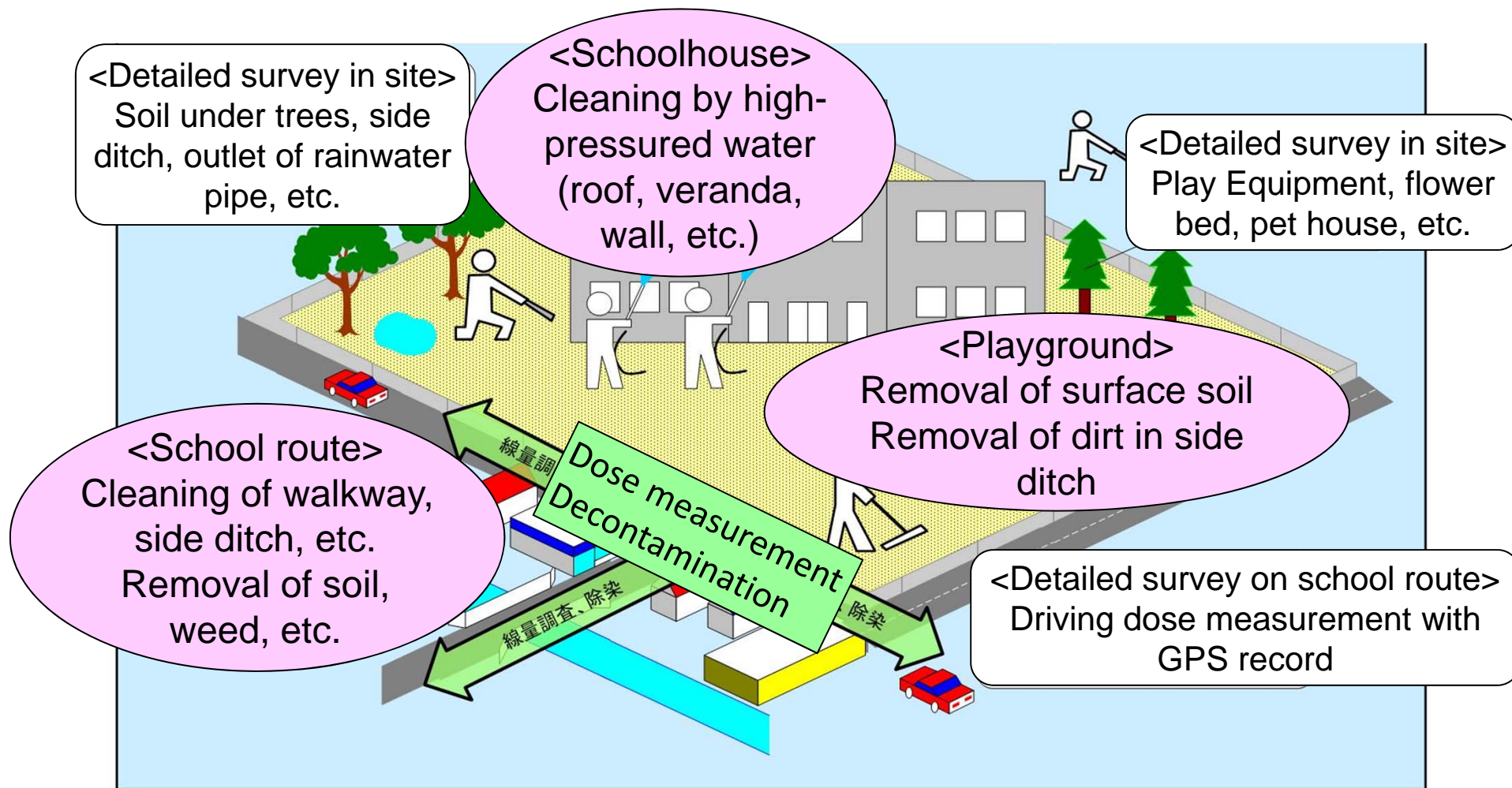
Measures for Remediation

- In order to decrease existing and potential annual exposures, we should pursue;
 - Reducing the number of exposed people
 - Modifying pathways of contaminant to a people
 - Removing existing sources by decontamination.
- The priority choices the Government is pursuing are
 - A) Restriction of inhabiting in the area where expected annual additional dose is larger than 20 mSv;
 - B) Strict shipping control for agricultural products, animal products and marine products through radiological surveys
 - C) Step-by-step decontamination of the land.

Strategy for Decontamination

- Reduce the size of the areas where estimated annual additional exposure is larger than 20 mSv through step by step decontamination activities.
- Reduce the annual additional exposure below 1 mSv on a long term basis in the areas where it is currently below 20 mSv but above 1 mSv.
- Focus decontamination activities on the hot spots in the area where annual additional exposure is below 1 mSv.

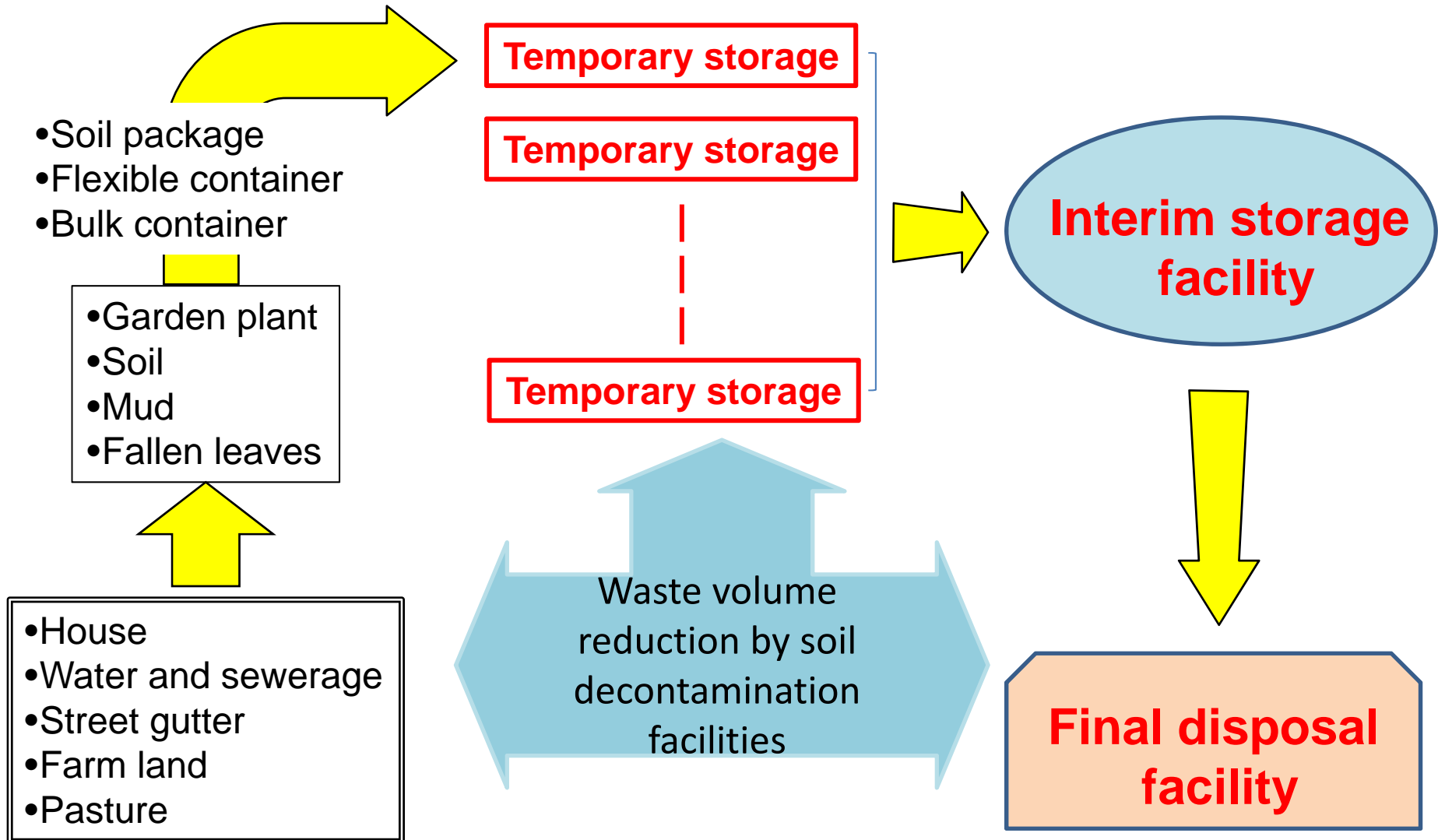
Current Situation for Implementing the Strategy in Evacuation Area: Activities to Reduce Dose Rate in School and School Route



Current Situation for Implementing the Strategy in Evacuation Area

- The Government is to start at least one demonstration decontamination project in every municipal area with a view to demonstrating decontamination approaches and establishing safety guideline for their widespread implementation.
- Based on the results of such projects, the Government will plan and promote a large scale decontamination activity before the end of the year in cooperation with the municipal governments so that people can return to home as soon as possible.
- With regard to agricultural land, Ministry of Agriculture, Forestry and Fisheries has promoted activities to verify the effectiveness of various decontamination technologies to be applied to contaminated agricultural fields.

Concept of Managing Waste from Decontamination Activities



I would like to express our deepest gratitude to you all for a wide array of support and suggestions.

As we should intensify the decontamination of highly contaminated area from now on, your continued support will be most helpful.