

ALPS Treated Water : System for Monitoring Discharge into the Sea

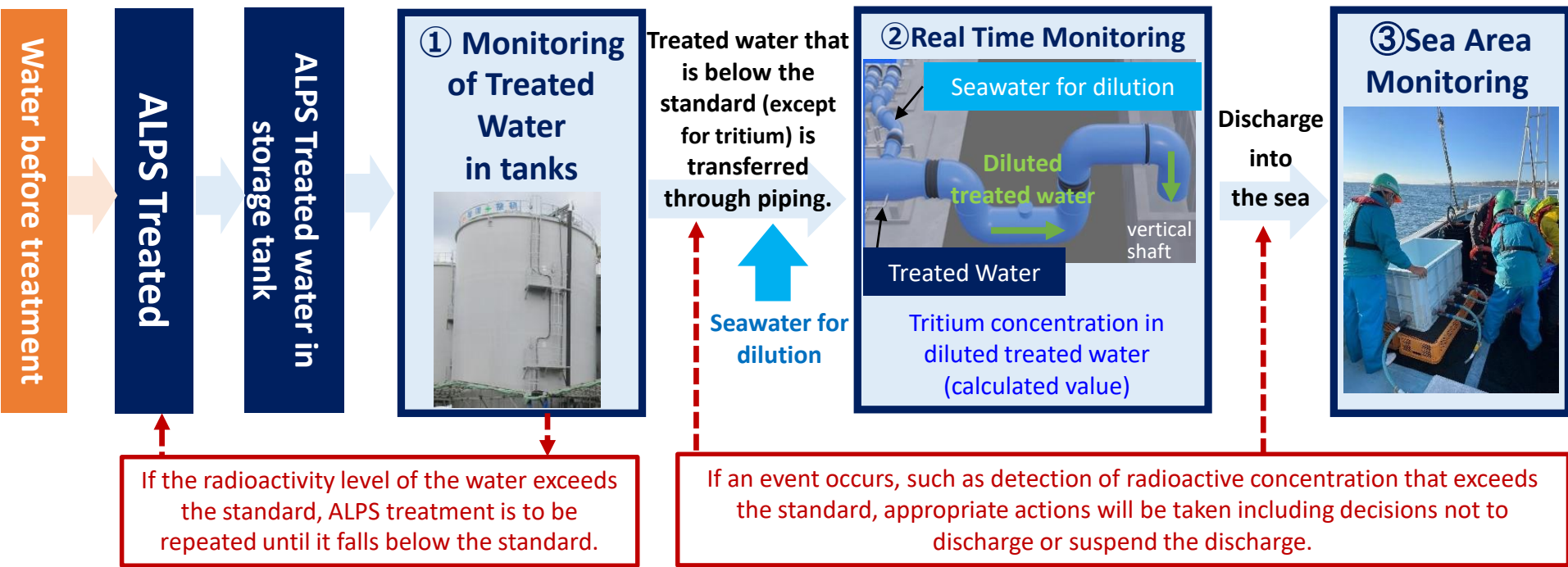
- ✓ Ensure multi-layered monitoring system with the IAEA's involvement to take appropriate actions

Japan will continue to conduct three different monitoring in a multi-layered manner, with the involvement of the IAEA (※). If an event occurs, such as detection of radioactive concentration that exceeds the standard, appropriate actions will be taken including decisions not to discharge or suspend the discharge. The IAEA will continue to be involved as an independent organization.

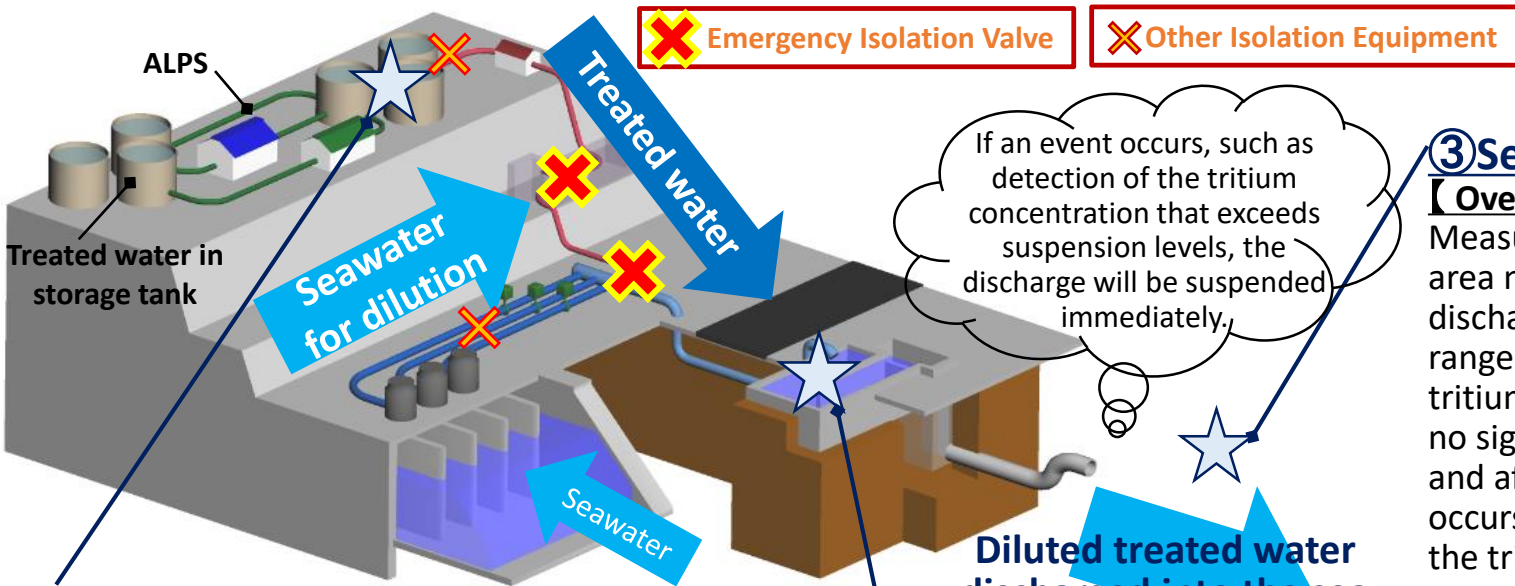
(※ While participating laboratories for monitoring differ at each stage, the Government of Japan and TEPCO are the main entities for monitoring. The IAEA objectively confirms the analytical capabilities and data reliability of the Government of Japan and TEPCO with the participation of third-party laboratories.)

- ✓ Continue to act in a highly transparent manner

Assessments of monitoring by the Government of Japan and TEPCO are available to **the public domestically and internationally.**



Details of Three Different Monitoring



① Monitoring of Treated Water in tanks

【Overview】 TEPCO and the Government of Japan check the treated water in the tanks (facilities for measurement and confirmation) before discharge into the sea for 30 nuclides (29 nuclides to be measured and assessed and tritium). Confirm if nuclides other than tritium are below the standard and the result will be disclosed. If the radioactivity concentration exceeds the standard, the water is repeatedly treated until the radioactivity concentration falls below the standard.

【Organizations】 TEPCO and Japanese Third-Party Laboratories (The IAEA objectively confirms TEPCO's analytical capabilities and the reliability of the data, with participating third-party laboratories.)

【Frequency(Including data publication)】

Analysis is conducted before each discharge of treated water in tanks.

② Real Time Monitoring

【Overview】

The flow rate of ALPS treated water and seawater for dilution are monitored on a real-time basis and the tritium concentration after dilution is confirmed. The water is diluted until the tritium concentration goes far below the standard.

【Organizations】

TEPCO (also accessible on the IAEA website)

【Frequency of data publication】

every hour

③ Sea Area Monitoring

【Overview】

Measure seawater in the sea area near and around the discharge point for a wide range of nuclides, mainly tritium, to confirm that there is no significant change before and after discharge. If an event occurs, such as detection of the tritium concentration that exceeds suspension levels, the discharge will be suspended immediately.

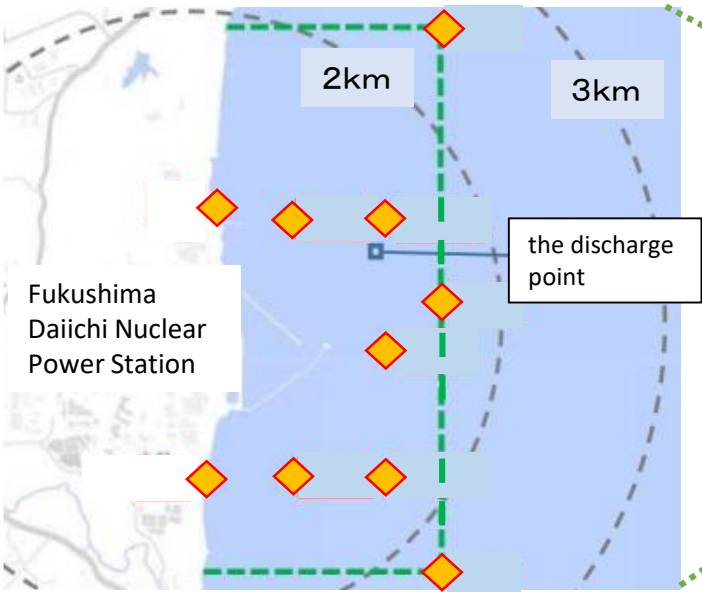
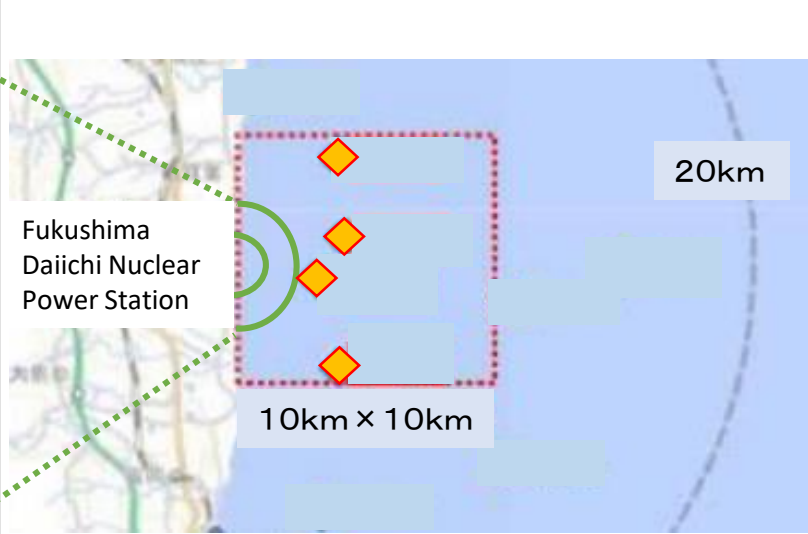
【Organizations】

TEPCO, MOE, NRA, Fisheries Agency etc.
(The IAEA objectively confirms TEPCO's analytical capabilities and the reliability of the data, with participating third-party laboratories.)

【Frequency (Including data publication)】

Tritium: daily basis for a certain period of time after the commencement of discharge.
Other nuclides: once a week/a month/several months/a year

【Reference】 Details of Sea Area Monitoring

	<p>Vicinity of the discharge point (10 points within 3 km of the discharge point at FDNPS)</p>	<p>Outside the vicinity of the discharge point (4 points in a 10 km x 10 km area around the discharge point)</p>
<p>Suspension Level for Discharge</p>	<p>✓ Tritium concentration of 700 Bq/L^(※1) ✓ <u>Sampling once per week</u> ※1 700 Bq/L suspension level for discharge is set at the level more stringent than the upper limit of tritium concentration(1500 Bq/L)【1/40 of regulatory standard】 in the implementation plan.</p>	<p>✓ Tritium concentration of 30 Bq/L^(※2) ✓ <u>Sampling once per week or per month</u> ※2 The maximum tritium concentration detected in the sea area around the nuclear power stations in Japan over the past three years is 20 Bq/L. 30 Bq/L suspension level is set at the level that clearly surpasses 20 Bq/L.</p>
<p>Sampling Points</p>	 <p>2km 3km</p> <p>Fukushima Daiichi Nuclear Power Station</p> <p>the discharge point</p> <p>◆ : Sampling points(10 points)</p> <p>※3 When unusual situations are confirmed in the detailed monitoring by each organization, appropriate actions will be taken.</p>	 <p>Fukushima Daiichi Nuclear Power Station</p> <p>20km</p> <p>10km x 10km</p> <p>◆ : Sampling points(4 points)</p> <p>※3 When unusual situations are confirmed in the detailed monitoring by each organization, appropriate actions will be taken.</p>