

- When discharging ALPS treated water into the sea, dilution is to be surely conducted and the diffusion and potential radiological impacts on humans and marine environment are to be scientifically assessed. Monitoring before and after the discharge will also be strengthened and enhanced.

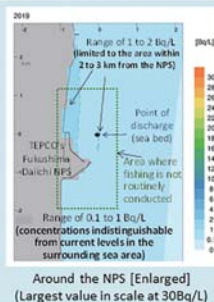
< Assessment of potential impact on the marine environment >

● Results of the dispersion simulation

The surrounding sea area where the tritium concentration was assessed to increase from the current level (0.1 to 1 Bq/L) is limited to the area within 2 to 3 km from the NPS. Even in this sea area, the sea water sufficiently satisfies the regulatory standard for tritium in Japan and the WHO's guideline for drinking-water quality.

● Assessment on exposure doses of the general public

The impact on humans is assessed to be approx. 1/1,000,000 to 1/100,000 of the exposure doses (2.1 mSv/y) of Japanese people from natural radiation.



< Environmental monitoring >

- The Government of Japan and relevant sectors will strengthen and enhance sea area monitoring before and after the discharge so that concentrations of tritium etc. in the sea can be compared.
- The credibility of analysis is to be secured by obtaining cooperation from the IAEA.

[Source] Prepared based on the "Radiological Environmental Impact Assessment Report Regarding the Discharge of ALPS Treated Water into the Sea (Construction stage)" (November 2022) by Tokyo Electric Power Company Holdings, <https://www.tepco.co.jp/press/release/2022/pdf4/221140501.pdf#page=289>



Following the basic policy, which the Government of Japan announced in April 2021, Tokyo Electric Power Company Holdings conducted assessment on the radiological impact when discharging ALPS treated water into the sea in accordance with internationally recognized methods (as found in the International Atomic Energy Agency (IAEA) Safety Standard documents and International Commission on Radiological Protection (ICRP) recommendations). The assessment was revised based on opinions received from Japan and abroad through a public comment procedure, observations in IAEA reviews and discussions with Nuclear Regulation Authority. The assessment result indicated that the impact on humans and the environment is minimal.

- Results of the dispersion simulation in the sea (using the meteorological and hydrological data for 2019; annual average)
 - The area where the concentration of tritium was assessed to be higher than that in seawater (0.1 to 1 Bq/L) in the current surrounding sea area is limited to the area within 2 to 3 km around the NPS.
 - Tritium concentration assessed to be around 30 Bq/L was observed in some areas near the point of discharge, but the concentration decreased rapidly in the vicinity of those areas. Even the tritium concentration of 30 Bq/L is sufficiently lower than 10,000 Bq/L, which is the standard level specified in the WHO Guidelines for Drinking Water Quality.
- Results of radiological impact assessment on humans and the environment (assessment results as of November 2022)
 - The impact on humans was assessed to be approx. 1/1,000,000 to 1/100,000 of the exposure doses (2.1 mSv/y) of Japanese people from natural radiation.
 - The impact on plants and animals (flatfish, crabs, and brown algae) was assessed to be approx. 1/2,000,000 to 1/1,000,000 of the standard values at which impact could occur in living organisms as specified by ICRP. (Result of the assessment regarding crabs was approx. 1/25,000,000 to 1/10,000,000)

Furthermore, the Government of Japan and other related agencies decided to strengthen and enhance sea area monitoring even before the discharge of ALPS treated water into the sea so that concentrations of tritium and other substances in the sea area can be compared before and after the discharge. In conducting sea area monitoring, the credibility of analysis capabilities is to be secured by obtaining cooperation from the IAEA.

(Source) Prepared based on the "Radiological Environmental Impact Assessment Report Regarding the Discharge of ALPS Treated Water into the Sea (Construction stage)" (November 2022) by Tokyo Electric Power Company Holdings <https://www.tepco.co.jp/press/release/2022/pdf4/22114j0101.pdf#page=289>