

1. The situation at FDNPS is well-managed, but
 - approx. 170 m³ of ALPS Treated Water is being generated and stored in tanks every day. (average of FY2018)
 - the tanks storing ALPS treated water are expected to be full around the summer of 2022.

What is ALPS Treated Water?

Water gets contaminated when it touches the damaged reactors and debris. TEPCO has successfully removed most of nuclides (e.g. Cs-137, Sr-90) except for tritium from this contaminated water.

This is ALPS Treated Water, NOT contaminated water, which is stored at the FDNPS.



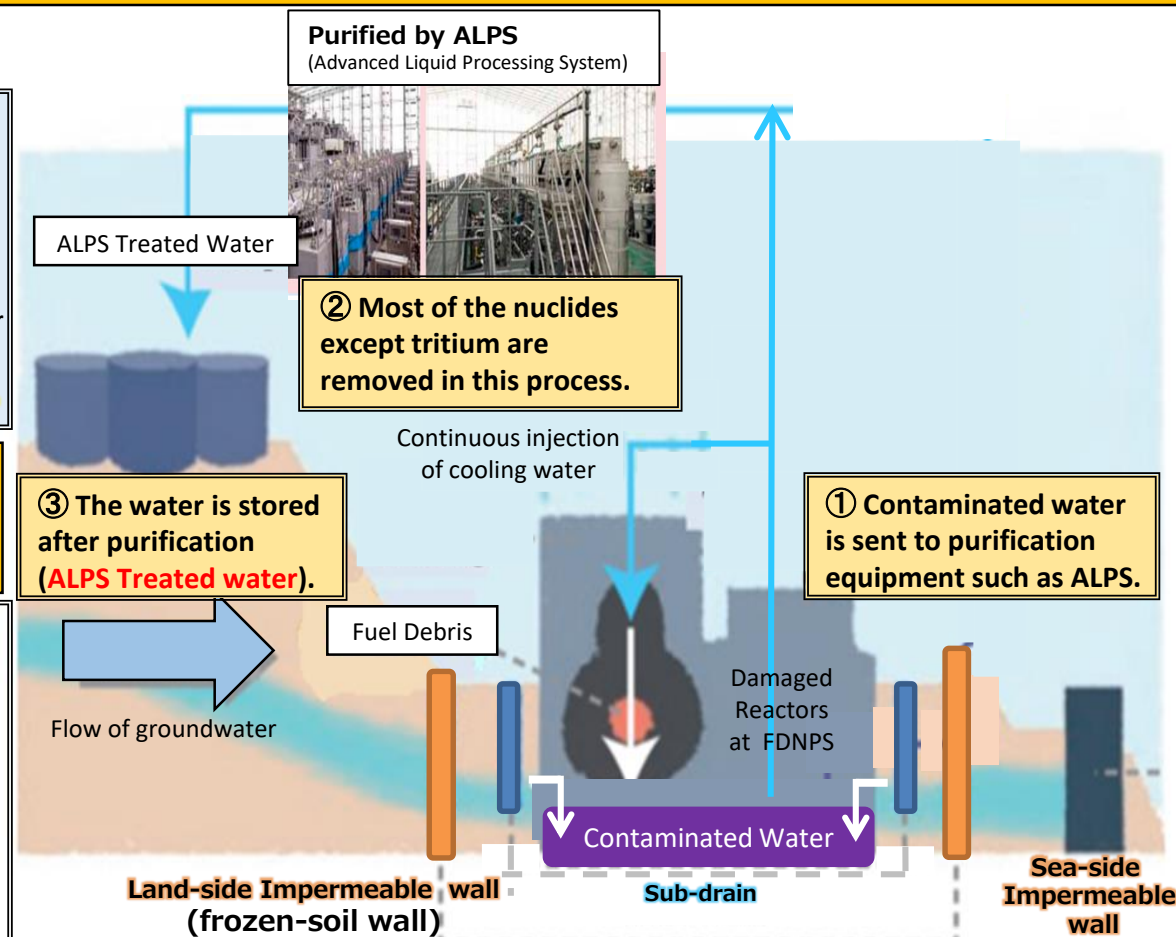
ALPS Treated Water
Photo Credit: IAEA

2. The Subcommittee on handling of the ALPS treated water concluded its report on 10 February 2020.

➤ The Report identified two feasible options:

- 1) **discharge into the sea**
- 2) **vapor release**

The Government of Japan (GOJ) will decide its basic policy on the handling of ALPS treated water.



Key Questions:

- 1) Will the ALPS treated water be released to the environment as is? → **See P.2**
- 2) What are the IAEA's findings on the disposal options of the ALPS treated water? → **See P.3**
- 3) How has the GOJ been providing information to the international community? → **See P.4**

1) Will the ALPS Treated Water be released to the environment as is?

No. In the case of releasing the ALPS treated water to the environment, the ALPS treated water will be re-purified and diluted to meet the regulatory standards for discharge.

Current Status of ALPS treated water (Dec 2019)

1,080,700 m³

300,000 m³
(28%)

780,700 m³
(72%)

28% of the stored water is below the regulatory standards for discharge other than tritium.

72% of the total volume of ALPS treated water stored in tanks contains radionuclides at the concentration that exceeds the regulatory standards for discharge. This will be further re-purified to meet the regulatory standards other than tritium.

In any case, all ALPS treated water will be diluted in the case of discharge to the environment.

What is 'regulatory standards for discharge'?

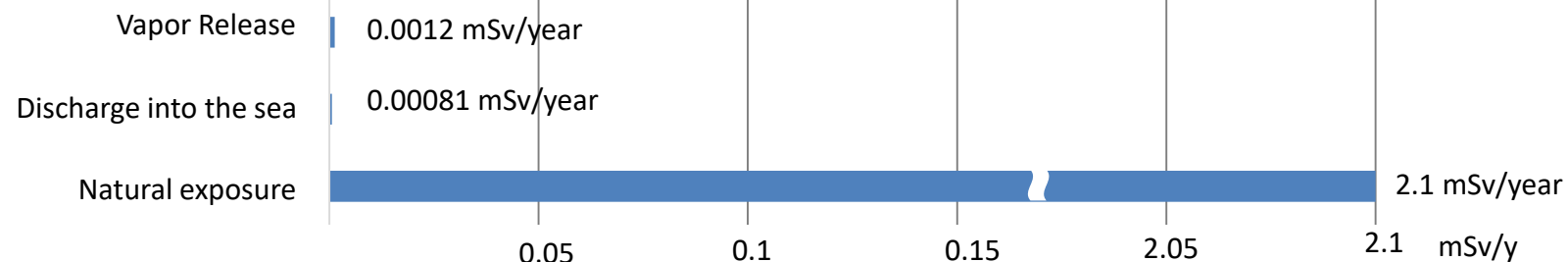
Japan's regulatory standards for discharge is set in compliance with the international standards known as publications of International Commission for Radiological Protection (ICRP), keeping public radiation dose less than 1mSv/year.



For example, if the water contained only tritium among the radionuclides, Japan's regulatory standards allow discharge of water with 60,000 Bq per liter of tritium-concentration.

The impact of the radiation to human health as a result of the discharge is considerably small.

Graph: Comparison of radiation impacts between the releases of entire amount of the ALPS treated water disposed of in one year and natural radiation



Even if the entire amount of the ALPS treated water stored in the tanks were to be disposed of in one year, **the impact would be no more than 1/1,000 of the exposure impact of natural radiation (2.1 mSv/year) in Japan.** *Based on a UNSCEAR-specified method.

2) What are the IAEA's findings on the disposal options of the ALPS treated water?

Statements made by IAEA Director General Rafael Grossi after he visited FDNPS on 26 February 2020:
(<https://www.iaea.org/newscenter/news/iaea-director-general-sees-progress-in-fukushima-decommissioning-work>)

“What I saw today has been very impressive. I’ve witnessed a very systematic and meticulous effort to deal with every obstacle you have been finding along the way.”

“The IAEA considers the disposal options (discharge into the sea and vapor release) as technically feasible and in line with international practice.”

“Once a decision is taken on the way forward, the IAEA would be ready to assist in its implementation, for example in radiation monitoring. It could help provide reassurance to the public – in Japan and elsewhere – that any releases of water would be within international standards.”



Photo Credit: Dean Calma / IAEA

Excerpts from the IAEA Review Report on the ALPS Subcommittee Report etc. published on 2 April 2020 (<https://www.iaea.org/sites/default/files/20/04/review-report-020420.pdf>)

- **The two options selected (discharge into the sea and vapor release) are technically feasible and would allow the timeline objective to be achieved. (Acknowledgement 4)**
- **The IAEA Review Team also notes that the ALPS treated water will be further purified as necessary to meet the regulatory standards for discharge before dilution. (Acknowledgement 4)**
- **The IAEA Review Team is not aware of a solution currently available for the separation of tritium commensurate with the concentration and the volume of ALPS treated water. (Acknowledgement 3)**
- **The IAEA Review Team holds the view that a decision on the disposition path for the stored ALPS treated water must be taken urgently, considering safety aspects and engaging all stakeholders. (Advisory Point 1)**

3) How has the GOJ been providing information to the International Community?

The GOJ has repeatedly been explaining the situation of the FDNPS to the international community on various occasions:

- ✓ **Briefing sessions have been held 105 times** for all the Diplomatic Missions in Tokyo (DMT).
- ✓ **Monthly Report** on the discharge record and monitoring results
- ✓ **Technical briefings** on the occasions of international conventions
- ✓ **Reports** on the decommissioning progress and the surrounding environment
- ✓ Related information **is available on the METI website:**

(<https://www.meti.go.jp/english/earthquake/nuclear/decommissioning/index.html>)



The 105th briefing for the DMT (3 Feb 2020)

CONCLUSIONS

- **Significant progress has been made to move FDNPS from an emergency situation to a stabilized situation.**
- **The Report made by the ALPS Subcommittee outlines the potentially available options: 1) discharge into the sea and 2) vapor release. The IAEA's Review Report concluded that the two options selected are technically feasible.**
- **The Government of Japan (GOJ) will decide its basic policy on the handling of ALPS treated water.**

- **Japan appreciates the IAEA's Review Report of April 2020 and continues to count on the IAEA's assessments.**
- **The GOJ will continue to inform the international community of the situation of the FDNPS in a courteous and transparent manner.**
- **The GOJ stands ready to explain our stances in response to any unfounded claim.**



Resumed local fishery (above) and agriculture (below) near the FDNPS

