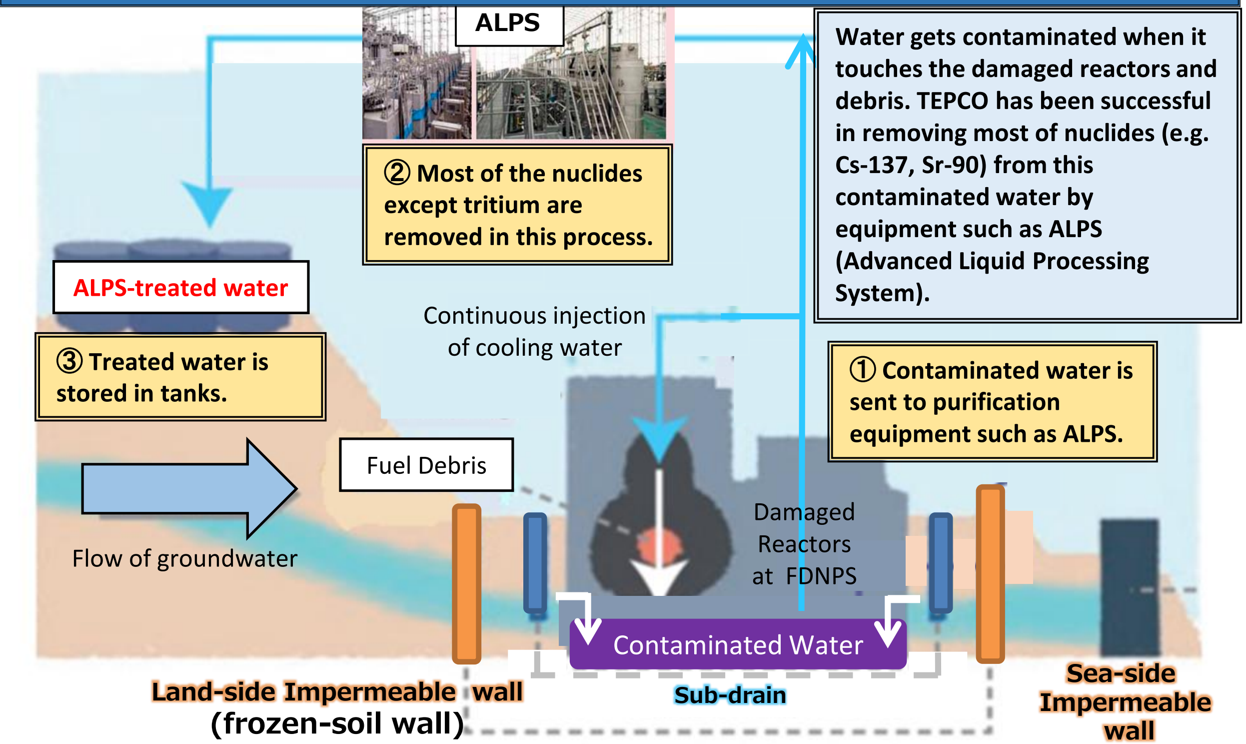
FACE the FACTS : The Situation of TEPCO's Fukushima Daiichi NPS (FDNPS) is stable

The Gov of Japan
Nov 2019

1. Various measures have been taken for the management of contaminated water at FDNPS.

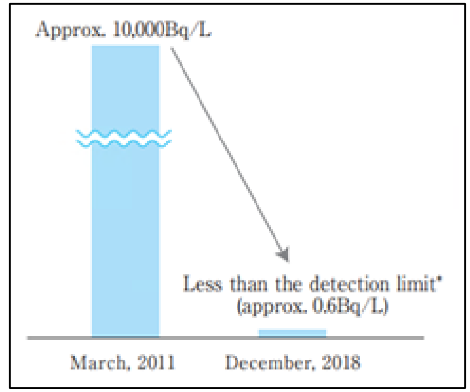
How the nuclides are removed from the "contaminated water"



- **It is ALPS (Advanced Liquid Processing System)-treated water, NOT - contaminated water, that is stored at the FDNPS.**
- **Radioactive materials in ALPS treated water are reduced to about 1/1,000,000 (one millionth), compared to the water before purification.**

2. Drastic decrease of radioactive materials in the sea and the air near the FDNPS.

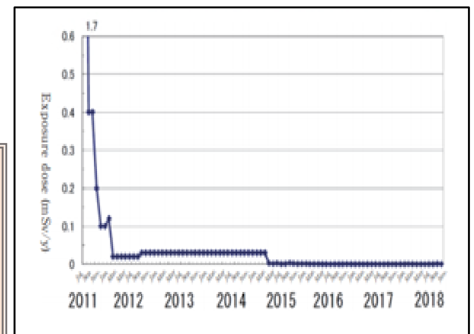
Concentration of radioactive materials in the sea water around the plant



* Cesium137 near the south discharge channel

Concentration of radioactive materials in the sea around the plant is now less than the detection limit. The level is even below the drinking water standard.

Estimated annual dose at the site boundary by radioactive materials (cesium)



The amount of radioactive materials in the air is so low that people can live as usual even in the surrounding areas of the FDNPS.

Key Questions:
1) What is tritium? How will ALPS-treated water be handled? → See P.2
2) What are the IAEA's findings on FDNPS? → See P.3
3) How has the GOJ been providing information to the international community? → See P.4

1) What is tritium? How will ALPS-treated water be handled?

What is tritium?

- Tritium is a relative of hydrogen that emits weak radiation.
- It exists naturally and is found in the water such as water vapor in the atmosphere, rain, sea water, and tap-water. Its impact on health is very low, around 1/700 of that of Cs-137.

While no decision has been made, various options are considered in the Subcommittee on handling ALPS-treated water*: (1) geosphere injection, (2) discharge to the sea, (3) vapor release, (4) hydrogen release, (5) underground burial, (6) long-term storage

*The water which is referred to in the Subcommittee for its consideration is not "contaminated water" but the ALPS-treated water. The Subcommittee continues to discuss how to handle the ALPS treated water, on the condition that radionuclides (Cs-137, Sr-90, etc) other than tritium are sufficiently removed by further purifying the ALPS-treated water and the remaining tritium in the water is diluted in advance so as to meet regulatory standards for discharge.

Some argue that tritium in ALPS-treated water should be handled differently from tritium generated from usual operation of NPPs because the former is generated as the result of the accident.

No scientific reason can be found to differentiate the handling of the two.

The map shows countries with operating nuclear reactors.

Besides, it should be noted that operators of nuclear reactors globally discharge tritium into the sea and the atmosphere, and there have been no reported public health incidents caused by tritium discharge. In each country, there are regulations to manage liquid radioactive waste keeping public radiation dose less than 1mSv/year, based on ICRP (International Commission on Radiological Protection) publication.

2) What are the IAEA's findings on FDNPS?

- **The IAEA has been cooperating with Japan in various areas such as decommissioning and sea water monitoring.**
- **The following key findings of IAEA reports remain uncontested by its Member States.**
- **Japan will continue to support the IAEA to conduct its factual and impartial assessment.**

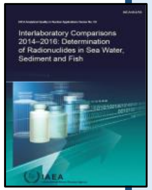
Decommissioning:

- "The IAEA Review Team considers that significant progress has already been accomplished to move Fukushima Daiichi from an emergency situation to a stabilized situation."

"IAEA International Peer Review Mission on Mid-And-Long-Term Roadmap Towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station" (IAEA, November 2018)
Available at: https://www.iaea.org/sites/default/files/19/01/missionreport-310119.pdf

Sea water monitoring:

- "The IAEA can report that Japan's sample collection procedures follow the appropriate methodological standards required to obtain representative samples. The results obtained in ILCs demonstrate a high level of accuracy and competence on the part of the Japanese laboratories involved in the analyses of radionuclides in marine samples for the Sea Area Monitoring programme."

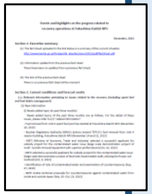


"Interlaboratory Comparisons 2014–2016: Determination of Radionuclides in Sea Water, Sediment and Fish" (IAEA, April 2019)
Available at: https://www-pub.iaea.org/MTCD/Publications/PDF/AQ-59web.pdf)

-"The IAEA considers that the extensive data quality assurance programme contributes to building confidence of the stakeholders in the accuracy and quality of the sea area monitoring data."

"Events and Highlights on the Progress Related to Recovery Operations at Fukushima Daiichi Nuclear Power Station" (IAEA, July 2019)
Available at: https://www.iaea.org/sites/default/files/19/09/events-and-highlights-july-2019.pdf)

- "The monitoring results indicated no rise in radionuclide concentrations and remain within the WHO guidelines for drinking water. Based on these reports and the information that has been made available, the IAEA considers the public is safe and sees no reason why this should not continue to be the case in the future."



"Events and highlights on the progress related to recovery operations at Fukushima Daiichi NPS" (IAEA, December 2013)
Available at: https://www.iaea.org/sites/default/files/recoveryoperations201213.pdf

For more Fukushima Daiichi Status Updates:
https://www.iaea.org/newscenter/focus/fukushima/status-update

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

The Government of Japan (GOJ) has repeatedly explained the situation of the FDNPS to international community on various occasions:

- ✓ Briefing sessions have been held 104 times for all the Diplomatic Missions in Tokyo (DMT).
  - The most recent DMT briefing (21st Nov.) was attended by 18 countries/region, and there was no protest/expression of concern from the participants over Japan's handling of the FDNPS.
- ✓ Monthly Report on the discharge record and the seawater monitoring results is sent to all the DMT and the IAEA
- ✓ Technical briefings on the occasions of international conventions such as the IAEA, the OECD/NEA etc.
- ✓ Reports on the decommissioning progress and the surrounding environment were sent to the IAEA.
- ✓ Related information is available on the METI website (https://www.meti.go.jp/english/earthquake/nuclear/decommissioning/index.html)

The 104th briefing for the DMT

CONCLUSIONS

- The FDNPS has shifted from emergency situation to stabilized situation.
- The water stored at the FDNPS is ALPS-treated water, the radioactive materials of which are reduced to about one millionth, compared to the water before purification.
- No IAEA Member States challenged the key findings of the IAEA Reports on the FDNPS.

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

- **Japan has closely cooperated with the IAEA and Japan continues to count on the IAEA's assessments.**
- **The GOJ continues to explain the information regarding the situation of the FDNPS to the international community in a courteous and transparent manner.**
- **The GOJ stands ready to explain our stances in response to any unfounded claim.**