

## **Response to the Joint Communication from Special Procedures from the Government of Japan**

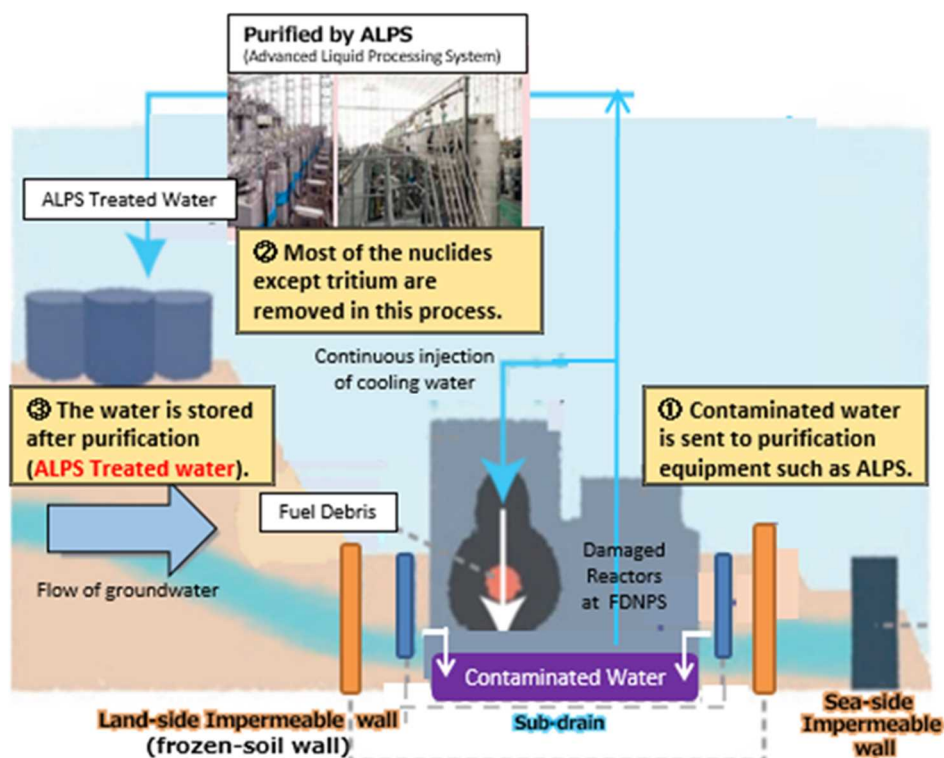
Regarding the Joint Communication by the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, the Special Rapporteur on the right to food, Special Rapporteur on the rights to freedom of peaceful assembly and of association and Special Rapporteur on the rights of indigenous peoples, sent on April 20, 2020 to the Permanent Mission of Japan to the United Nations Office and other international organizations in Geneva, the response from the Government of Japan is as follows.

The Government of Japan would like to add, on the occasion of the issue of the News Release by the Special Rapporteurs dated June 9, 2020, that it continues to listen carefully to opinions from a wide-range of the parties concerned including local municipalities, farmers, foresters and fishermen, regarding the handling of the ALPS treated water stored at Tokyo Electric Power Company Holdings' Fukushima Daiichi Nuclear Power Station, taking into account the influence of the COVID-19 pandemic.

1. Firstly, in order for the Special Rapporteurs to have an accurate understanding on the background of the matter, the Government of Japan (GoJ) would like to provide an overview on the purification treatment of the contaminated water, using the figure below.

At Tokyo Electric Power Company Holdings' Fukushima Daiichi Nuclear Power Station (hereinafter referred to as the FDNPS), fuel debris remaining in the buildings is cooled by injecting water on to it. Contaminated water is generated when the cooling water mixes with groundwater and rainwater which seeps into the buildings (please refer to the purple part in the figure below). The contaminated water is sent to several purification devices such as the Advanced Liquid Processing System (hereinafter referred to as ALPS) except for part of the contaminated water (please refer to the blue arrows coming from the purple part in the figure below) which is re-used for cooling water again. After most of the radionuclides except tritium are removed in this purification system (please refer to box ① and ② in the figure below), the water is safely stored in the tanks as ALPS treated water meeting Japan's regulatory standards for storage which are set in compliance with the international standards known as publications of the International Commission for Radiological Protection (hereinafter referred to as ICRP), an international specialized organization. Therefore ALPS treated water stored in the tanks is not contaminated water. Contaminated water generated is decreasing due to the decrease of groundwater which seeps into the buildings by implementing measures such as the construction of the frozen-soil wall and the sub-drain. What is currently under discussion is about ALPS treated water referred to in box ③ of the figure below.

It is an important precondition that even when ALPS treated water is discharged into the environment, the secondary treatment to remove radionuclides except for tritium will be appropriately carried out by Tokyo Electric Power Company (hereinafter referred to as TEPCO) to meet the regulatory standards for discharge set by the Nuclear Regulation Authority (hereinafter referred to as NRA) in compliance with the international standards known as the publications of the ICRP. As part of that precondition, the secondary treated water should then be sufficiently diluted to meet the regulatory standard for tritium, which is also set by the NRA in compliance with the international standards known as the publications of the ICRP before it is discharged into the environment.



Please refer to the websites of the Ministry of Foreign Affairs (MOFA) and the Ministry of Economy, Trade and Industry (METI) about the current situation of the decommissioning of the FDNPS:

- “FACE the FACTS: The Situation of TEPCO’s Fukushima Daiichi NPS (FDNPS) is stable” (<https://www.mofa.go.jp/mofaj/files/000564692.pdf>)
- “Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station Units 1-4” (<https://www.meti.go.jp/english/earthquake/nuclear/decommissioning/index.html>)

2. The GoJ would like to point out the factual errors in the allegations made by the information source. The perception of the information source which is quoted by the Special Rapporteurs is cited in the boxes below per paragraph, followed by the comments of the GoJ.

The management of highly contaminated water at the Fukushima Daiichi nuclear plant continues to present serious challenges to the Tokyo Electric Power Company (TEPCO), and is a source of serious concern towards populations whose basic human rights and wellbeing are affected by the process.

While the stable state of the FDNPS is being maintained and managed, the decommissioning is steadily progressing and includes a concrete plan for fuel debris retrieval. There has been gradual progress in the returning of residents and reconstruction efforts in the surrounding area. The Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station states that systematic risk reduction will be realized under the concept of "coexistence of reconstruction and decommissioning," with consideration for the site conditions, rationality, promptness and certainty while placing top priority on the safety of locals, the surrounding environment and workers.

As for the steps taken on decommissioning and the contaminated water, IAEA Director General Rafael Mariano Grossi, who visited the FDNPS on February 2, 2020, said: "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."

According to the Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station Unit 1 to 4 (the Mid-and-Long-Term Roadmap) established in December 2011 and most recently revised in December 2019, the Government of Japan and TEPCO aim to suppress the amount of contaminated water generation to about 150m<sup>3</sup>/day in 2020 and to less than 100m<sup>3</sup>/day in 2025, and treatment of stagnant water in the buildings is aimed to be completed in 2020. Available information and data give ample reason to doubt that this target can be achieved.

In the Mid-and-Long-Term Roadmap revised in December 2019, the target to reduce the amount of contaminated water generated to 150m<sup>3</sup> per day in 2020 has been maintained and a new target to limit it to 100m<sup>3</sup> per day in 2025 has been set. The amount of contaminated water generated was reduced to approximately 180m<sup>3</sup>/day in the fiscal year 2019 from approximately 540m<sup>3</sup>/day, which was before implementing preventive multilayered approaches such as the construction of the sub-drain and the frozen-soil wall. The volume of contaminated water generated could increase due to groundwater and rainwater flowing into the buildings. However, in fiscal year 2019, when the amount of rainfall was 1.7 times greater than that in fiscal year 2018, the amount of contaminated water generated remained at the same level. The GoJ continues to achieve the targets set out in the Mid-and-Long-Term Roadmap by taking steps to reduce the inflow of rainwater into the buildings such as the reparation of the buildings' rooves.

In the past nine years a significant and increasing volume of radionuclide-contaminated water has been recorded at the site. The contaminated water allegedly still contains radioactive toxins like caesium, strontium, iodine, rhodium and cobalt in disturbing amounts. Chronic exposure to these radionuclides can produce negative health effects including neurodevelopmental problems, cardiovascular disease, cancer, and even death.

Contaminated water generated in the buildings is sent to several purification devices and thereafter stored in the tanks as ALPS treated water. ALPS treated water meets the regulatory standards for storage set in compliance with the international standards known as the publications of the ICRP.

Currently, towards determining its basic policy on the handling of ALPS treated water, the GoJ continues to listen to opinions from the parties concerned including local residents considering the report of the Subcommittee on Handling of the ALPS Treated Water. It is an important precondition that even when ALPS treated water is discharged into the environment, the secondary treatment to remove radionuclides except for tritium will be appropriately carried out by TEPCO to meet the regulatory standards for discharge set by the NRA in compliance with the international standards known as the publications of the ICRP. As part of that precondition, the secondary treated water should then be sufficiently diluted to meet the regulatory standard for tritium, which is also set by the NRA in compliance with the international standards known as the publications of the ICRP before it is discharged into the environment.

As of 19 March 2020, the amount of such contaminated water at the Fukushima Daiichi plant (units 1-4) was recorded at 1.19 million m<sup>3</sup> (cubic meters). The majority of this, 1.08 million m<sup>3</sup>, is water treated by the Advanced Liquid Processing Systems (ALPS) and held in storage tanks (ALPS-treated water). Volumes of contaminated water are expected to continue to increase over the coming years. According to some estimates the additional decontamination of all ALPS-treated water alone will require an additional estimated 5-6 years.

TEPCO has never referred to the specific time span required for secondary treatment. TEPCO is to conduct pilot secondary treatment of ALPS treated water within the fiscal year 2020. In any case, it is an important precondition that even when ALPS treated water is discharged into the environment, the secondary treatment to remove radionuclides except for tritium will be appropriately carried out by TEPCO to meet the regulatory standards for discharge set by the NRA in compliance with the international standards known as the publications of the ICRP. As part of that precondition, the secondary treated water should then be sufficiently diluted to meet the regulatory standard for tritium, which is also set by the NRA in compliance with the international standards known as the publications of the ICRP before it is discharged into the environment.

In September 2018, TEPCO indicated the water processing had failed to reduce levels of radioactivity to levels below the regulatory limit permissible for ocean discharge. On 28 September 2018, TEPCO admitted that of the 890,000 m<sup>3</sup> of ALPS-treated water, about 750,000 m<sup>3</sup> contained higher concentrations of radioactive materials than levels permitted by the safety regulations for release into the ocean. In 65,000 m<sup>3</sup> of ALPS-treated water, the levels of strontium-90 were more than 100 times the safety standards, according to TEPCO. The levels were as high as 20,000 times the standards in some tanks. These figures contrast TEPCO's initial pledge to reduce radioactivity "to lower than the permissible level for discharge" by 2020.

The allegation that TEPCO indicated that it would "reduce radioactivity of ALPS treated water stored in the tanks 'to lower than the permissible level for discharge' by 2020" is groundless.

The Mid-and-Long-Term Roadmap formulated by the GoJ indicated the "completion of the treatment of stagnant water in buildings within 2020 except for the reactor buildings of Unit 1 to 3, the process main building and the high-temperature incinerator building, within year 2020." As the Roadmap says, "the completion of treatment" means that situation where contaminated water is stagnant in buildings except for some buildings is solved by pumping the stagnant water (contaminated water) and treating it. Stagnant water in buildings is stored in the tanks as ALPS treated water after purification treatment using cesium adsorption system, desalination device, and ALPS.

It is true that approximately 70% of the total volume of ALPS treated water contains radionuclides at the concentration that exceeds the regulatory standards for discharge while ALPS treated water is stored meeting the regulatory standards for storage set in compliance with the international standards known as the publication of the ICRP.

However, it is an important precondition that even when ALPS treated water is discharged into the environment, the secondary treatment to remove radionuclides except for tritium will be appropriately carried out by TEPCO to meet the regulatory standards for discharge set by the NRA in compliance with the international standards known as the publications of the ICRP. As part of that precondition, the secondary treated water should then be sufficiently diluted to meet the regulatory standard for tritium, which is also set by the NRA in compliance with the international standards known as the publications of the ICRP before it is discharged into the environment.

In September 2019, the Minister of the Environment of the Government of Japan did not exclude the possibility of discharging the contaminated water into the ocean, during a televised interview. In its 10 February 2020 report the ALPS Subcommittee considered five initial options for disposition of ALPS treated water and down selected to two potential options: controlled vapour release, and controlled discharges into the sea.

Then Minister of the Environment, Mr. Yoshiaki Harada, did not say, “it did not exclude the possibility of discharging ‘the contaminated water’ into the ocean,” but said, “this is not my jurisdiction but I think there will be no other way than for ‘treated water’ to be discharged and diluted.”

ALPS treated water is not contaminated water. “Contaminated water” is, in general, non-treated water referred to in the purple part in the figure above of 1. What is currently under discussion is about ALPS treated water referred to in box ③ of the figure above.

However, it is an important precondition that even when ALPS treated water (box ③ of the figure above) is discharged into the environment, the secondary treatment to remove radionuclides except for tritium will be appropriately carried out by TEPCO to meet the regulatory standards for discharge set by the NRA in compliance with the international standards known as the publications of the ICRP. As part of that precondition, the secondary treated water should then be sufficiently diluted to meet the regulatory standard for tritium, which is also set by the NRA in compliance with the international standards known as the publications of the ICRP before it is discharged into the environment.

While TEPCO plans to conduct secondary treatment of large amounts of the ALPS-treated water prior to any discharge, significant amounts of radioactive materials will remain, including strontium. The disposal of contaminated water from the Fukushima nuclear disaster into the ocean or air will jeopardize a multitude of human rights and the livelihoods of a large number of communities, including indigenous communities who are heavily dependent on fishing for income and subsistence. The discharged radionuclides could potentially build up in the fish and shellfish which compose an important part of the diet of the population in Japan. If consumed by humans, the accumulation of these radioactive elements in fish can potentially cause a number of serious health concerns, including fatal diseases, in children as well as adults. The decision to dispose of contaminated wastewater into the ocean would also seriously affect the human rights and livelihoods of local fishermen, who have invested enormous efforts into rebuilding their industry after the nuclear plant disaster. The impacts of such ocean disposal would create reputational damage for their industry, irrespective of differences of opinion regarding fish and shellfish contamination and resulting health impacts. Aerial discharges raise many similar concerns for agricultural communities in potential affected areas, and potentially for consumers as well.

Currently, towards determining its basic policy on the handling of ALPS treated water, the GoJ continues to listen to opinions from the parties concerned including local residents considering the report of the Subcommittee on Handling of the ALPS Treated Water. It is an important precondition that even when ALPS treated water is discharged into the environment, the secondary treatment to remove radionuclides except for tritium will be appropriately carried out by TEPCO to meet the regulatory standards for discharge set by the NRA in compliance with the international standards

known as the publications of the ICRP. As part of that precondition, the secondary treated water should then be sufficiently diluted to meet the regulatory standard for tritium, which is also set by the NRA in compliance with the international standards known as the publications of the ICRP before it is discharged into the environment.

In the Subcommittee on Handling of the ALPS Treated Water, the result of the exposure impact studies by means of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) specified method was presented. According to this, if the total amount of the ALPS treated water stored in the tanks is disposed of every year by vapor release or by discharge into the sea, the impact will be no more than one-thousandth of the exposure impact of natural radiation in Japan (2.1 mSv/year). About this result, the GoJ received the review from the IAEA saying that “the IAEA Review Team considers that the methodology used to estimate prospectively the radiological impact of the two solutions is appropriate at this stage for the purpose of informing the decision on a possible solution, and would allow the initiation of discussions with the national regulatory body (the NRA).”

In consideration of the final opinion to be undertaken the ALPS Subcommittee noted that the Government is expected to involve relevant stakeholders, including scheduling meetings with the local community. Local community members including the local fisheries association and forestry association report strong opposition to any environmental release, that the consultation is very limited, failing to involve the wider population, and that it is taking place during the current COVID-19 pandemic, posing challenges to meaningful consultation. We also note concerns have been raised by neighbouring countries regarding the proposed means of disposal, and limited evidence of broader consultations with potentially affected communities and indigenous peoples in foreign jurisdictions.

With regard to the handling of the ALPS treated water, the GoJ recognizes that it should be properly considered while taking into account the report of the Subcommittee on Handling of the ALPS Treated Water, which was released on February 10, 2020. In order to listen to opinions carefully from a wide-range of the parties concerned including local municipalities, farmers, foresters and fishermen, “Meetings as Opportunities for Receiving Opinions” have been held with the participation of those who have accepted to attend the meetings and been able to join them online. The GoJ will decide its basic policy with responsibility including a policy for countermeasures against reputational damage while carefully listening to the opinions of various domestic parties concerned. In addition, to receive opinions from around the country, the GoJ has been collecting public comments in writing until July 15.

To foreign countries including neighboring countries, the GoJ continues to properly inform them of the situation of the FDNPS based on scientific facts in a courteous manner by utilizing various

opportunities such as briefing sessions for all the diplomatic missions in Tokyo or relevant international conferences. For instance, about the situation of decommissioning the FDNPS and contaminated water management, the GoJ periodically publicizes general reports through the IAEA; informs all the diplomatic missions in Tokyo and the IAEA of the situation every month in principle; has held more than 100 briefing sessions for all diplomatic missions in Tokyo since the accident at the FDNPS. The GoJ has courteously responded to questions or opinions which arise in these briefings on the scene.

As for the report of the Subcommittee on Handling of the ALPS Treated Water, the IAEA Review Team considers that the recommendations in the report made by the ALPS Subcommittee are based on a sufficiently comprehensive analysis and on a sound scientific and technical basis. Also, the IAEA Review Team considers the two options (namely, controlled vapor release and controlled discharges into the sea, the latter of which is routinely used by operating nuclear power plants and fuel cycle facilities in Japan and worldwide) selected out of the initial five options are technically feasible and would allow the timeline objective to be achieved.

Furthermore, IAEA Director General Rafael Mariano Grossi visited the FDNPS on February 26, 2020. He mentioned that: 1) efforts made in the FDNPS are systematic and meticulous; 2) the two disposal options (discharge into the sea and vapor releases) are technically feasible and in line with international practice; and 3) the support from the IAEA such as in radiation monitoring at the implementation could help provide reassurance to the public that any releases of water would be within international standards.

The discharge of contaminated water into the ocean and air is anticipated to affect populations also beyond Japan's borders. Several countries voiced their concerns over the Fukushima Daiichi water issue at a Meeting of the International Maritime Organization in London, the basis of which are that the proposed approaches to managing the radionuclide contaminated water can seriously affect the food security and livelihood of large numbers of populations within and outside Japan.

At the forty-first Consultative meeting and fourteenth meeting of the Contracting Parties to the London Convention and London Protocol, regarding ALPS treated water stored at the FDNPS, a few parties expressed concern about whether any radioactive water would be discharged into the sea and its possible impact on the marine environment. However, there was no statement which suggested that it can seriously affect the food security and livelihood of large numbers of populations within and outside Japan.



3. Please find below for the GoJ's response to each question raised in the communication.

1. Does your Excellency's Government envisage any further changes to be made to the Mid-and-Long-Term Roadmap towards the decommissioning of TEPCO's Fukushima Daiichi NPS?

There is no fact that there are any obstacles to the achievement of the targets for contaminated water management as alleged to the UN Special Rapporteur, and there are no plans to make further revisions to the Mid-and-Long-Term Roadmap at this time.

The decommissioning of the FDNPS is a difficult and unprecedented attempt in the world. In general, the Mid-and-Long-Term Roadmap will be revised flexibly according to the progress and situation. It has been revised five times so far, and most recently in December 2019.

2. Has the objective set for resolving water crisis efficiently by 2020 been modified or is it likely to be modified in view of recent developments?

There is no fact that the target for contaminated water management, which is set in the Mid-and-Long-Term Roadmap revised in December 2019, has been modified. Also, there is no plan to modify this target at this time.

In the Mid-and-Long-Term Roadmap revised in December 2019, the target to reduce the amount of contaminated water generation to around 150 m<sup>3</sup>/day within 2020 has been maintained, and a new target to reduce the amount to about 100 m<sup>3</sup>/day or less within 2025 has been set. By proceeding with measures to suppress rainwater inflow into the buildings, such as repairing damaged parts of the building roof, the GoJ will aim to achieve the targets set in the Mid-and-Long-Term Roadmap.

In addition, in the Mid-and-Long-Term Roadmap revised in December 2019, the target to complete stagnant water removal and treatment in buildings, excluding the reactor buildings of Units 1 to 3, the process main building and the high-temperature incinerator building, as well as to expose the floor surface of these buildings was set. To achieve the target, the stagnant water removal and treatment in the buildings will be processed.

3. Does your Excellency's Government envisage the possibility of discharging any contaminated water into oceans that is (a) below and (b) above regulatory limits for radioactive exposures?

Currently, towards determining its basic policy on the handling of ALPS treated water, the GoJ continues to listen to opinions from the parties concerned including local residents considering the report of the Subcommittee on Handling of the ALPS Treated Water.

In the case of releasing ALPS treated water to the environment, it is a premise that the necessary measures be implemented in compliance with regulatory standards for discharge set by the NRA in compliance with the international standards known as the publications of the ICRP, while obtaining the understanding of local communities.

4. How is your Excellency's Government engaging and consulting with concerned and/or affected communities? Please include detailed information on efforts regarding: local communities and indigenous peoples near Fukushima; local communities, civil society organizations, and indigenous peoples located further away, including those outside Japan's territory; and States in the vicinity of Japan, including Canada, China, Russia, the Republic of Korea, the United States, among others, as well as the Nordic Council.

With regard to the handling of the ALPS treated water, the GoJ continues to listen to opinions from a wide-range of the parties concerned including local municipalities, farmers, foresters and fishermen, considering the report of the Subcommittee on Handling of the ALPS Treated Water. The process of listening to opinions is available for viewing through online streaming videos that are freely accessible to the general public. In addition, the GoJ has collected public comments in writing and everyone can raise his or her opinions. The GoJ continues to listen to a wide-range of opinions in a transparent manner and take the process of consideration forward.

The report of the Subcommittee on Handling of the ALPS Treated Water, which was released on February 10, 2020, has been reviewed by the IAEA. To foreign countries, the GoJ continues to provide information in a highly transparent manner through methods such as: reports to all the diplomatic missions in Tokyo and the IAEA, which are sent every month in principle; briefing sessions for all diplomatic missions in Tokyo and the foreign press; relevant international conferences such as the IAEA General Conference or meetings of OECD/NEA; and the websites of MOFA and METI.

The relevant websites mentioned above are as follows:

- Website of MOFA

"FACE the FACTS : The Situation of TEPCO's Fukushima Daiichi NPS (FDNPS) is stable"  
(<https://www.mofa.go.jp/mofaj/files/000564692.pdf>)

- Website of METI

"Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station Units 1-4"  
(<https://www.meti.go.jp/english/earthquake/nuclear/decommissioning/index.html>)

5. How is your Excellency's Government's proposal for ocean discharge of radioactive waste in compliance with Japan's obligations under the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Protocol)?

The London Protocol prohibits, in principle, dumping of wastes and other matter generated on land from vessels, aircraft, platforms or other man-made structures at sea. Discharge of wastes and other matter from land-based facilities to the sea is not subject to the regulations of the London Protocol.

How to handle ALPS treated water is currently under consideration within the GoJ taking into account the report of the Subcommittee on Handling of the ALPS Treated Water released on February 10, 2020, and the GoJ has not yet reached a conclusion. In any case, the GoJ will make sure any action should be taken in compliance with international law.

4. Lastly, the GoJ would like to explain its policy on the handling of ALPS treated water.

With regard to the handling of the ALPS treated water, the GoJ continues to listen to opinions from a wide-range of the parties concerned including local municipalities, farmers, foresters and fishermen, considering the report of the Subcommittee on Handling of the ALPS Treated Water. Still there have been parties concerned whose opinions must be heard. The GoJ will carefully and courteously listen to those opinions, considering the effect of the COVID-19 pandemic. The GoJ has no specific schedule to end the exchange of views and opinions with the wide range of parties concerned mentioned above, but the deadline for collection of public comments is July 15, 2020.

Basically the GoJ will decide its basic policy after listening to opinions, but the process of deciding the policy is also considered by taking into consideration various opinions. Legally, it is necessary to take reviews and allowance from the NRA before implementing the disposal of ALPS treated water.

With gradual progress in the return of residents and reconstruction efforts in the surrounding area, again, towards the reconstruction and revival of Fukushima, the GoJ is determined to continue to make progress towards realizing systematic risk reduction under the concept of "coexistence of reconstruction and decommissioning," with consideration for the site conditions, rationality, promptness and certainty while placing top priority on the safety of locals, the surrounding environment and workers.