

Fukushima Revisited: ALPS Water Release, China's Import Ban and the SPS Agreement at the WTO

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Introduction

Since the March 2011 accident at the Fukushima Daiichi Nuclear Power Station (FDNPS) in Japan, [the Tokyo Electric Power Company](#) (TEPCO) has been continuously injecting water to cool the fuel debris. This water becomes contaminated with radionuclides. To address this issue, TEPCO has utilized [the Advanced Liquid Processing System \(ALPS\)](#) to remove most radionuclides from the water. However, one radionuclide, tritium, cannot be technically eliminated. The treated water has been stored in tanks, with the site now holding over 1,000 such tanks. Both [the Japanese government and TEPCO](#) emphasize the necessity to reduce the number of these tanks for the safe decommissioning of the plant, which involves the site's dismantling and decontamination. As a result, on 24th August 2023, the discharge of the ALPS treated water into the Pacific commenced. On that same day, [China imposed an import ban](#) on Japanese aquatic products citing concerns about potential radionuclide contamination. This decision was in line with [the Agreement on the Application of Sanitary and Phytosanitary Measures](#) (SPS Agreement) under the World Trade Organization (WTO). China formally [notified](#) the import ban to the SPS Committee as an emergency measure on 31st August 2023. Following China's lead, both [Hong Kong](#) and [Macau](#) also implemented tighter restrictions on the import of certain Japanese aquatic products. In response, Japan submitted [a written counterargument](#) to the SPS Committee on 4th September 2023.

In Japan, a growing number of [politicians](#) and trade experts, including [Nakagawa](#) and [Kawase](#), are advocating for a challenge to China's import ban through the WTO dispute settlement system. This post examines the compatibility of China's measure with the provisions of the SPS Agreement, focusing on Japan's counterarguments submitted to the WTO. To clarify my position from the outset, I am not fully in favor of Japan escalating this issue to the WTO, and I will detail my reasons in the subsequent sections.

Differentiating Korea – Radionuclides and China’s Import Ban

When the word “Fukushima” is mentioned within the context of the WTO dispute settlement system, many EJIL: Talk! readers likely recall [Korea – Radionuclides \(DS495\)](#). Therefore, it might be helpful to distinguish between this case and the case involving China discussed in this post.

In 2013, two years after the accident, it was revealed that water, contaminated with high levels of radionuclides, had accidentally been released into the ocean from the damaged FDNPS. This revelation led Korea to enforce a comprehensive import ban on 28 kinds of fishery products from eight Japanese prefectures. Opposing this 2013 import ban and the related measures, Japan brought the case to the WTO in 2015. In April 2019, the Appellate Body report, which largely affirmed Japan’s defeat, was [adopted](#) by the Dispute Settlement Body. [As of now, Korea continues to maintain the aforementioned blanket import ban.](#)

Immediately after the *Fukushima* accident in 2011, [China took a comprehensive import ban](#) on Japanese food products. This import ban, excluding fishery products, is still in effect. [Japan had expressed concerns](#) in the SPS Committee about China’s import ban for about four years till March 2017. However, unlike with Korea, Japan has never filed a WTO complaint against China regarding this matter. As mentioned at the beginning of this post, in August 2023, which marked 12 years after the accident, China extended its import ban to Japanese aquatic products, in response to TEPCO’s planned release of ALPS treated water. It is the latter action (or possibly both) that the Japanese government is currently considering challenging at the WTO.

The Weak Basis of Japan’s Challenge under Article 2.2 of the SPS Agreement

First, in its counterargument, Japan contends that China’s import ban breaches the SPS Agreement as it is not based on scientific principles (para. 6). Japan’s primary contention focuses on Article 2.2 of the SPS Agreement, stipulating that SPS measures must be based on scientific principles and be maintained with sufficient scientific evidence. These requirements center on ensuring a direct connection between the SPS measure and the underlying scientific principles and evidence ([Panel Report, Russia – Pigs \(EU\)](#), para. 7.624).

Japan’s stance is that post-discharge monitoring of ALPS treated water reveals that tritium concentration levels in the seawater remain significantly below Japan’s tritium standard (i.e., [a concentration limit of 60,000Bq/L](#)). Moreover, [the International Atomic Energy Agency \(IAEA\) reported in July 2023](#), before the

discharge, that “the discharge of the ALPS treated water, as currently planned by TEPCO, will have a negligible radiological impact on people and the environment.” Essentially, Japan seems to suggest that, due to the negligible radiological impact of the ALPS treated water discharge on humans and the environment, China’s import ban lacks a scientific ground.

The panel in *Japan – Apples* found insufficient scientific evidence to assert that apples could be a vector for the introduction or proliferation of fire blight within Japan. The panel viewed Japan’s preventative measure against the disease in apples as “clearly disproportionate” to the negligible risk of transmission, thereby determining it was not supported by sufficient scientific evidence under Article 2.2 of the SPS Agreement ([Panel Report, Japan – Apples, para. 8.198](#)). Nonetheless, some experts have critiqued the panel’s logic, later affirmed by the Appellate Body ([AB Report, Japan – Apples, para. 163](#)), which posits that an import ban targeting a negligible health risk is disproportionate and, therefore, lacks a scientific foundation.

While Japan underscores the IAEA report, indicating that the discharge of ALPS treated water into the ocean presents only a negligible radiological impact on people and the environment, it does not automatically imply that China’s import ban is scientifically unfounded. Japan’s concern – of implementing an overly stringent import ban in reaction to a negligible risk – is more suitably addressed under Article 5.6 of the SPS Agreement, which will be elaborated upon later in this post.

The Tritium and Discrimination Discussion under Article 2.3 of the SPS Agreement

Second, Japan’s counterargument emphasizes that other nuclear facilities, including China’s Qinshan Nuclear Power Plant, release substantially more tritium annually than FDNPS (para. 5). This casts doubt on the consistency of China’s import ban with Article 2.3 of the SPS Agreement, which mandates that Members ensure their SPS measures “do not arbitrarily or unjustifiably discriminate between Members where identical or similar conditions prevail, including between their own territory and that of other Members.”

In assessing whether identical or similar conditions exist among Member territories, the Appellate Body noted that, while Article 2.3’s analysis considers conditions present in the products from different Members, it also involves considering other relevant conditions, such as “territorial conditions,” if they might affect the products at issue ([AB Report, Korea – Radionuclides, para. 5.64](#)).

In defense, [China](#) points to the different radioactive contamination situations between Japan and China, and Japan and other regions, asserting that ALPS treated water contains not just tritium but also numerous other radionuclides. While [Japan acknowledges](#) the presence of other radionuclides in the ALPS treated water, it emphasizes that their concentrations are negligible and fall below established standards.

The carcinogenic risk from radionuclides is [generally believed](#) to never become zero, regardless of exposure levels (there is no threshold). Consequently, the presence of radionuclides other than tritium in ALPS treated water, even in minimal amounts, may distinguish territorial conditions between Japan and China, and between Japan and other regions, under Article 2.3.

Within this provision, the subsequent question is whether the discrimination is arbitrary or unjustifiable. The answer relies on whether there exists a “rational connection” between the reasons provided for the discriminatory treatment and the objective of the measure ([Panel Report, India – Agricultural Products](#), paras. 7.428-7.429). When evaluating this, the level of protection that China desires via the import ban might be a significant factor (e.g., [Panel Report, Korea – Radionuclides](#), para. 7.349). If China advocates for a rigorous level of protection concerning carcinogenic risks from radionuclides in imported food, the distinction between ALPS treated water and discharges from other nuclear facilities could be seen as reasonable.

Questioning China’s ALOP under Article 5.6 of the SPS Agreement

Third, should Japan decide to challenge China’s import ban at the WTO, the resolution’s trajectory would largely hinge on determining China’s “appropriate level of protection (ALOP)”, sometimes termed the “acceptable level of risk”, concerning the carcinogenic risks potentially presented by radionuclides in Japanese aquatic products. Under Article 5.6 of the SPS Agreement, Japan might contend that China’s import ban is more trade-restrictive than required to achieve its ALOP. As previously highlighted, China’s ALOP is also pertinent when considering Articles 2.2 and 2.3 of the SPS Agreement.

Historically, WTO jurisprudence has consistently held that setting an ALOP remains the “prerogative” of the individual Member (e.g., [AB Report, India – Agricultural Products](#), para. 5.205), especially when it pertains to protecting human life or health. For instance, in *Korea – Radionuclides*, the Appellate Body criticized the panel for downplaying the “qualitative” aspect of Korea’s ALOP in preference for its “quantitative” aspect (i.e., 1 mSv/year dose limit) ([AB Report,](#)

[Korea – Radionuclides](#), para. 5.38). However, it appears, based on [prior discussions by the author with Hamada](#), that the Appellate Body misinterpreted the panel’s understanding: the panel saw the qualitative ALOP as being incorporated within the quantitative ALOP. This misjudgment by the Appellate Body hints at a possible overreliance on Members’ discretion when defining their ALOP.

With this in mind, while China might assert that it has set a stringent ALOP concerning carcinogenic risks linked to radionuclides in Japanese aquatic products, contesting this ALOP could pose a challenge for Japan. Instead, Japan might argue that China’s import ban is more trade-restrictive than required to achieve China’s rigorous ALOP and that alternative measures could achieve the same level of protection. Given Japan’s persistent call for China to [promptly lift its import ban](#), Japan will likely propose “no further measures” regarding radionuclides in its aquatic products as an alternative. In this context, Japan would need to demonstrate that China’s stringent ALOP can be met without imposing further measures on radionuclides in these products.

[Radionuclides exist in our daily environments](#), thus, we inherently accept a certain level of associated carcinogenic risk. Therefore, if the carcinogenic risk from tritium and other radionuclides in ALPS treated water falls significantly below such levels, it can reasonably be considered “safe” – [a viewpoint advocated by the Japanese government](#). However, as noted, the establishment of an ALOP is considered a Member’s prerogative, and assertions related to it have been highly respected by WTO judicial bodies. Therefore, if a Member sets its ALOP for radionuclides as “a level not accepting even minimal risk”, it is likely that WTO judicial bodies will uphold it. In this scenario, even if the carcinogenic risk from ALPS treated water is below the risk level ordinarily accepted in everyday life, it may still be concluded that certain measures are needed to meet China’s stringent ALOP.

Assessing China’s Potential Reliance on Article 5.7 of the SPS Agreement

Fourth, in responding to Japan’s claims under Article 5.1 of the SPS Agreement, which requires that Members base their SPS measures on risk assessments, China is likely to invoke Article 5.7. This would allow China to argue that its import ban is justified as a provisional measure, taken without being based on risk assessments (also refer to the piece by [Bacchus](#)). To support this stance, China must satisfy four requirements (as outlined in [Panel Report, US – Animals](#), para.

7.292). One of these conditions stipulates that “relevant scientific information is insufficient.” Scientific evidence is considered insufficient “if the body of available scientific evidence does not allow, in quantitative or qualitative terms, the performance of an adequate risk assessment under Article 5.1 and as defined in Annex A to the SPS Agreement” ([AB Report, Japan – Apples](#), para. 179).

While the decision by the panel in *Korea – Radionuclides* provides valuable insights that we will discuss further, it is worth noting that the Appellate Body declared the panel’s findings on Article 5.7 as “moot and of no legal effect” ([AB Report, Korea – Radionuclides](#), para. 5.118).

This panel highlighted that Korea implemented its measure in May 2011, a mere two months after the *Fukushima* accident, in an emergency situation where there was insufficient scientific evidence. Conversely, even with ambiguities surrounding the contamination leak from the FDNPS into the ocean by 2013, the panel found that some estimates were possible based on publicly accessible sources. Consequently, the panel concluded that there was sufficient scientific evidence to undertake a risk assessment when Korea’s comprehensive import ban on Japanese fishery products was put into effect in 2013 as a reaction to the leakage ([Panel Report, Korea – Radionuclides](#), paras. 7.84, 7.91, 7.96).

The recent release of ALPS treated water into the ocean by TEPCO was not accidental but a planned act. Since this commencement, TEPCO has consistently shared [real-time monitoring data](#) from diverse marine locations. Moreover, by testing the contamination levels of Japanese aquatic imports at the border, one can directly obtain the scientific data needed for a risk assessment (e.g., [Panel Report, Korea – Radionuclides](#), para. 7.92). In this backdrop, China faces a challenge in asserting that it lacked the scientific evidence to evaluate risks from radionuclides in Japanese aquatic products. Consequently, China might struggle to defend its import ban as a provisional measure under Article 5.7, potentially leading a WTO panel to determine that China did not base its measure on a risk assessment, breaching Article 5.1.

The Feasibility of a Risk Assessment Claim under Article 5.1 of the SPS Agreement

From our analysis, Japan seems best positioned for success when raising claims under Articles 5.7 and 5.1 of the SPS Agreement. However, even if Japan prevails in extended WTO litigation centered on these articles, it is uncertain whether China would promptly lift its import ban. Instead, China may choose to comply with WTO recommendations by conducting a new risk assessment. Should this

happen, Japan would face the necessity to again contest China's revised import ban – this time based on the new risk assessment – under Article 5.1 of the SPS Agreement. This scenario could see Japan pursuing two distinct WTO litigations to achieve a definitive dispute resolution. However, [as previously articulated by the author](#), substantiating a breach of Article 5.1 becomes challenging for the complaining party when confronting SPS measures tied to the carcinogenic risk posed by radionuclides.

Initially, Annex A(4) of the SPS Agreement defines a risk assessment for food safety as “the evaluation of the potential for adverse effects on human and animal health arising from the presence of [...] contaminants in food”. The term “potential” has been interpreted to mean “possibility” ([AB Report, EC – Hormones](#), para. 184). With this interpretation, when it comes to radionuclides which pose the carcinogenic risk irrespective of exposure levels, there is always a “possibility” of adverse effects on human health. As a result, risk assessments are likely to be readily deemed appropriate.

Furthermore, an SPS measure is deemed to be “based on” a risk assessment when it is “reasonably supported” by such assessment (*Ibid.*, para. 193). When the possibility for adverse effects of radionuclides on human health is evaluated in accordance with the SPS Agreement, it would be difficult to refute a rational relationship between such risk assessments and the SPS measures aimed to protect against those risks.

Consequently, should radionuclides stemming from ALPS treated water be detected in Japanese aquatic products, even in minimal amounts, it is likely that China's import ban would be recognized as based on a risk assessment, consistent with Article 5.1 of the SPS Agreement.

Conclusion

In this post, we have examined the compatibility of China's import ban on Japanese aquatic products with the SPS Agreement. This ban was instituted in response to TEPCO's release of ALPS treated water into the ocean in late August 2023. In Japan, several politicians and trade experts advocate challenging China via the WTO dispute settlement system, primarily arguing that China's measure is not rooted in science. However, the efficacy and strategic wisdom of such a WTO challenge remains ambiguous. As highlighted in this post, the SPS Agreement's structure complicates a complaining party's efforts to substantiate violations, particularly when it pertains to SPS measures addressing health risks, like the carcinogenic risk from radionuclides, that exist irrespective of exposure levels.

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It is noteworthy that the Japanese government has adopted a dual-pronged approach to China's import ban: submitting a counterargument to the SPS Committee and concurrently [requesting "discussions"](#) with China under the framework of the Regional Comprehensive Economic Partnership (RCEP) Agreement. [Article 5.11.2 of the RCEP Agreement](#) on emergency measures stipulates:

The relevant exporting Parties may request discussions with the Party adopting an emergency measure referred to in paragraph 1. Such discussions shall be held as soon as practicable. Each Party participating in the discussions shall endeavour to provide relevant information, and shall take due account of any information provided through the discussions.

The exact motivation behind Japan's request for "discussions" under RCEP remain unclear. Given the two major economic frameworks where both Japan and China have membership – WTO and RCEP – Japan seems keen to leverage every available diplomatic channel. However, based on the arguments presented earlier, this author posits that engaging in RCEP discussions might prove more fruitful than initiating a WTO lawsuit. As of this post's publication, China's reaction to Japan's request remains a matter of anticipation. Keeping a close watch on the forthcoming interactions between Japan and China within RCEP is essential for a comprehensive understanding of the evolving dispute.