Speech Scripts of Global Media Conference on August 10th in Seoul_English

[Scientists (5 min./person*2 persons)]

👉 Tim Deere-Jones, Independent & non-aligned Marine Pollution Researcher & Consultant on anthropogenic pollutants in marine and coastal environments

1. Long distance transport of sea discharged radioactivity.
Back in the 1990s, European nuclear reprocessor sea discharged radioactivity was identified off NE Alaska, making its way through the Arctic towards the Pacific Ocean. TEPCO, Japanese nuclear regulators and the IAEA must be fully aware of such long term, very long-range processes for transporting man-made radioactivity over thousands of sea miles.
In general terms the Pacific Ocean circulatory system consists of major surface water currents moving in a clockwise direction in the direction of the prevailing trade winds. These surface water currents are powerful, long-range and coherent. This means that Pacific Ocean circulation is well placed to transport radioactive material for long distances, over long time scales and contribute to the ongoing increase of Ocean wide radiological pollution.
The IAEA July report has not responded in detail to concerns about the long-range transport of Fukushima radioactivity through the Pacific environment.
2. Pacific Ocean stakeholders have referenced Sea to Land transfer in their submissions against the Fukushima discharges.
In the 1970s, the UK nuclear industry discovered that in onshore winds Caesium, Plutonium and Americium transferred from the sea to the land in marine aerosols and sea spray and crossed the shoreline to penetrate inland.
Concentrations of nuclides were enriched, relative to levels in ambient seawater, during the process, with enrichment factors of up to several hundred for the alpha emitters (Pu and Am) and lower for the Cs.
It was reported that the greatest enrichments were associated with airborne marine micro-organisms, organic and sedimentary particles entrained in marine aerosol micro-droplets and that larger sea spray droplets did not have such high enrichments.
The nuclear industry quickly abandoned this research, leaving many ongoing concerns un-answered. Later independent research proved that over 200 miles from the discharge point, marine radioactivity blew inland from the coast and contaminated agricultural produce ten miles inland.
Given the well-established very deep inland penetration of sea salt (hundreds of miles) and marine micro-organisms (at least 100 miles) it seems highly likely that the radioactivity may penetrate far further than 10 miles.
Other UK studies have proved that coastal flooding dumps thousands of tonnes of radioactively contaminated water and sediment onto coastal farmland and urban environments and that such events deliver dietary, inhalation and contact doses to those living in such environments and consuming produce grown on coastal land.
Given the evidence that man-made sea discharged radioactivity can be transported by sea for 1,000s of miles, it is evident that sea to land transfer has significant dose potential.
The IAEA July report has not discussed the issue or responded to the concerns.

3. TEPCO, the Japanese Government and IAEA have consistently claimed that tritiated water is harmless and the July IAEA report has confirmed and supported that position.

But, post 1990s UK research has clearly proved that

tritium in tritiated water becomes bound to organic material and micro-organisms in marine environments

tritiated water behaves like any other water, so tritium can be transferred from the sea to the land in flood water, sea spray and aerosols

Organically Bound tritium(OBT) is biologically available and highly mobile through the marine food webs

OBT is highly bio-accumulated in species towards the top of the marine/coastal trophic level (cod fish, shelduck). Such species typically held concentrations between 2,000 to 6,000 times more enriched than the concentrations in ambient waters. OBT is of far greater radiological significance than tritiated water.

Although there is no evidence of human studies, from the work above it can be deduced that elevated and enriched doses of marine sourced tritium and OBT to humans (via sea foods) and inhalation doses are strongly indicated.

Other pathways of delivery of doses of marine discharged tritiated water and OBT include

consumption of foods produced on sea washed coastal pasture as a result of coastal inundation events

the consumption of contaminated terrestrial agricultural and arable products grown up to at least 10 miles inland, but contaminated by marine sourced tritium and OBT transported in land by sea to land transfer mechanisms

Based on such data it is concluded that human inhalation doses of tritium and OBT are also to be expected as a result of breathing coastal zone air

In the context of the enrichment factors described above, OBT evidently has the potential to make a significant dose contribution to coastal zone communities.

Conditions for exposure of coastal populations, to doses of additional tritium, OBT and other nuclides discharged in the ALPS water, are favorable along distant downstream coasts because of the higher sediment loadings of inshore waters, prevailing onshore winds, and seasonal storms with a heavy surf action, coastal flooding and marine sea spray and aerosol production.

The IAEA report has failed to address these issues despite the concerns expressed by a wide number of organizations

4. The Pacific Islands Forum requested that, as well as the rapid analysis of the water from all batches of storage tanks stipulated by the IAEA to provide an average concentration outcome, there should be detailed full analysis of selected batches in order to provide a better picture of the concentrations of all radionuclides present.

The IAEA July Report has failed to reference these matters or to respond to the concerns.

5. Long term transport of radioactivity in the Pacific circulatory system means that many coastal communities are likely to experience doses of radioactivity from the proposed discharge of ALPS water. As discussed above these doses will be contact, dietary and inhalation doses.

The IAEA has recommended the identification of Critical Groups in respect of discharges. Japan's authorities have not made any attempt to identify Pacific Ocean Critical Groups who, as a result of their habitation, life and work styles, age and gender status are those most likely to be in receipt of the highest doses arising from the ALPS water discharge.

The IAEA report has not commented on this omission and therefore supports and approves the Japanese Government failure to ID such groups and provide analysis of the radiological risks to those most likely to receive the highest doses.

👉 **Arjun Makhijani, Ph.D., A member of the Expert Panel appointed by the Pacific Islands Forum and a President, Institute for Energy and Environmental Research(IEER)**

<u>TEPCO plan to dump radioactive Fukushima water is deeply flawed and does not conform to key IAEA principles, requirements, and guidelines</u>

Main Points are that:

- ➢ The TEPCO plan is not in conformity with the justification and optimization requirements of the IAEA.
- ➢ The IAEA has refused to consider justification – thereby abandoning some of its own principles, requirements, and guidelines.
- ➢ The IAEA final report did not consider economic and social harms even though these are part of its requirements.
- ➢ The IAEA final report relies on the TEPCO REIA, which is deeply flawed.
- ➢ Neither the Government of Japan or the IAEA has seriously considered the concrete option recommended by the Expert Panel.
- ➢ The Japanese government has asserted that the term "society" should include the entire Pacific region but that Japan alone has the right to decide for everyone – a blatantly undemocratic stance that is a recipe for ecological chaos, especially as key IAEA requirements are being violated.

1. Plan violates justification requirement and guidance

IAEA fundamental safety principle #4 on "justification" requires that the proposed activity "must yield an overall benefit" (emphasis added).

IAEA General Safety Guide 8 (GSG-8) provides that Japan's regulator must ensure that no practice is implemented "unless it is justified."

GSG-8 provides clear guidance on justification: "…justification is the process of determining whether a practice is, overall, beneficial, i.e. whether the expected benefits to individuals and to society from introducing or continuing the practice outweigh the harm (including radiation detriment) resulting from the practice." (Para 2.11 - emphasis added).

Countries in the Pacific region like South Korea, Philippines, Marshall Islands, China, Fiji, and many others will receive no benefits and they will suffer some harm. The dumping plan is clearly not justified and violates fundamental safety principle #4 and the associated requirement (in General Safety Requirement Part 3) and the guidance in GSG-8.

2. The dumping plan violates the optimization requirement

Fundamental safety principle #5 requires the achievement of "the highest level of safety that can reasonably be achieved". GSG-8 provides the guidance including keeping exposures "as low as reasonably achievable" (ALARA).

The dumping plan does not meet the optimization requirements for Pacific region countries and for the fishing communities in Japan.

The Expert Panel recommendation for filtering the water and then making concrete with it that has little potential for human contact would avoid transboundary harms and have essentially zero doses to the public from tritium.

Japan and the IAEA have not seriously considered the Expert Panel's concrete option – they seem determined to proceed with dumping. Director General Grossi indicated approval in

April 2021 even before the task Force was appointed. In July 2023, posed for a photo feeding commercial fish food to experimental fish – knowingly or unknowingly complicit in poor science.

3. **The REIA is seriously deficient**

Only three “reference” species – flatfish, crabs, and brown algae – are considered; they are “reference” species without specific reference to Pacific region ecosystems

Analysis of which indicator species would best represent ecosystem impact is needed but was not done.

Bioconcentration of radionuclides, including strontium-90, is not well considered.

The assumption of ecological equilibrium being reached is wrong in a number of ways: levels of the non-tritium radionuclides, which are 1000’s (137Cs) to > 300,000 (60Co) times more likely to accumulate on the seafloor, and as such would continue to increase over time with a continuous source.

The IAEA conclusion that the impact would be “negligible” is not scientifically supported by the analysis. A sound REIA is needed to support any conclusions about radiation, ecological, and economic and social harms. Such an REIA has not been done.

4. **Serious failures of science and regulation**

Both Japan’s Nuclear Regulation Authority and the IAEA have failed in fundamental ways in their responsibilities to manage the water in ways to minimize harm and avoid transboundary impacts.

Japan’s claim that dumping would promote overall decommissioning is not valid because the option for making concrete recommended by the Expert Panel would meet the requirements better and faster without transboundary impacts.

By claiming to decide that dumping was acceptable on behalf of all Pacific region countries Japan is opening the door for similar actions by other countries. It is a recipe for ecological disorder and is blatantly undemocratic.

By stating that justification was out of its scope because it was invited after the dumping decision had been made the IAEA has opened a giant loophole for wholesale violation of its justification principle and guidelines.

The IAEA has abandoned the interests of Pacific region countries in its eagerness to support the dumping plan.

In my view it is critical that members of the IAEA like South Korean hold the IAEA to account for its abandonment of its own safety principles and guidelines and creating a loophole for any country to follow Japan’s egregious example.

[Fisherfolks (3 min./person*4 persons)]

👉Japan: Haruo Ono, a fisherfolk in Northern Fukushima

I’m Haruo Ono, who has been a fisherman for over 55 years in Fukushima Prefecture. Not only me, but the fishermen of Fukushima prefecture are all against ocean release.

I will give my opinion from a fisherman's point of view.

The sea is a fisherman's workplace and also a place where fish live.

The sea is one big creature, and why is it trying to shed tritium-contaminated water there?

I heard somebody's mention at the Tsukiji Market right after the Great East Japan Earthquake that I would not buy fish from Fukushima Prefecture. It seems that such a nightmare will repeat again with the release of polluted water into the ocean.
In addition, the sea is not only for fisherfolks, but also has many relationships with humans, such as swimming, fishing boats, surfing, and sea shrines.
Dear everyone around the world, please stop our government's insanity of flushing tritium-contaminated water into the waters of Fukushima because the oceans are connected. There are plenty of ways other than ocean release.

👉**Korea: Young-chul KIM, National Fishermen Association**

Dear fisherfolks around the world, who are always struggling to stop the discharge of contaminated water from Fukushima into the ocean, I am Kim Yeong-cheol, a fisherman who makes a living by fishing in Korea and serves as the executive director of the National Fisherfolks Federation.
I would like to appeal to you with a more desperate heart than ever.
The sea is a source of life for fishermen. I lived with gratitude all my life, gazing at the sea all my life, treating it as my life partner, like my home, workplace, and family and friends.
However, I heard that Japan is going to dump radioactive contaminated water into the sea where I live. It really felt like poison was being sprayed on my body. Are you saying it's safe? Then, whether it is agricultural or industrial water, it can be used in Japan, but why is it dumped far away into the sea while digging an undersea tunnel? Isn't the Japanese government trying to ruin this precious sea, the home of our fishermen?
Korean fishermen considered the Fukushima accident in 2011 an irresistible force and even raised money to help Japan. But now, the Japanese government is trying to artificially dump contaminated water into the sea.
Since the Japanese government declared the dumping of contaminated water in the ocean in 2021, we Korean fishermen have been opposing the dumping of the ocean while holding land and sea demonstrations. We will fight until the Japanese government gives up dumping at sea. If we work together, we can stop it.
The Korean government, Japanese government, and the UN should take the lead in protecting the seas of all mankind rather than political interests. We must remember that the sea is not the property of one country. Any country or United Nations that agrees to pollute the world's oceans will be recorded in history and will be forever regretted. This is because it is directly related to the health and life safety of people around the world. There is no border or nationality in front of this obvious problem. The only thing the world's fishermen need to do now is to prevent a single drop of radioactively contaminated water from being dumped until it is completely safe, no matter how many decades it takes.
If the fishermen of the world remain silent, the Japanese government will regard it as that the fishermen agree.
Koreans who feel anxious about the release of polluted water into the ocean are already closing their wallets, and the damage has begun, such as trading at half price compared to the previous year. An undersea tunnel for dumping contaminated water in Japan has been completed, and it is expected that the real ocean discharge will begin from September. Our livelihood is completely destroyed, and all fishermen are forced to die.
Let us, Korea and the world, cross national borders and unite passionately toward the single goal of “stopping the dumping of nuclear wastewater in the ocean.” Let's show the world how scary fishermen can be when they're angry. Let's believe in our own strength and shout

without regret. Once dumped into the sea, it cannot be picked up again. Let's stop it right now. Rather than becoming a cowardly fisherman in front of history, let's pass on to our children an uncontaminated sea.
Colleagues in the world, please join us. Let's fight hard until the end!
The sea is a living, breathing creature. When humans abandon the sea, the sea also abandons humans.

👉**America: Dave McCutch, a fisherfolk in Oregon, USA**

No script, but he will talk about the following at the conference:

- How the Fukushima meltdown affected fish (he witnessed mutated crabs the same year the disaster happened)
- How the meltdown caused a market crash for fishers in the US, who had no insurance
- How he is opposed to the discharge plan

👉**Philippines: Ronnel Arambulo, Ang Pamalakaya (Pambansang Lakas ng Kilusang Mamamalakaya ng Pilipinas / National Federation of Small Fisherfolk Organizations in the Philippines)**

In solidarity with many countries in Asia, the fisherfolk in the Philippines strongly oppose Japan's plans to release 1.25 million tonnes of treated wastewater from the Fukushima Daiichi Nuclear Power Plant in the Pacific Ocean. According to experts, it will take 30 years for the plan to finish due to its immense quantity and gradual release.
It has the potential to have substantial negative impacts on fisheries and other marine resources in the biggest ocean in the world.
Since the Philippines is also located in the Pacific Ocean, its potential impacts will negatively affect our fisheries during the North East Monsoon, which lasts for at least six months in the last quarter of the year.
Of particular concern connected to Japan’s plans to release treated nuclear wastewater within Philippine waters is the already vulnerable Philippine Rise (formerly Benham Rise), a 13-million-hectare underwater plateau between Aurora and Isabela in the eastern part of Luzon which boasts different kinds of marine resources and deposits of gas and minerals that seems like a paradise for us.
If Japan’s plans push through, the treated nuclear wastewater will contaminate our rich ocean and have disastrous implications and consequences for the Philippine fishing industry. Because of the potential negative implications of Japan’s plans, the livelihood of millions of Filipino fisherfolk will be affected, putting the Philippines’ food security at colossal risk.
The grave impact of Japan’s plans on livelihood, food security, and the environment is the basis for our strong solidarity with the fisherfolk in different countries, fighting against the potential global negative impacts of Japan’s plans to release wastewater from the Fukushima Nuclear Power Plant.
Therefore, our urgent appeal to the Japanese government is to refrain from pushing through their harmful plan to release the treated nuclear wastewater into the Pacific Ocean. Instead, we urge them to look and exhaust all possible alternatives in disposing of the wastewater to prevent further destruction to our environment and global human health.

Our appeal to the United Nations is that they need to intervene on this issue by creating a resolution that should contain their disapproval of Japan's plans to release the treated nuclear wastewater into the Pacific Ocean.
While this issue persists, our fisherfolk organization will continue to hold protests.
We will also strengthen our solidarity with other citizens and organizations of immediately affected countries, like China, South Korea, and Japan, to urge the Japanese government to reconsider and stop its plan to release the treated nuclear wastewater.
Thank you!

[Civil society (3 min./person*3 persons)]

👉 Pacific Islands: Epeli Lesuma, Nuclear Justice Campaigner, Pacific Network on Globalisation (PANG)

The Pacific Collective on Nuclear Issues (PCNI) which is a collective of civil society groups, movements and alliances working on advocacy of nuclear justice issues for Pacific peoples is deeply concerned that Japan proceed with the release of the ALPS-treated radioactive wastewater as early as the end of August.
The Collective is disappointed in the Japanese Government and TEPCO's shameless disregard of the calls of the Pacific Islands Forum panel of experts to hold off on any such release and to explore alternatives which will not threaten Pacific peoples' livelihoods, safety, health, well-being and the sovereignty of Pacific nations.
Japan's actions have a number of Human Rights implications and threaten both directly and indirectly Pacific peoples' rights to:

- ➢ Clean, Healthy and Sustainable Environment and in turn the rights of Pacific Children and Future Generations to a clean environment;
- ➢ Access to Information and Public Participation, including in Environmental Matters and the Consultation and Free, Prior Informed Consent for Indigenous Peoples;
- ➢ The Enjoyment of the Highest Attainable Standard of Physical and Mental Health;
- ➢ Culture and the rights of Pacific people to live and practice their culture in dignity with the Pacific Ocean at the heart of this;
- ➢ An Adequate Standard of Living and Development as the release of nuclear wastewater threatens the safety of ocean food sources and the aspirations of Pacific peoples to develop our economies in a sustainable, equitable and equal manner.

Japan's actions further contradict their obligations under the United Nations Convention on the Law of the Sea (UNCLOS), violating Articles 192 and 195 and nearly all articles in Part 12 which address the protection and preservation of the marine environment.
We also condemn Japan's diplomatic efforts to fracture the long-held regional position of Pacific states in defense of a nuclear-free Pacific. We condemn numerous attempts to increase its Overseas Development Assistance (ODA) as a means of placating our leaders and buying support for its irresponsible and dangerous plans. We have observed an escalation in Japan's engagements with Pacific leaders which suggests that development assistance is being deliberately weaponised as a tool to achieve compliance.
Further to this, we do not feel assured by the IAEA's confidence in the safety of Japan's proposal as the agency's remit is in promoting the safe use of nuclear energy. We demand transparency within the IAEA and its handling of this matter.

The Pacific Collective on Nuclear Issues joins our partners in calling on the Japanese Government and TEPCO to abandon this plan effectively immediately.
Pacific civil society groups will rally together in solidarity and will undertake peaceful demonstrations as outward expressions of our condemnation of Japan's release of this radioactive wastewater into our Blue Pacific Continent.
We call on our Pacific leaders, namely the leaders of Fiji, Palau, the Federated States of Micronesia, New Zealand and Australia, to stand united to protect our Blue Pacific against Japan's hazardous plans.

👉USA: Dana Ngo, Lead Organizer, Ocean Health Cooperatives

It is a privilege to be here amongst friends who care about the health of the ocean and earth, and to be a channel for many of the beings who do not share our common language.
My name is Dana and I am one of many voices in a global coalition called the Ocean Health Cooperative. I'm also a geneticist, so learning about the potential of having radioactive water in our oceans and cells came as a big shock. At the same time, I am greeted with gratitude every morning to this growing movement of millions of people from every background, all over the world, because we recognize that we are all connected to this One body of water.
I've shared this collective thought before, that I am here today to share the coalition's vision of oceans so blue and healthy that when we swim, eat, and breathe it all in, we will know that it is restoring and healing us; one of well-fed and happy whales and dolphins, whom we are now just learning how to communicate with; and to have the bottom of the ocean teeming with life, getting us ready for the next stage of evolution, because we co-evolve with life around us– our breath, water, and food come from somewhere.
We share the planet with all life, and we need these systems to keep us alive.
We have a huge collective responsibility to make the right decision for the world that we know is possible.
The ocean is responsible for 2 out of every 3 breaths we take. We are living in the Decade of the Ocean (according to the UN), and we are 3 years in with only 7 more to go.
We still have a chance to step forward on a path towards beauty and restoration, by considering the alternative solutions that exist to the discharge. And much like Dr. Bob Richmond of the University of Hawaii says, this is a huge opportunity to demonstrate better stewardship of the ocean.
Fortunately, there are hundreds of organizations, companies, and institutions who have gathered in solidarity with all of us to assure that our greatest life-support system, the ocean (the source of water and life), stays pure.
Our coalition holds 4 pillars in mind and in practice: the scientific explorations of environmental and health impacts (as well as alternatives and remediation solutions, of which there are several now), education through art and storytelling (which has now received millions of impressions through hundreds of networks), community-building, and the international agreements and legal frameworks.
Thank you so much for holding space for this discussion, and we look forward to sharing more conversations around solutions with everyone moving forward. Please keep in touch with us for more actions and upcoming events.

👉Taiwan: Chen Shi-Ting, Senior Researcher, Green Citizen Action Alliance(GCAA)

Good morning to colleagues from around the world, I am Shi Ting Chen. I am speaking in my capacity as a senior researcher of Green Citizens' Action Alliance (aka GCAA), an

environmental group in Taiwan.

GCAA and other anti-nuclear groups have set up a national platform, also an umbrella group, for a nuclear phaseout in Taiwan since 2013. We strive to coordinate all anti-nuclear campaigns across the country. From then onward, we have been gravely concerned about the treatment and the discharge of Fukushima radioactive wastewater. In May 2020, we called upon Taiwan's civil society groups to sign and to hand in a joint petition to the Japanese government in the hope that Japan would have taken into account the strong opposition voiced by the people of Taiwan. Unfortunately, successive Japanese governments have displayed complete disregard for concerns over the safety of the water in question and for relevant ecological and social impacts. Being one of the leading economic powers and the very country that has suffered the worst nuclear catastrophe to date, Japan has treated its obligations under international law with contempt. Japan's plan to dump contaminated water into the sea is utterly unacceptable for neighboring countries and the world. We condemn this irresponsible act in the strongest terms.

We believe that the Japanese government's plan to dump an unprecedented amount of wastewater into the sea over the course of the next three decades is bound to set an extremely atrocious example, and hence Japan must withdraw such a plan. The release of contaminated water is not a one-off discharge, but rather a program which will have transnational and trans-generational effects. Such a plan will pose enormous danger to the marine environment and lead to the irreversible consequences. While the Japanese government repeatedly claims the safety of the diluted radioactive water, but it has no plan whatsoever to ensure the release of waste water will be consistent with international safety standards over the course of the next three decades, let alone actively monitoring its long-term impacts on marine ecology and on biomagnification in marine food chains. What Japan wants to do is to dump the wastewater on the cheap. That's why we strongly urge the Japanese government to contemplate other safer alternatives of land-based storage plans around the Fukushima Daiichi nuclear power plant, rather than turning the sea into a dumping ground just 12 years after the nuclear disaster. Japan has no right to inflict a beggar-thy-neighbor policy on the marine environment and neighboring countries. As indicated in a 2021 Taiwan survey, 86% of the populace of Taiwan feared for the adverse impact on the world along with Taiwan's marine environment as a result of Japan's wastewater plan. The people of Taiwan have regarded it as totally unacceptable.

Chau-Ron Wu, Director of Research Center for Environmental Changes at Academia Sinica, indicated that in theory, nuclear wastewater will go into the north pacific subtropical gyre and that it will take approximately two to three years for the gyre to move from Japan to California, but this simulation is premised on the flow of the largest gyre. This implies that, in reality, if the Fukushima nuclear wastewater enters into much smaller gyres of the pacific, it will only take about a year for the currents to journey from Japan to the waters off the coast of Taiwan. It is our grave concern that fishing communities of Taiwan will be adversely impacted and lose their livelihoods.

While the Taiwanese government is against Japan's dumping plan, Tsai Ing-wen's government merely has done so in a reactive way, rather than a proactive manner. We believe that her government should utilize all available diplomatic avenues to protest the release of Fukushima radioactive wastewater and demand a complete withdrawal of the plan. Furthermore, Taiwan's government should request a full disclosure of information and data by Japan concerning all radionuclides and their respective amounts in every water tank while requesting Japan to draw up plans concerning the release of wastewater exceeding the international standards along with relevant compensations in the future. Taiwan's

government should further inquire into the long-term impacts of the radioactive wastewater release on Taiwan's marine ecology, fishery products and fishing Industry.
The demands and collective effort made by civil society groups in Taiwan are these:

1. Continue to oppose Japan's plan to release nuclear wastewater into the pacific, and call on the Japanese government to adopt a land-based storage plan of nuclear wastewater.
2. Call on the governments of all countries to jointly protect marine ecosystems in the Pacific Ocean, demand the United Nations and relevant international organizations to fulfill their international obligations, and request the Japanese government to withdraw the wastewater release plan.
3. Urge the government of Taiwan to ensure, to the best of its ability, the health of the Taiwanese people and the rights and interests of fishermen, and request Japan to withdraw its wastewater release plan.