



To: The Honorable Chair Nicole Lowen, the Honorable Vice Chair Elle Cochran, and Members of the Committee on Energy and Environment

From: Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

Re: **Hearing HCR191/HR196/HCR196/HR 201 URGING THE GOVERNMENT OF JAPAN TO HALT ITS PLANS TO DUMP WASTEWATER FROM THE FUKUSHIMA-DAIICHI NUCLEAR POWER PLANT INTO THE PACIFIC OCEAN.**

Hearing: Thursday March 23, 2023, 9:30 a.m., room 325

Aloha Chair Lowen, Vice Chair Cochran, and Members of the Committee on Energy and Environment:

The Hawai'i Reef and Ocean Coalition (HIROC) is a group of scientists, educators, filmmakers and environmental advocates who have been working since 2017 to protect Hawaii's coral reefs and ocean.

The Hawai'i Reef and Ocean Coalition STRONGLY SUPPORTS HCR196, HR 201, and HCR191!

The **effects of releasing radioactive water into the ocean have not been adequately tested**. For example, over time, will this lead to **bioaccumulation in sea life** with detrimental effects on the sea life and the people who consume sea food? More study and analysis needs to occur before ocean discharge occurs. There are other options such as storing the water in concrete that have not been adequately explored.

I share the concerns expressed in testimony by our local expert Robert Richmond of Kewalo Marine Laboratory.

Please approve and forward these resolutions and concurrent resolutions!

Hawai'i Reef and Ocean Coalition (by Ted Bohlen)

HCR-191

Submitted on: 3/21/2023 12:07:06 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Lyle Tenjoma	Individual	Support	In Person

Comments:

This 30-50 year dumping of nuclear waste by TEPCO and the government of Japan is a unilateral ecocidal with out any EIS. Only the Japanese nuclear industry 's input has been addressed. Nowhere is the biological/ecological impact addressed or represented. This is merely dumping radioactive meltdown trash over the fence into the neighbors yard (Pacific Ocean.)The world's oceanographers and marine biologists need an independent and impartial analysis of the true contents of those 1.2 million tons of accumulated meltdown water stored in Fukushima'Daiichi NPP. This baseline is needed for rational assessment of the decontamination process prior to disposal. This impartial toxicology report is akin to DNA analysis, which is needed for scientific assessment. The injection of presently unknown highly contaminated nuclear waste is like injecting a unknown cocktail of drugs/chemicals into a human.

UNIVERSITY OF HAWAI'I AT MANOA

Kewalo Marine Laboratory
Pacific Biosciences Research Center
41 Ahui Street, Honolulu, HI 96744

March 21, 2023

Committee on Energy and Environmental Protection
House of Representatives, 32nd Legislature
State of Hawaii

Dear Chair and Committee Members,

I am submitting this testimony in support of the resolutions from the Hawaii State Legislature (HCR 191/HR 196, HCR 196/HR201) urging the Government of Japan to halt the planned release of treated, radioactively contaminated cooling water from the Fukushima-Daiichi Nuclear Power Plant into the Pacific Ocean, as the safety of this activity remains in question.

I am one of the five scientists engaged by the Pacific Islands Forum to serve on an independent, expert panel to review documents, plans and data provided by the Japanese Government and the Tokyo Electric Power Company (TEPCO), to support their planned release of the Fukushima wastewater beginning in the Spring or Summer of this year (2023). After careful review of the materials provided, numerous discussions with the Japanese scientists, and a recent set of face-to-face meetings in Japan, including a visit to the Fukushima site, it is my opinion, and that of my colleagues, that there are insufficient scientific proof and support for this to go forward at this time. We unanimously recommend that the present plan for imminent release be halted until key data are provided and analyzed, alternatives be given due consideration and a scientific consensus on the best way forward be reached.

Context for consideration at the policy level:

- The decision by Japan to release the Advanced Liquid Processing System (ALPS)-treated water into the Pacific Ocean is political in nature. Substantial funds have already been invested in pursuing this approach, and all indications are that the Japanese Government is not considering other options, even those that may be better for their own people and economy in the long term.
- Multiple stressors acting in concert are affecting the health of the oceans and those who depend on its living resources: climate change, overfishing, eutrophication, plastics, pesticides, heavy metals, and radionuclides. So, this problem should be considered as a further contribution to cumulative impacts of environmental stressors on ocean and human health.
- The contributions of the Pacific Island nations, states and territories to the present problems are minimal, yet their burden is substantial, now and for future generations. This is the context in which Japan's plans should be examined in the big picture: The islands have nothing to gain, did not contribute to the present crisis, and yet have much to lose.
- Pledges to adhere to presently established and accepted standards do not mean the activity will, in fact, be safe for the health of the ocean and all who depend on it for its ecological, economic, and cultural values.

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Specific issues that remain and must be addressed:

- Only a subset of the 1,000+ storage tanks and 62 radionuclides present have been adequately sampled, leaving data gaps of concern.
- The changing radionuclide concentrations in the tanks remains unresolved and concerning, as does the assumption of the sum of the ratios <1 .
- The Radiological Environmental Impact Assessment (REIA) needs to consider all exposures including accidental ones, and deficiencies in this document remain.
- TEPCO has not fully characterized what is in the holding tanks prior to treatment using the ALPS. This is a concern if there is any incident where a tank leaks, as have occurred previously and in determining the efficacy of the ALPS system.
- This is not a laboratory-based chemistry experiment; it is a planned release of over 1.3 million tons of treated, radioactively contaminated water into a shared ocean, rich in plant and animal life, for over 40 years, with both transboundary and transgenerational implications.
- The base assumption that “dilution is the solution to pollution” does not hold up, as radionuclides can be taken up, accumulated, concentrated, and transferred through the food web, including to people eating affected seafood.
- Comparisons to external radiation exposure (e.g. during airplane flights) are irrelevant, as internal exposure via ingestion of contaminated seafood is of far greater concern, as skin can mostly block beta particles, but cellular DNA, RNA and signal proteins have no such protection. Such sublethal health effects are not adequately addressed in the ongoing discussions of potential impacts of the release on human health.
- The Panel believes that in 2023, following the recent approval of the United Nations treaty for ocean protection signed by 170 nations, that releasing additional pollutants into the sea is contrary to the current thinking. This is an opportunity to revisit the standards for the release of radionuclides into the oceans, the environmental impacts, and the cumulative effects of ionizing radiation on plants, animals, and people.

Respectfully submitted,



Robert H. Richmond, Ph.D.
Research Professor

HCR-191

Submitted on: 3/21/2023 5:18:13 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Andrew Crossland	Individual	Support	Written Testimony Only

Comments:

I **strongly support** this Resolution.

HCR-191

Submitted on: 3/22/2023 8:59:34 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Lynda Williams	Individual	Oppose	Written Testimony Only

Comments:

Dear Representatives,

I firmly OPPOSE this ridiculous resolution to urge Japan to TEMPORARIALY halt the planned release of radioactive waste water from Fukushima nuclear power plant until a "group of high-level, experienced, independent, and impartial scientists has received and reviewed a toxicology report for the plant" - this is absurd! The UN International Atomic Energy Agency, IAEA, one of the most experienced scientific boards in the world, has already signed off on this release - but that doesn't mean it is safe! There is no higher group of scientists but the MISSION of the IAEA is to promote nuclear power around the world and they notoriously underestimate risk and casualties from nuclear radiation and nuclear power plant accidents.

Marine biologists and health activist all know it isn't safe. VOTE NO on this rubbish.

HCR-191

Submitted on: 3/22/2023 9:38:34 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Malakai	Individual	Support	Written Testimony Only

Comments:

I agree

HCR-191

Submitted on: 3/22/2023 9:38:49 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
JiDion	Individual	Comments	Written Testimony Only

Comments:

I stand with this bill

HCR-191

Submitted on: 3/22/2023 9:39:18 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Alana	Individual	Support	Written Testimony Only

Comments:

Strongly support

HCR-191

Submitted on: 3/22/2023 9:39:36 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Desmond grace	Individual	Support	Written Testimony Only

Comments:

I support

HCR-191

Submitted on: 3/22/2023 9:40:48 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Ashton Fujioka	Individual	Support	Written Testimony Only

Comments:

I support this bill.

HCR-191

Submitted on: 3/22/2023 9:41:15 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Marwin	Individual	Oppose	Written Testimony Only

Comments:

I oppose the bill because I can't really do anything due to my religion

HCR-191

Submitted on: 3/22/2023 9:41:54 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Koa germano	Individual	Support	Written Testimony Only

Comments:

I support this bill

HCR-191

Submitted on: 3/22/2023 11:05:52 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Pono	Individual	Support	Written Testimony Only

Comments:

I support

HCR-191

Submitted on: 3/22/2023 11:06:18 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
MIKI	Individual	Support	Written Testimony Only

Comments:

I support this.

HCR-191

Submitted on: 3/22/2023 11:06:53 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Marvin	Individual	Support	Written Testimony Only

Comments:

I support this because I want them to stop the waste water.

HCR-191

Submitted on: 3/22/2023 11:07:16 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Irie-Passion Soto	Individual	Support	Written Testimony Only

Comments:

I Support this bill.

HCR-191

Submitted on: 3/22/2023 11:07:36 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Angelica	Individual	Support	Written Testimony Only

Comments:

I support this.

HCR-191

Submitted on: 3/22/2023 11:07:47 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Ruthann Aloka	Individual	Oppose	Written Testimony Only

Comments:

I don't support this! Our pacific oceans are the most important par of our life. We are all connected to the water. If the water is polluted by all these waste then the fishes are going to eat it and die. Fishes are another thing we are connected to.

HCR-191

Submitted on: 3/22/2023 11:08:12 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Mesiyo-Marilynn Delos santos-asada	Individual	Oppose	Written Testimony Only

Comments:

I oppose.

HCR-191

Submitted on: 3/22/2023 11:08:41 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kaholokula Kitashima	Individual	Support	Written Testimony Only

Comments:

I support this! The reason I support this, is because this can be a global threat as the waste water that may have chemicals that may affect the marine life and more!

HCR-191

Submitted on: 3/22/2023 11:09:37 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Ezekiel gonzales	Individual	Oppose	Written Testimony Only

Comments:

I don't support this bill because if we dump lā of our waste in our pacific oceans then it is going to be ingested by the fishes. The fishes are the number one good we eat.

HCR-191

Submitted on: 3/22/2023 11:09:49 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
HallieJoy	Individual	Support	Written Testimony Only

Comments:

I support this bill and agree that the toxic waste water should not be put into the Pacific Ocean as it is gonna effect everyone. But I feel as though we should just try take this straight to the United Nations who is in power to deal with this.

HCR-191

Submitted on: 3/22/2023 11:10:00 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Samantha alama	Individual	Support	Written Testimony Only

Comments:

I do suport them and i agree that they should put a hold on putting waste water in to our oceans and actually have all nations come together and discuss about it and find a solution.

HCR-191

Submitted on: 3/22/2023 11:10:07 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Samantha Gersaba-Myers	Individual	Support	Written Testimony Only

Comments:

I support this bill, although I feel as though since this is a global issue, they should get the United Nations involved. Additionally, there must be a better way to dispose of the nuclear waste, as it is dangerous, like placing it into a chamber, or burying the waste.

HCR-191

Submitted on: 3/22/2023 11:10:24 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kelson kitzmiller	Individual	Support	Written Testimony Only

Comments:

In support

HCR-191

Submitted on: 3/22/2023 11:10:35 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Malo Tinoga	Kapoei high school	Oppose	Written Testimony Only

Comments:

I'm not okay on the japan dumping there toxic waste in our waters because it can kill th sea life, one of the reasons why they would pass this bill is either because they want the money or they have no other place to it them.

HCR-191

Submitted on: 3/22/2023 11:11:21 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Noah Madeira	Individual	Support	Written Testimony Only

Comments:

I support

HCR-191

Submitted on: 3/22/2023 11:11:37 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Denali Ewing	Individual	Comments	Written Testimony Only

Comments:

I personally feel that they shouldn't be allowed to dump waste in the ocean. Our oceans are already dying, adding more waste is not a good idea. The waste will travel all over polluting a lot of water. They should ask everyone that lives in areas of the Pacific Ocean because we are the one that will have to face/deal with the problems that come with this. We have so much ocean pollution all over the world and people just want to keep dumping more and more waste into the ocean. Pretty soon we not gon have one ocean because we keep killing it more and more. The water also helps us with nutrients and all kinds of things that are good for the human body. If we keep polluting more and more water it will spread to our plants. Then we're going to have more ocean and land problems.

HCR-191

Submitted on: 3/22/2023 11:12:22 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Austin tagovailoa	Individual	Support	Written Testimony Only

Comments:

I support this bill because It is very bad for alot of people and animals in the sea. Its also important for japans people to know that. Its not our problem japan has too much rubbish.

HCR-191

Submitted on: 3/22/2023 11:12:52 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Justin sewell	Individual	Support	Written Testimony Only

Comments:

I'm Justin from Hawai'i n i support

HCR-191

Submitted on: 3/22/2023 11:14:36 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Blaise Perez	Individual	Support	Written Testimony Only

Comments:

I really do support this. The reason why I support this is because this can be a glbal threat and this can affect our fishes and animals and the food they eat in the ocean. And its not also good for the people.

HCR-191

Submitted on: 3/22/2023 2:06:20 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Keligh Takahashi	Individual	Support	Written Testimony Only

Comments:

I'm in support.

HCR-191

Submitted on: 3/22/2023 2:07:27 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Zandrea Hill-Brack	Individual	Support	Written Testimony Only

Comments:

I support this bill.

HCR-191

Submitted on: 3/22/2023 2:13:57 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Hi'ilani Nalua'i	Individual	Support	Written Testimony Only

Comments:

This is a good start to stop the dumping of nuclear waste into our ocean. The dumping of nuclear waste is obviously going to have detrimental impacts of our environment. We definitely need highly advanced toxicology scientists to show the exact effects this will have on the earth. I hope the ultimately goal of this bill is to stop the dumping of the nuclear waste. This is literal radioactive waste that will affect literally everything within miles and it makes no sense to harm our environment that we depend on. That every living thing depends on. Japan needs to find another way to get rid of their own trash, you make a mess then you have to clean it up.

HCR-191

Submitted on: 3/22/2023 2:14:00 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Malinakealani Nalua'i	Individual	Support	Written Testimony Only

Comments:

I support this bill in halting the dumping of toxic waste from the Fukushima disaster from being poured into the ocean, to have an environmental impact report before anything is done. This decision to dump the waste into the biggest ecosystem that connects all of us in the world is not the right or smart choice. Maybe propose to actually stop it, not just halt it for a small amount of time.

HCR-191

Submitted on: 3/22/2023 2:14:31 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kuini Kawaaauhau- AuHoon	Individual	Support	Written Testimony Only

Comments:

I support your bill and how we want them to hult and bring in more scientitst and see how it will affect us people

HCR-191

Submitted on: 3/22/2023 2:14:48 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Jayden	Individual	Support	Written Testimony Only

Comments:

I support and agree with this bill

HCR-191

Submitted on: 3/22/2023 2:15:16 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kainalu Alama	Individual	Support	Written Testimony Only

Comments:

I support this bill

HCR-191

Submitted on: 3/22/2023 2:17:14 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kaleo	Individual	Support	Written Testimony Only

Comments:

I think you should stop pouring oil into the river because it effects many people around the world.

HCR-191

Submitted on: 3/22/2023 2:17:45 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
gizelle alafoni	Individual	Support	Written Testimony Only

Comments:

I am in support of this bill please find a possible solution.

HCR-191

Submitted on: 3/22/2023 2:19:26 PM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Lono	Individual	Support	Written Testimony Only

Comments:

I support this bill, as a whole global scale could be affected by this negative impact. There could be ways to get rid of this with out throwing it into the enviornment. All we need to do is just find a way, instead of working around the problem, and if we halt this please put a stop to the dumping of radioactive waste in general because we all live off of the enviornment.

HCR-191

Submitted on: 3/23/2023 2:01:18 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Regina Peterson(Nani)	Individual	Support	Written Testimony Only

Comments:

I am in strong support of this bill. But this matter should not be just halted temporarily, Dumping wastewater, especially toxic wastewater, should never be dumped in our oceans. This dumping can't happen at all. Please inform the United Nations about this matter as i feel it is also a United Nations issue to address this matter with Japan's government. Mahalo!

HCR-191

Submitted on: 3/23/2023 9:45:04 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Kaya	Individual	Support	Written Testimony Only

Comments:

I support .

HCR-191

Submitted on: 3/23/2023 9:49:39 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Aiyanah	Individual	Support	Written Testimony Only

Comments:

I fully support HCR191.

HCR-191

Submitted on: 3/23/2023 9:50:17 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Fa'apona	Individual	Support	Written Testimony Only

Comments:

I support.

HCR-191

Submitted on: 3/23/2023 9:50:26 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Cy Ridiros	Individual	Support	Written Testimony Only

Comments:

In support

HCR-191

Submitted on: 3/23/2023 9:50:30 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Braydon	Individual	Support	Written Testimony Only

Comments:

japan shouldn't release waste waters nuclear power plants in to the Pacific Ocean because if they do realese the nucular power plants the coral reefs would die and the sea life would have to go else where because of the nuclear wast in the ocean.

HCR-191

Submitted on: 3/23/2023 9:52:21 AM

Testimony for EEP on 3/23/2023 9:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Jayven Okuda	Individual	Support	Written Testimony Only

Comments:

I support this bill because why wouldn't we halt this waterwaste, we should at least know what this water is, and how could it affect our waters of the pacific. We should be careful for what is being put into our waters, and maybe do something with this wastewater, maybe clean it and re-use it for something better.