

Twelve Years Later

Fukushima State of Nuclear Emergency Still in Effect, Deaths and Health Damages Unaccounted for, Pacific Wastewater Dumping Planned

By Mari Inoue

Fukushima Daiichi Nuclear Disaster

Twelve years have passed since the beginning of the ongoing Fukushima Daiichi triple nuclear reactor disaster. It started on March 11, 2011, after the Great East Japan Earthquake hit the area, damaging the electric supply to the reactors' cooling systems. Subsequent 14-meter-high tsunamis swept over the facility's 10-meter-high seawall, destroying the emergency generators, and causing a 'station blackout.' Consequently, the facility lost its ability to cool the reactors' cores in Units 1, 2, and 3.

Declaration of Nuclear Emergency

A state of nuclear emergency was declared the evening of March 11. The Prime Minister's office initially announced that no radiation was leaking from the facility and that residents should stay home and not evacuate. After losing ability to cool the three nuclear reactors' cores, a triple nuclear meltdown occurred. There were hydrogen explosions at reactors. A large amount of radioactivity began being released into the environment. More than 160,000 Fukushima residents were forced to evacuate from their hometowns.

Evacuation Zones

Due to radioactive releases from the three crippled reactors, the Japanese government expanded the evacuation zone to about a 12.5-mile radius. The U.S. Nuclear Regulatory Committee (NRC) and State Department recommended U.S. citizens in Japan to evacuate within a 50 mile radius of Fukushima Daiichi.

Twenty mSv-per-year Standard

Japan's evacuation zones were established based on an external radiation exposure level of 20mSv (a millisievert is a measure of health risk from ionizing radiation) per year. This is a threshold 20 times higher than both Japan's pre-Fukushima disaster national standard for the public and the international standard (set by the International Commission on Radiological Protection). Japan continues to ignore international radiation protection principles.

Poor Regulation and Collusion

In July 2012, the Fukushima Nuclear Accident Independent Investigation Commission chartered by the Diet, Japan's Parliament, concluded that the nuclear disaster was a human-made disaster caused by poor regulation and collusion between the government, the reactor's owner Tokyo Electric Power Co. (TEPCO), and Japan's nuclear regulator. The Commission accused TEPCO and regulators at the nuclear industrial safety agency of failing to take adequate safety measures, despite authoritative evidence and warnings from eminent seismologists that the area was susceptible to powerful earthquakes and tsunamis.

Twelve Years Later

The state of nuclear emergency is still in effect. Tens of thousands of Fukushima residents are still displaced. The government lifted evacuation orders for many districts in Fukushima and terminated housing assistance and other benefits for evacuees.



15,000 Fukushima residents sought criminal prosecution of TEPCO execs responsible for the nuclear disaster, but their acquittal was upheld January 2023. Signs read "All Acquitted" and "Wrongful Decision."

As of December 2022, 338 Fukushima children (who were 18 or younger in 2011) were diagnosed with thyroid cancer. This is alarming, because pediatric thyroid cancer cases in Japan were only 1 or 2 per million before the disaster.

Disaster-related Deaths

As of June 2022, the official number of the so-called "disaster-related deaths" in Fukushima Prefecture had reached 2,333. These deaths refer to those who died due to the aggravation of injuries caused by the Great East Japan Earthquake or due to the physical burden of evacuation life. This figure is much higher than those of Miyagi Prefecture (930 deaths) and Iwate Prefecture (470 deaths), which were also heavily impacted by the earthquake and tsunamis.

Criminal Case Against TEPCO Executives

In 2012, a group of nearly 15,000 Fukushima residents sought criminal prosecution of those responsible for the nuclear disaster. Accordingly, three former TEPCO executives, including the chairman and VPs, were indicted in 2016. In September 2019, the Tokyo District Court concluded that there was insufficient evidence to convict them. The case was appealed. In January 2023, the Tokyo High Court upheld acquittal of those executives, finding them not guilty of professional negligence resulting in deaths and injuries on the grounds that they could not have predicted the tsunami that damaged the nuclear reactor.

Civil Suit Victory Against TEPCO Executives

A civil case was filed in Tokyo in 2012 by TEPCO shareholders since the disaster caused a huge financial loss to the company. In July 2022, the Tokyo District Court ordered the above three former executives and former President of TEPCO to pay 13 trillion yen (\$95 billion) in damages to compensate shareholders, but not the victims. This ruling marks the first time a court has found former executives responsible for the nuclear disaster.

Japan to Delay Ocean Dumping of Contaminated Wastewater

By John LaForge

Japan announced in January that the government would delay plans to pump over 1.37 million metric tons of watery radioactive waste into the Pacific Ocean from the devastated six-reactor complex at Fukushima Daiichi. With the country facing harsh international pressure to cancel the dumping, Chief Cabinet Secretary Hirokazu Matsuno acknowledged "the need to gain public support" for the plan, the Associated Press reported January 12. Public hostility toward the plan increased February 22, when the government approved TEPCO's proposed reduction in wastewater monitoring; it okayed cutting the number of isotopes in released water that it will monitor from 64 to 30.

Fierce criticism of the scheme has come from China, South Korea, other Pacific Rim countries, scientists, environmental groups, UN human rights experts, and the Pacific Islands Forum (PIF), an alliance of 17 Pacific island nations. Japan's Prime Minister Fumio Kishida also said the government wants to postpone the dumping – by the Tokyo Electric Power Company (TEPCO) – until it is "verifiably safe to do so," Thomas Heaton reported February 16 to Hawaii's Civil Beat news outlet.

Anti-dumping pressure by the PIF, independent countries from whose waters up to half of the world's tuna is sourced, was crucial in forcing Japan's apparent retreat. The PIF has warned that contaminating the water could harm the fishing that island economies depend on. Mari Yamaguchi reported for the AP January 12: "Some scientists say the impact of long-term, low-dose exposure to tritium and other radionuclides on the environment and humans is still unknown and the release plan should be delayed. They



Image designed by Tony Sahara of Manhattan Project for a Nuclear-Free World.

Million Metric Tons into the Pacific

On April 13, 2021, the Japanese government announced that it will start discharging more than 1.3 million metric tons of radioactive "treated" wastewater from Fukushima Daiichi into the Pacific starting in Spring of 2023. The dumping will continue for three decades or more. The "treated" water contains radioactive isotopes due to being used to cool the highly radioactive melted cores of the three nuclear reactors. Tritium and carbon-14 cannot be filtered out at all. [Editor's Note: TEPCO acknowledged over 75% of the wastewater was not successfully filtered and still contained over 60 hazardous radioactive materials including strontium-90, cesium-137, and cobalt-60.]

Independent human rights experts appointed by the UN Human Rights Council have expressed deep regret at Japan's decision. Fukushima residents, fisheries associations, most of Fukushima's districts, and many anti-nuclear groups in and outside Japan expressed their opposition to the plan. Henry Puna, Secretary General of the Pacific Islands Forum calls for Japan to hold off on any such release.

Global Action to Oppose Dumping Plan

Groups are holding a global action to halt Japan's outrageous plan to dump radioactive water into the Pacific. Check mp-nuclear-free.com to join.

— Pacific Islands Forum, Feb. 6, 2023; "Fukushima Health Survey," Our Planet, Dec. 2; Reuters, Jul. 13, 2022; Reconstruction Agency of Japan, June 2022

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say tritium affects humans more when it is consumed in fish." A scientific expert panel has urged reconsideration of the dumping "because it was not supported by data and more information was needed," Ken Buesseler, with the Woods Hole Oceanographic Institution, told the PIF January 18.

Japan announced in April 2021 that it would allow TEPCO to pump the collected wastewater into the Pacific. TEPCO has said the process will take 30 to 40 years using an underground and undersea tunnel now under construction. Media attention has focused on the radioactive tritium in the waste, which cannot be removed by filtering, and has ignored long-lived carbon-14 which likewise cannot be removed.

Mostly unreported has also been the collapse of TEPCO's filter system which was supposed to separate dozens of long-lived radioactive elements from the cooling water, including ruthenium, cobalt, strontium, cesium, and even plutonium, but has not done so. Dr. Buesseler told Science magazine in 2020, "Many other isotopes are in those tanks still, and over 70 percent would have to be cleaned up further before they might even consider releasing...."

The water becomes contaminated (150 tons every day) after being poured over hundreds of tons of melted, radioactive uranium fuel – and plutonium in Reactor 3 – deadly hot wreckage amassed deep inside the foundations of the three destroyed nuclear reactors. Reactor 3 suffered a huge hydrogen explosion on March 14, 2011, and it was packed with "mixed oxide" fuel made of uranium and plutonium. Hydrogen explosions also caused severe damage to Reactors 1 and 2, and to the waste fuel pool of Reactor 4.