

# The Fukushima Nuclear Disaster and the Tokyo Olympics

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**Translation, with notes and references, by Norma Field**

**Abstract:** The Olympic games have always been used to display national might. In recent years, they have become tools for businesses, especially construction companies, which create, and then destroy, large public structures, leading to a colossally wasteful society from which they derive stupendous profit. What is important now is to give relief to those who continue to suffer from the Fukushima nuclear disaster, and at the very least, to protect children, who are blameless, from exposure. Casting sidelong glances at the vast numbers of victims, the perpetrators, including TEPCO, government officials, scholars, and the media, have utterly failed to take responsibility.

## What was the Fukushima Nuclear Accident?

On March 11, 2011, the Tokyo Electric Fukushima Daiichi Nuclear Power Plant was assaulted by a severe earthquake and tsunami, leading to a total power outage. Experts had been agreed that total outage would be the likeliest cause of a catastrophic incident. And just as anticipated, the reactors of the Fukushima Daiichi Nuclear Power Plant suffered meltdowns and released enormous quantities of radioactive materials into the surrounding environment. According to the report submitted by the Japanese government to the International Atomic Energy Agency

(IAEA), this accident released  $1.5 \times 10^{16}$  becquerels (Bq) of cesium 137 into the atmosphere—the equivalent of 168 Hiroshima bombs. One Hiroshima bomb's worth of radioactivity is already terrifying, but we have the Japanese government acknowledging that the Fukushima disaster released 168 times the radioactivity of that explosion into the atmosphere (Japanese Government, 2011; METI, 2011; UNSCEAR, 2000).

The cores of reactors 1, 2, and 3 melted down. The amount of cesium 137 contained in those cores adds up to  $7 \times 10^{17}$  Bq, or 8000 Hiroshima bombs' worth. Of that total, the amount released into the atmosphere was the equivalent of 168 bombs, and combined with releases into the sea, the total release of cesium 137 into the environment to date must be approximately equivalent to 1000 Hiroshima bombs. In other words, most of the radioactive material in those cores remains in the damaged reactor buildings. If the cores were to melt any further, there would be more releases into the environment. It is in order to prevent this that even now, nearly 8 years after the accident, water continues to be aimed by guesswork in the direction where the cores might be located. And because of this, several hundred tons of contaminated waste water are accumulating each day. Tokyo Electric Power Company (TEPCO) has constructed over 1000 tanks on site to store this water, but the total volume now exceeds one million tons. Space is limited, and there is a limit as well to the number of tanks that can be constructed. TEPCO will be compelled to release these waters into the sea

in the near future.

### **Obstacles to containing the disaster**

Of course, the greatest priority is to secure the melted cores in as safe a condition as possible, but even with the passage of nearly eight years, neither their location nor their condition has been ascertained.<sup>1</sup> The reason is that it is impossible to access those sites. Had this accident occurred at a thermal power plant, the problem would have been simple. In the beginning, there might have been fires burning over several days, but once they died down, it would have been possible to go to the site, investigate, repair, and restart operations. But in the case of a nuclear power plant, anyone approaching the site would die. The government and TEPCO have attempted to send in robots, but robots do not stand up well to radiation. The reason is that once their microchips are exposed, their programs get rewritten. Accordingly, almost all the robots sent in to date have failed to return.

Toward the end of January 2017, TEPCO inserted a device resembling a remote-controlled endoscope into the concrete platform (pedestal) under the reactor pressure vessel. A large hole that had opened up in the steel scaffolding used by workers during maintenance, located directly under the pressure vessel, made it possible to ascertain the following: the fuel core had melted through the pressure vessel and fallen further down. The investigation yielded something even more important, however. For human beings, exposure to 8 sieverts (Sv) will result in certain death. The area directly under the pressure vessel measured 20 Sv/hour, but along the way, levels as high as 530 or 650 Sv were detected. These measurements, moreover, were found not inside the cylindrical pedestal, but between the wall of the pedestal and the wall of the containment structure. TEPCO and the government had scripted a scenario wherein

most of the melted core had been deposited, dumpling-like, inside the pedestal, to be retrieved and sealed inside a containment structure in the course of 30-40 years. According to this scenario, the conclusion of this process would signify the achievement of containment. In reality, however, the melted nuclear fuel had flowed out of the pedestal and scattered all around. Forced to rewrite their “roadmap,” the government and TEPCO began talking about making an opening on the side of the containment structure through which the melted fuel could be grasped and removed. That, however, is an impossibility. It would entail severe worker exposure.

From the beginning, I have maintained that the only option is to construct a sarcophagus, as was done at the Chernobyl site in the former Soviet Union. That sarcophagus deteriorated to such an extent in 30 years’ time as to require coverage by a second sarcophagus, put in place in November 2016. The second sarcophagus is expected to last for 100 years. We do not yet know what measures will be available at that point. No one who is alive today can expect to see the containment of the Chernobyl disaster. All the more so in the case of Fukushima: the containment of this disaster will not have been achieved even after all who are alive today have died. Moreover, even if it were hypothetically possible to seal the molten core inside the containment structure, that will not mean that the radioactivity will have vanished. Indeed, it would be necessary to protect any such structure for hundreds of thousands to a million years.

### **Declaration of a Nuclear Emergency: The human consequences**

Tragedy continues to unfold in the environs of the plant. On the day of the disaster, the government issued a Declaration of a Nuclear Emergency, and mandatory evacuation zones were expanded, beginning at 3 kilometers from

the plant, then 10, then 20. Residents in those areas had to leave their homes, taking only what they could carry. Livestock and pets were abandoned. That is not all. Iitate Village, located 40-50 kilometers away from Fukushima Daiichi, received no warnings or instructions immediately after the accident, but one month later, on the grounds of extreme contamination, the entire village was ordered to evacuate.

What do we mean when we talk about happiness? For many people, happiness likely supposes uneventful days, one unfolding after the other, in the company of family, friends, neighbors, lovers. This is what was ruptured, one day, without warning. Evacuees first went to centers, such as gymnasiums, then to cramped temporary housing, then to “reconstruction” housing or public housing temporarily “declared” to be evacuee quarters. Family members with shared lives until then were scattered apart. Their livelihood destroyed, people have been taking their own lives out of despair.

This is not all. Even outside the mandatory evacuation zones, there emerged vast contaminated areas that by all rights should have been designated “radiation control zones.” These are areas where only radiation workers, those who earn their living by handling radiation, are permitted entry. And even those workers, once they enter a control zone, are not permitted to drink water or eat food. Naturally, it is forbidden to sleep. There are no toilets. The government, on the grounds that an emergency situation prevails, has scrapped the usual regulations and abandoned several million people to live in contaminated areas. These people, including infants, drink the water, eat, and sleep in those areas. They have of course been burdened with the risks associated with exposure. And thus abandoned, they are all surely subject to anxiety. Some, seeking to avoid exposure, gave up their jobs and evacuated with their entire families. Others, wishing to protect at least their

children from exposure, have split up, with fathers staying behind to pursue their jobs in contaminated areas and mothers leaving with their children. But this has damaged household stability and wrecked family relationships. Staying in contaminated areas hurts the body, but evacuation crushes the soul. These abandoned people have been living in anguish every day for nearly eight years.

On top of this, in March of 2017, the government instructed those it had once ordered to leave, or those who had left of their own volition, to return to those contaminated areas so long as the radiation levels did not exceed 20 millisieverts/year (mSv). The housing assistance it had offered these people, however unsatisfactory, was terminated. This has inevitably meant that some people are forced to return. In Fukushima today, reconstruction is considered the highest priority. If people feel no choice but to live there, then of course, reconstruction becomes desirable. They cannot tolerate living in fear day after day. They would like to forget about the contamination, and fortunately or not, radioactivity is invisible. The central and local governments take active measures to make them forget. Anyone voicing concern or referring to contamination is subject to criticism: they are obstructing reconstruction.

20 mSv per year is the level of exposure permitted only for radiation workers, such as I once was. It is hard to forgive the fact that this level is now being imposed on people who derive no benefit from exposure. Moreover, infants and children, who are especially sensitive to radiation, have no responsibility for the recklessness of Japanese nuclear policy, let alone for the Fukushima disaster. It is not permissible to apply occupational levels of exposure to them. The government of Japan, however, says nothing can be done given the Declaration of a Nuclear Emergency. We can understand an emergency lasting for one day, a whole week, one month, or depending on the

circumstances, even for one year. But in fact, the Declaration of a Nuclear Emergency has not been rescinded even after nearly eight years have passed. The government is eager to make people forget about the Fukushima disaster. Media have fallen silent. Most Japanese have been driven to forget that conditions are such that make it impossible to rescind the Declaration even while the regulations that should prevail have been scrapped. The principal culprit in radioactive contamination is cesium 137, with a half-life of 30 years. Even after the passage of 100 years, it will have diminished by only one-tenth. In point of fact, even after 100 years, Japan will be in a state of nuclear emergency.

### **The Olympic games in a state of nuclear emergency and the crimes of the Japanese nation**

The Olympic games have always been used to display national might. In recent years, they have become tools for businesses, especially construction companies, which create, and then destroy, large public structures, leading to a colossally wasteful society from which they derive stupendous profit. What is important now is for the state to mobilize all its resources so that the Declaration of a Nuclear Emergency can be rescinded as soon as possible. The priority should be to give relief to those who continue to suffer from the Fukushima nuclear disaster, and at the very least, to protect children, who are blameless, from exposure. The greater the risks facing a society, the more those in power seek to avert peoples' eyes. The mass media will try to whip up Olympic fever, and there will come a time when those who oppose the Olympics will be denounced as traitors. So it was during World War II: the media broadcast only the proclamations from Imperial Headquarters, and virtually all citizens cooperated in the war effort. The more you thought yourself an upstanding Japanese, the

more likely you were to condemn your fellow citizens as traitors. If, however, this is a country that chooses to prioritize the Olympic games over the blameless citizens it has abandoned, then I shall gladly become a traitor.

The Fukushima disaster will proceed in 100-year increments, freighted with enormous tragedies. Casting sidelong glances at the vast numbers of victims, the perpetrators, including TEPCO, government officials, scholars, and the media, have utterly failed to take responsibility. Not a single one has been punished.<sup>2</sup> Taking advantage of this, they are trying to restart the reactors that are currently stopped and to export them overseas. The Tokyo Olympics will take place in a state of nuclear emergency. Those countries and people who participate will, on the one hand, themselves risk exposure, and, on the other, become accomplices to the crimes of this nation.

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### **References**

- Japanese Government. (2011). "Discharge of Radioactive Materials to the Environment," *Report of the Japanese Government to the IAEA Ministerial Conference on Nuclear Safety: The Accident at TEPCO's Fukushima Nuclear Power Stations*. June.
- Johnson, D.T., Fukurai, Hiroshi, & Hirayama, M. (2020). "Reflections on the TEPCO Trial: Prosecution and Acquittal after Japan's Nuclear Meltdown." *The Asia-Pacific Journal: Japan Focus*. June 15.
- METI (Ministry of Economy, Trade and Industry, 2011). "News Release: Tokyo Denryoku Kabushikigaisha Fukushima Daiichi

Genshiryoku Hatsudensho oyobi Hiroshima ni tōka saretā genshibakudan kara hōshutsu saretā hōshaseibusshitsu ni kansuru shisan ni tsuite”[On the estimates of radioactive materials discharged by Tokyo Electric Power Company’s Fukushima Daiichi Nuclear Power Station and the atomic bomb dropped on Hiroshima]; “Kaiseki de taishō to shita kikan de no taikichū e no hōshaseibusshitsu no hōshutsuryō no shisanchi (Bq)” [Estimates derived by calculation for radioactive materials discharged into the atmosphere during the period in question], “Hiroshima gembaku de no taikichū e no hōshaseibusshitsu no hōshutsuryō no shisanchi (Bq)” [Estimates of radioactive

materials discharged into the atmosphere by the Hiroshima atomic bomb (Bq)]. August 26.

*New York Times*. (2019). “[Fukushima Nuclear Disaster Trial Ends with Acquittals of 3 Executives](#).” September 19.

UNSCEAR (United Nations Scientific Committee on the Effects of Atomic Radiation, 2000). Annex C, “[Exposures to the Public from Man-made Sources of Radiation](#),” *Sources and Effects of Ionizing Radiation*.

World Nuclear News. (2019). “[Tepco makes contact with melted fuel in Unit 2](#).” February 13.

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## Notes

<sup>1</sup> On February 13, 2019, TEPCO released photos showing first contact with melted fuel debris in unit 2 (World Nuclear News, 2019).

<sup>2</sup> There are currently more than 30 civil cases winding their way through the courts, but only one criminal proceeding in Tokyo District Court, with three former TEPCO executives as defendants, charged with professional negligence resulting in death and injury. All three were acquitted on September 19, 2019 (*New York Times*, 2019; Johnson et al., 2020). The decision has been appealed.