

# Disaster Mitigation in Japan in the Modern Era



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## Introduction: Still Searching

Japan, threatened constantly by natural disasters of all kinds, has invested enormous sums of money in construction costs of public works, citing the revitalization of local communities, or economic policies, as the rationale. Erosion and flood control, including getting rid of denuded mountains and managing volatile rivers, has been an important political priority of Japan since ancient times; today, one sees few bare mountains and many golf courses. You could describe Japan in some ways as, if anything, over-prepared for sea disasters, as evidenced by the large-scale destruction of large areas of the coastline and the installation of huge piles of ugly concrete blocks. In his book *Lost Japan* (1993), Alex Kerr lucidly delineates Japan's ruthless environment policies over the last few decades. However, it may not be simply just a case of building more, or higher, sea walls; they aren't necessarily the best solution, and in fact may be counter-productive, such as by preventing surges of sea water from returning to the ocean. In the Tohoku region, the places to which previous tsunami had reached were marked, along with high places that could be used as areas to escape to, and big stones in temples and shrines showed that a tsunami had come this far. It's not that Japan was unaware that a major disaster could happen. For example, in local newspapers published in Ishinomaki a week before 3/11, there were numerous articles about disaster preparedness. It was just that no one had any idea of the potential enormous scale of tsunami and earthquakes; perhaps we had grown complacent.

An illustration of the way the triple disaster of the Great East Japan Earthquake, tsunami and nuclear reactor accidents that occurred on March 11, 2011, is still deeply embedded in the Japanese people's consciousness can be seen in an article by Akihiko Wakayama in the Nov. 27, 2022 issue of the *Nikkei Shimbun*. It describes the ongoing search, 11 years later, in the Tohoku district for relics or clues related to people who disappeared in the disaster. The accompanying photograph shows police in Fukushima Prefecture carefully sifting through sand between concrete blocks on a beach, inch by inch, motivated by the desire to give the families of those still missing some kind of clarity and resolution. The searchers hope that, especially on the days following a typhoon or heavy rain, a fragment of human remains or of something that once belonged to a person swept away in the tsunami will turn up. Some have a personal connection to the disaster, as they live locally and have lost some of

their own family members or homes. Even if nothing is found, the act of continued searching is seen by local people as a form of "grief care". The writer suggests that Japanese people generally want to have some physical remains of their beloved dead so they can carry out a cremation. An example of this concept is that recovering the remains of Japanese war dead from other countries is still seen as a national duty by the government of Japan.

## A New Genre of Literature

As an avid reader and the curator of the Japan Library: Pukapuka, which was the recent recipient of a donation of 78 books under the Japan Foundation's Read Japan project, I have noticed an entirely new genre of Japanese literature: post-3/11 themes. These cover a broad range of topics not only relating to the 2011 catastrophe itself, but also focusing on how it affected Japanese society, and the resulting changes and stalemates.

*A Tale for the Time Being*, Ruth Ozeki's brilliant and wide-sweeping novel, posits a book belonging to a possible tsunami victim floating from Japan around the time of the 2011 disaster to British Columbia, where it is picked up and read by a woman living there. *Precarious Japan*, by Anne Allison, discusses the uncertainty experienced after 3/11 for so many and the politics of survival in Japan as a whole, describing "the soul on strike in precarious Japan". *Japan Copes with Calamity*, edited by Tom Gill, Brigitte Steger, and David H. Slater, is a collection of ethnographies on communities affected by 3/11, in the survivors' own words. Hideo Furukawa's *The Little Woods in Fukushima* describes poignantly how the Fukushima disaster greatly affected the author's family's *shiitake* mushroom business, and mentions financial issues, such as the arbitrary definitions of a "half-destroyed" (there may be great damage but the entrance is intact) versus a "completely destroyed" house; only the latter received any compensation. *Bending Adversity: Japan and the Art of Survival*, by David Pilling, looks closely at survival strategies in the country (*Photo 1*).

## The Nuclear Question

The great earthquake of 2011 unleashed destruction on a scale that modern scientific technology simply could not deal with. Power was lost at the nuclear reactor at Fukushima's nuclear power station,

Photo 1: Iyoko Hishinuma



Temporary housing for affected persons, Fukushima Prefecture

Photo 2: Iyoko Hishinuma



Radiated soil prepared for decontamination, Fukushima Prefecture

followed by a meltdown, with more than 100 years and astronomical costs expected to be required to resolve the damage. Most scholars had previously said that nuclear reactor accidents could not happen in Japan, with some stating that the Chernobyl accident occurred because Russia had poor technical skills, but was unthinkable in Japan, where the level of technology is so much higher. Partly because of this thinking, as many as 63 nuclear power stations have been built in Japan.

Iyoko Hishimuna, an activist based in Iizaka Onsen, Fukushima, who has been supporting and reporting on the continuing issues experienced by those affected by the disaster, says, “The scientists were arrogant, and Japanese people as a whole had forgotten their previous spirit of reverence for nature. The destructive power of nature was far beyond what anyone imagined. We have left a ‘negative legacy’ to numerous future generations. It is extremely frightening and shocking that the government, in spite of the fact that Japanese nuclear power stations are aging and deteriorating, with the ongoing possibility of their being attacked or accidentally hit by a missile from North Korea, and without the people’s agreement, is steadily advancing from this year the restarting of the nuclear reactors” (Photo 2).

An article in *The Japan Times* on Jan. 3, 2023 discusses the outrage expressed by inhabitants of South Pacific islands at Japan’s

plan to release radioactive water into the Pacific Ocean this spring, while Japanese officials, with the Fukushima storage facilities running out of room, say there are no other feasible options.

Nevertheless, to everyone’s amazement, Japan survived for a considerable length of time without any nuclear power post-3/11 – and was able to function surprisingly well. Since then, though, there’s been a steady return to the nuclear narrative, and a reopening of nuclear power stations. Though 43 of Japan’s pre-2011 total of 54 plants remain idled, the Ministry of Economy, Trade and Industry stated in 2017 that if the country is to meet its obligations under the Paris climate accord, nuclear energy needs to make up around 20-22% of the nation’s portfolio mix. Some 26 restart applications are now pending with an estimated 12 units to come back in service by 2025 and 18 by 2030.

In 2021, nuclear energy provided just 7.2% of Japan’s electricity. Under revised regulations enacted in July 2013, Japanese reactors have a nominal operating period of 40 years. Extensions may be granted once only and are limited to a maximum of 20 years, with exacting safety requirements.

## Has Japan Changed? New Measures Going Forward

When Japan was hit by the Great Kanto Earthquake of 1923, then the country's worst-ever natural disaster, 45% of Tokyo burned and there was a death toll of 140,000. A dark aspect post-quake was the racist rumors that led to the massacre of around 6,000 Korean residents. (This xenophobia has echoes today, when many foreign residents of Japan have told me that they are following Japan's extreme practices on mask-wearing, for example, mainly to avoid "giving foreigners a bad name" or having foreigners become the target for blame related to the spread of Covid-19.)

The Kobe earthquake in 1995 was known for the authorities' slow response, in contrast to which local yakuza (gangsters) became involved quickly in post-quake recovery, actively distributing food and coordinating with rescue efforts.

After the 2011 tsunami, many around the world were amazed by the orderliness, community-mindedness, and patience of the Japanese people; there was also new awareness of the interconnectedness of all the world's people and of Japan's significance in global supply chains. At the same time, the government's response lacked coordination, timeliness, and efficiency, even if it was speedier than after previous disasters. Moreover, "the crisis at Fukushima exposed an official culture riddled with paternalism, complacency, and deceit" (Pilling). Meanwhile, volunteer groups and local efforts have built resilience and provide ongoing support to affected communities – a phenomenon mentioned by Rebecca Solnit in *A Paradise Built in Hell: the extraordinary communities that arise in disaster*. Considering why Japan did not change much after 3/11, as many hoped and expected would happen, such as by substantially reducing energy usage, Furukawa opines that Japanese people "do not have the tenacity required for deliberative thinking."

Says Hishinuma, "In Kamaishi city in Iwate Prefecture, passed on from generation to generation, is the phrase *denkodenko*, meaning that we have to each protect ourselves, and in the event of a tsunami, to escape separately – in stark contrast to what actually took place at a primary school in Miyagi Prefecture, where the teachers and the students all ran away together and more than 80 perished. There are similar words and phrases passed on from ancient times in other areas. We usually do not think about disasters, but it is essential to

prepare in advance as part of our daily lives, and to strengthen buildings."

After the Kobe earthquake in January 1995, there was growing awareness of fires that start after power has been restored following an outage caused by a natural disaster (*tsūden kasai*), and that can cause much injury and death, leading to greater use of master circuit breakers that turn off automatically in a strong temblor. Similar systems can turn off gas supplies also, considerably reducing the post-disaster fire risk. Japan's municipalities are gradually increasing their use of digital tools for disaster management, such as flood sensors on electricity poles and interactive chatbot apps for residents needing to evacuate. I hope that such measures, combined with ancient wisdom such as a *denkodenko*-style awareness, will substantially improve the speed and efficiency of Japan's disaster response.

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Photo: Iyoko Hishinuma



Disaster-affected people in Fukushima, July 2011. *Utsukushii Fukushima o Futatabi* (rough translation: *Bring Back Beautiful Fukushima*), a volunteer group, sent out many photos seeking help, and received over 700 packages from donors throughout Japan as a result.

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