

# The Nuclear Disaster That Could Destroy Japan - On the danger of a killer earthquake in the Japanese Archipelago 日本と世界を滅ぼす原発震災—巨大地震におびえる日本列島 • Japanese text available

Hirose Takashi

## The Nuclear Disaster That Could Destroy Japan - On the danger of a killer earthquake in the Japanese Archipelago

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Translated and with an introduction by C. Douglas Lummis

The original Japanese text is [available here](#).

### Translator's note

#### (Nuclear) Power Corrupts

A puzzle for our time: how is it possible for a person to be smart enough to make plutonium, and dumb enough actually to make it?

Plutonium has a half life of 24,000 years, which means that in that time its toxicity will be reduced by half. What could possess a person, who will live maybe one three-hundredth of that time, to produce such a thing and leave it to posterity to deal with? In fact, "possess" might be the right word. Behind all the nuclear power industry's language of cost efficiency or liberation from fossil fuel or whatever, one can sense a kind of possession – a bureaucratized madness. Political science has produced but one candidate for a scientific law - Power Corrupts and Absolute Power Corrupts

Absolutely. But the political scientists haven't noticed that the closest thing we have to absolute power is nuclear power. Nuclear power corrupts in a peculiar way. It seems to tempt the engineers into imagining they have been raised to a higher level, a level where common sense judgments are beneath them. Judgments like (as my grandmother used to say) "Accidents do happen".

At their press conferences, the Tokyo Electric Co. (Tepco) officials say, as if it were an excuse, that the 3/11 earthquake and tsunami in northeastern Japan were "outside their expectations". Look it up in the dictionary; that's the definition of "accident." For decades common-sense opponents of nuclear power, in Japan and all over the world, have been asking the common-sense question, What if there is an accident? For this they were ridiculed and scorned by the nuclear engineers and their spokespersons. We, suffer an accident? In our world there are no accidents!

Playing with nuclear power is playing God, which is by far the most corrupting game of all.

In Japan, one of the loudest, most persistent and best informed of the voices asking this common sense question has been that of Hirose Takashi. Mr. Hirose first came into public view with a Swifteen satire he published in 1981, *Tokyo e, Genpatsu wo! (Nuclear Power Plants to Tokyo!)*. (Shueisha) In that work, he made the argument that, if it is really true that these plants are perfectly safe ("accidents never

happen”) then why not build them in downtown Tokyo rather than in far-off places? By putting them so far away you lose half the electricity in the wires, and waste all that hot water by pumping it into the ocean instead of delivering it to people’s homes where it could be used for baths and cooking. The book outraged a lot of people – especially in Tokyo – and revealed the hypocrisy of the safety argument.

In the years since then he has published volume after volume on the nuclear power issue – particularly focusing on the absurdity of building a facility that requires absolutely no accidents whatsoever, on an archipelago famous as the earthquake capital of the world. Again and again he made frightening predictions which (as he writes in the introduction to his latest book *Fukushima Meltdown* (Asahi, 2011) he was always praying would prove wrong. Tragically, they did not. In the present article he reminds readers that the recent earthquake was not the last, but one in a series, and that the situation at Japan’s other nuclear power plants is as dangerous as ever. The nuclear power industry would like us to believe the 3/11 catastrophe was an “exception”. But all accidents are exceptions – as will be the next. CDL

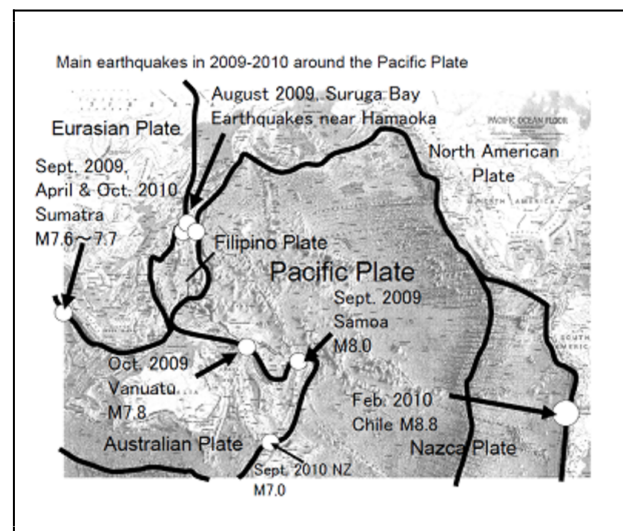
*C. Douglas Lummis is the author of **Radical Democracy** and other books in Japanese and English. A Japan Focus associate, he formerly taught at Tsuda College.*

## Earthquakes and Nuclear Power Plants

The nuclear power plants in Japan are ageing rapidly; like cyborgs, they are barely kept in operation by a continuous replacement of parts. And now that Japan has entered a period of earthquake activity and a major accident could happen at any time, the people live in constant state of anxiety.

Seismologists and geologists agree that, after some fifty years of seismic inactivity, with the 1995 Hanshin-Awaji Earthquake (Southern

Hyogo Prefecture Earthquake), the country has entered a period of seismic activity. In 2004, the Chuetsu Earthquake hit Niigata Prefecture, doing damage to the village of Yamakoshi. Three years later, in 2007, the Chuetsu Offshore Earthquake severely damaged the nuclear reactors at Kashiwazaki-Kariwa. In 2008, there was an earthquake in Iwate and Miyagi Prefectures, causing a whole mountain to disappear completely. Then in 2009 the Hamaoka nuclear plant was put in a state of emergency by the Suruga Bay Earthquake. And now, in 2011, we have the 3/11 earthquake offshore from the northeast coast. But the period of seismic activity is expected to continue for decades. From the perspective of seismology, a space of 10 or 15 years is but a moment in time.



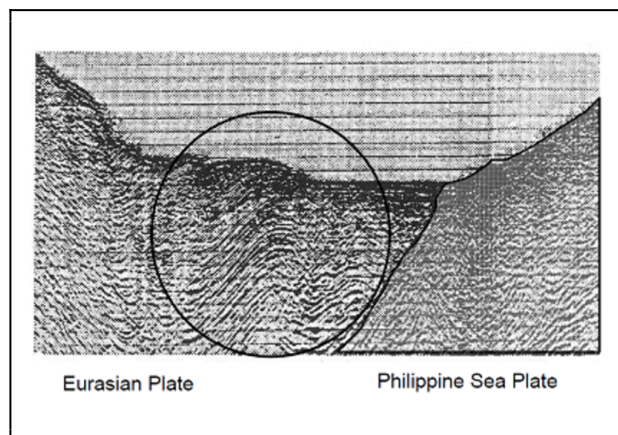
Because the Pacific Plate, the largest of the plates that envelop the earth, is in motion, I had predicted that there would be major earthquakes all over the world.

And as I had feared, after the Suruga Bay Earthquake of August 2009 came as a triple shock, it was followed in September and October by earthquakes off Samoa, Sumatra, and Vanuatu, of magnitudes between 7.6 and 8.2. That means three to eleven times the force of the Southern Hyogo Prefecture Earthquake. As you can see in the accompanying chart, all

of these quakes occurred around the Pacific Plate as the center, and each was located at the boundary of either that plate or a plate under its influence. Then in the following year, 2010, in January there came the Haiti Earthquake, at the boundary of the Caribbean Plate, pushed by the Pacific and Coco Plates, then in February the huge 8.8 magnitude earthquake offshore from Chile. I was praying that this world scale series of earthquakes would come to an end, but the movement of the Pacific Plate shows no sign of stopping, and led in 2011 to the 3/11 Earthquake in northeastern Japan and the subsequent meltdown at the Fukushima Nuclear Plant.

### Is the Rokkasho Reprocessing Plant Safe?

There are large seismic faults, capable of producing earthquakes at the 7 or 8 magnitude level, near each of Japan's nuclear plants, including the reprocessing plant at Rokkasho. It is hard to believe that there is any nuclear plant that would not be damaged by a magnitude 8 earthquake.



A representative case is the Rokkasho Reprocessing Plant itself, where it has become clear that the fault under the sea nearby also extends inland. The Rokkasho plant, where the nuclear waste (death ash) from all the nuclear plants in Japan is collected, is located on land under which the Pacific Plate and the North American Plate meet. That is, the plate that is the greatest danger to the Rokkasho plant, is

now in motion deep beneath Japan.

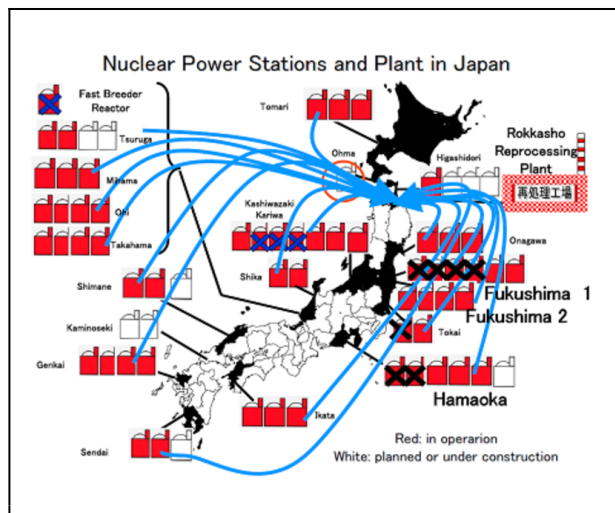
The Rokkasho plant was originally built with the very low earthquake resistance factor of 375 gals. (Translator's note: The gal, or galileo, is a unit used to measure peak ground acceleration during earthquakes. Unlike the scales measuring an earthquake's general intensity, it measures actual ground motion in particular locations.) Today its resistance factor has been raised to only 450 gals, despite the fact that recently in Japan earthquakes registering over 2000 gals have been occurring one after another. Worse, the Shimokita Peninsula is an extremely fragile geologic formation that was at the bottom of the sea as recently as the sea rise of the Jomon period (the Flandrian Transgression) 5000 years ago; if an earthquake occurred there it could be completely destroyed.

The Rokkasho Reprocessing Plant is where expended nuclear fuel from all of Japan's nuclear power plants is collected, and then reprocessed so as to separate out the plutonium, the uranium, and the remaining highly radioactive liquid waste. In short, it is the most dangerous factory in the world.

At the Rokkasho plant, 240 cubic meters of radioactive liquid waste are now stored. A failure to take care of this properly could lead to a nuclear catastrophe surpassing the meltdown of a reactor. This liquid waste continuously generates heat, and must be constantly cooled. But if an earthquake were to damage the cooling pipes or cut off the electricity, the liquid would begin to boil. According to an analysis prepared by the German nuclear industry, an explosion of this facility could expose persons within a 100 kilometer radius from the plant to radiation 10 to 100 times the lethal level, which presumably means instant death.

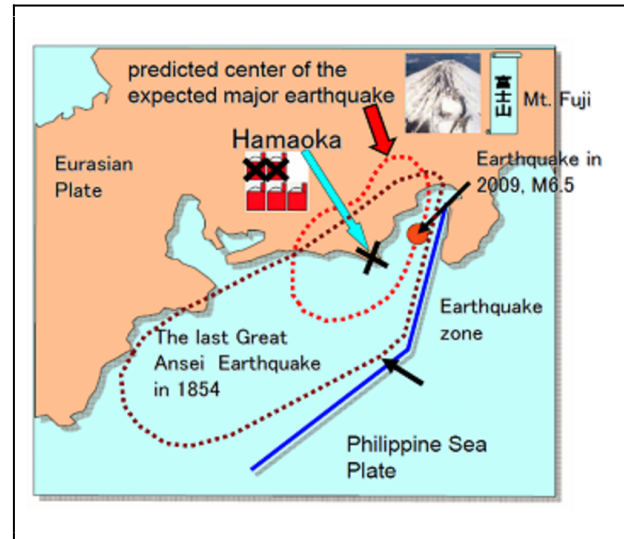
On April 7, just one month after the 3/11 earthquake in northeastern Japan, there was a large aftershock. At the Rokkasho

Reprocessing Plant the electricity was shut off. The pool containing nuclear fuel and the radioactive liquid waste were (barely) cooled down by the emergency generators, meaning that Japan was brought to the brink of destruction. But the Japanese media, as usual, paid this almost no notice.



### The Hamaoka Nuclear Plant and the Approaching Killer Earthquake

The Hamaoka Nuclear Plant is located at Shizuoka City, on Suruga Bay. Despite predictions of a magnitude 8 earthquake on Suruga Bay, it has continued in operation. If you look at the illustration showing the configuration of the plates beneath the Pacific Ocean, you will see that there is a point at which the Philippine Sea Plate, the huge Pacific Plate, the North American Plate, and the Eurasian Plate all meet; directly over that point is the Japanese Archipelago. And the very center of the area where these four plates press together is Shizuoka.



As shown in the chart below, large scale earthquakes in the eastern and southern seas have occurred regularly at intervals of between 100 and 250 years. Today in 2011, 157 years have passed since the Great Ansei Earthquake of 1854, so we are in a period when the next big one could come at any time. And the predicted center of this expected major earthquake is - though this is hard to believe - exactly under the location of the Hamaoka Nuclear Plant. (Editor's note: On May 6, 2011, following a request from Prime Minister Kan, the Hamaoka Plant was temporarily closed in light of the prediction that there was an 87% chance that an earthquake of magnitude 8.0 or more would strike the area in the next thirty years.)

And sonar readings at the site indicate that from thirty years back the Eurasian plate has been bending, which means that it is in a condition where it can be expected eventually to spring back.

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*Recommended citation: Hirose Takashi and C.*

*Douglas Lummis, The Nuclear Disaster That Could Destroy Japan – On the danger of a killer earthquake in the Japanese Archipelago, The Asia-Pacific Journal Vol 9, Issue 21 No 2, May 23, 2011.*