

# The Lessons of the 3.11 Meltdown for Japanese Nuclear Power: Citizenship Vs. A Corporate Culture of Collusion

## 日本原子力にたいする3.11炉心溶融の教訓—市民対企業結託文化

Roger Pulvers

**Between 2012 and 2014 we posted a number of articles on contemporary affairs without giving them volume and issue numbers or dates. Often the date can be determined from internal evidence in the article, but sometimes not. We have decided retrospectively to list all of them as Volume 10, Issue 54 with a date of 2012 with the understanding that all were published between 2012 and 2014.**

Roger Pulvers

This article brings together three Counterpoint columns published in The Japan Times on December 2, 9 and 23 and slightly edited here. Novelist, playwright, film director and translator Roger Pulvers provides a personal tour of Japan's disastrous experiment with nuclear power, compares the consequences of the Fukushima and Chernobyl disasters, and charts the uncertain future of Japan's nuclear industry. While the first two articles appeared prior to Japan's election, the victorious LDP leader Abe Shinzo has made plain his administration's determination to restart many of Japan's closed power plants in the face of public opinion polls revealing widespread opposition to the restarts, and scientific evidence of the high risk of restarts in earthquake-sensitive regions. Abe said on TV Asahi on December 23, "It is not yet clear what caused the Fukushima Daiichi accident." He added, "We will go ahead [with the reactor

restarts] with the people [regulators and scientists] that we already have." His "people" appear to omit the strong Japanese majority that public opinion polls reveal are opposed to restarts. Abe appears poised to push forward with the status quo of ineffective regulation, business cronyism, and hand-picked subservient experts described below. APJ

### I) Why is the potential turning point of 3/11 being allowed to slip away?

Dried Anpo persimmons from Fukushima Prefecture are famed for staying fresh and juicy. However, for the second successive autumn, 90 percent of the crop has had to be discarded due to it registering radioactive contamination levels above legally set limits.

Mushrooms, a staple of Japanese cuisine, have now been found with unacceptable levels of radioactive cesium as far away from the Fukushima No. 1 nuclear power plant, whose explosions and three reactor meltdowns caused the contamination, as Aomori and Nagano prefectures — several hundred kilometers away.

It is clear that the dangers lurking in the food we eat in this country have by no means been eliminated.

Now victims of radioactive contamination in Fukushima have come together to confront the nuclear power plant's owner and operator Tokyo Electric Power Co., and the Japanese government, that, as they see it, have together neglected their welfare.

A prime mover in the group, currently more than 150-strong, is lawyer Nomura Yoshitaro. However, members foresee the group eventually including 100,000 victims.

On Nov. 13, it issued a "Fukushima Human Rights Declaration" (<http://bloge.miwako-kurosaka.com/?eid=992364>) based on the Constitution's guarantee of the right of the citizenry's pursuit of happiness. This said, "the victimizers evaded their responsibility by substituting (their own) causes for the real ones, made light of the situation, beat people down on the amounts owed to them and claimed everything was settled." Regarding government officials, group representatives at a symposium held last month stated: "They are now giving priority to restoring the economy over the health of the people living (in the affected areas)."

The declaration states, in part: "We have the right to decide for ourselves to choose whether we evacuate our land or not.

"We have the right to know about and acquire

information, until we are satisfied, regarding the damages from radiation."

"We have the right to possess a healthy body, to love the nature of Fukushima and to enjoy our life."

"We have the right to claim total compensation for damage caused to our property by radioactive contamination."

Such forthright demands, backed up by legal advice from experts, constitute a rare phenomenon in the field of victims' rights in Japan. Altogether, the declaration shows how deeply the nuclear disaster has affected the psyche of the people of the Tohoku region of northeastern Honshu.

But has it also intruded convincingly into the consciousness of people living outside the contaminated region? And what are the Japanese people really prepared to do about the ravages that nuclear power plants can wreak in the event of accidents?

These questions are addressed brilliantly by Iida Tetsunari in an essay (<http://japanfocus.org/-Iida-Tetsunari/3852>) published online by The Asia-Pacific Journal: Japan Focus, and translated by film director John Junkerman. (I note that I am an associate of this group of scholars and journalists.) In his essay, Iida, executive director of Tokyo-based research organization the Institute for Sustainable Energy Policies — and acting leader of the new Nippon Mirai no To (Japan Future Party) — begins by posing questions.

"Is it possible to shift despair concerning politics into the energy for reform?" he asks. "What is required for a new society and politics? How can we empower civil society to propose and implement new policies?"

He also puts into a historical context today's most compelling issue: The sustainability of Japan's body polity in its present form.

"Even before 3/11 (the date of the Great East Japan Earthquake in 2011), Japan was in a state of collapse. A major cause of this was certainly the deteriorating framework of political parties, the bureaucracy and business that has prevailed since the Meiji Era (1868-1912); a breaking down that led to the catastrophic events in Fukushima.

"Faced with this catastrophe, many people concluded that this social and political deterioration had to be remedied and Japan's energy and nuclear power policies fundamentally changed. We are witnessing a once-in-a-century opportunity where such change is possible."

Until 3/11, Japanese governments turned a blind eye to the realities and pitfalls of nuclear power generation. Concomitant dangers were papered over by members of the so-called nuclear village, a gathering of mountebank-scholars and sycophants in the subsidized sway of the nuclear cartel.

What happened in the aftermath of the Great East Japan Earthquake and the tsunami it

triggered was no "accident," Iida maintains. "The history of nuclear fuel-cycle efforts is marked by failures, fabrications and perverted policy," he contends.

Then, taking that long view, he compares the mentality underpinning that calamity with that in prewar and wartime Japan — and expresses a fear that the lessons of March 11, 2011, may fade with time.

"Why is Japanese politics allowing this historic turning point to slip away? Perhaps we are witnessing a repeat of the foolish, fatal failures suffered during the Pacific War."

He sees raising public awareness as the best chance to alter the direction of Japan's plunge right back into the past.

"Public literacy about energy and nuclear power is at an all-time high, making this an excellent opportunity to hold a full public debate on the matter," he says. "Politics in Japan may be in a historic transition, or we may be heading toward a historic failure. In the midst of this crossroads, what is required of civil society? What can we accomplish?"

"We have to change policy, to change politics. Everyone thinks so," he declares.

Iida refers in his essay to events that mark a maturation of Japanese politics from the grass roots up. Weekly demonstrations in front of the Prime Minister's Residence have attracted up to 200,000 people in all since they started in

April this year. After Prime Minister Noda Yoshihiko invited comments on possible options for the future of nuclear-power generation, nearly 90,000 were received from the public — 90 percent of them supporting the zero option.

Social networking on nuclear energy shows the Japanese public is significantly more aware of the issues involved than previously. In a country with a biased press, interpersonal cyberspace has become the chief forum for open debate on the subject.

Whether such decidedly anti-nuclear public sentiment can be sustained when the press, overwhelmingly supportive of the nuclear industry (a huge source of advertising revenue), and the government — politicians and bureaucrats — are touting alternative-energy generation as uneconomical and unrealistic remains to be seen.

Most estimates of the relative costs of alternative versus nuclear energy generation appearing in the Japanese press fail to take into account diminishing costs of the former as technologies become widely applied, and the enormous expense to the economy of the latter when accidents occur — let alone the safe storage of nuclear waste for untold centuries to come.

The nuclear catastrophe in March 2011 cannot be considered a unique or isolated event in a country plagued by earthquakes, tsunamis, volcanic eruptions and typhoons.

The words of the resolute and courageous group of victims who declared their rights in

the face of deception, coverup and injustice ring out: "We have lost many things as a result of the nuclear plant accident. We don't want to lose any more."

This should be the cry of people in every prefecture of this country.

## II) What are the environmental and political lessons of Chernobyl for Fukushima and Japan?

There are approximately 7,000 exhibits in Kiev's Ukrainian National Chernobyl Museum. (The location of the nuclear plant that exploded on April 26, 1986 is spelled this way in Ukrainian.) Among the documents, photographs, maps and objects at this museum that opened on the sixth anniversary of the accident is a little piglet.

The piglet was born after the accident in the vicinity of the plant with a deformity known as dipygus. Its body, on display, is forked at the torso and possesses too many legs.

"The amount of mutations in people and animals grew sharply after the catastrophe," states the explanation accompanying the display. "Among these, in the first four years, were some 350 animals found with serious deformities."

What is the true nature of the destruction caused by radioactive contamination in the Chernobyl Exclusion Zone, an area stretching out in a 31-km radius from the plant? And what can we expect to find in a similar zone in Fukushima Prefecture? After all, it has been estimated that the nuclear accident in Ukraine has made human habitation in the zone impossible for 20,000 years. Will the land in Fukushima be equally condemned?

To get answers, I turned to Timothy Mousseau, professor of biological sciences at the University of South Carolina. Mousseau has made 30 trips to Ukraine and Belarus since 1999, spending approximately 230 days in fieldwork there, studying organisms living in both clean and contaminated areas in and around the zone and comparing them to those in other parts of Europe.

Writing in "Biology Letters" in March 2009, he and his colleague, biologist at the University of Paris Sud, Anders Moller, reported on their study of bumblebees, butterflies, grasshoppers, dragonflies and spider webs in forests around the plant.

They found that "abundance of invertebrates decreased with increasing radiation," concluding that "the ecological effects of radiation from Chernobyl on animals are greater than previously assumed."

A more recent study undertaken in the exclusion zone and published in May 2012 by Prof. Mousseau and colleagues states that "there were considerably fewer pollinating

insects in areas with high levels of radiation ... (with) dramatic reductions in species richness and abundance of breeding birds..."

They cross-validated their measurements against reliable data from earlier Russian studies.

The accident at Chernobyl spread highly radioactive substances to regions as far away as Sweden, Britain and southern Germany. In fact, it was the largest release of radioactive material into the environment on record, about 400 times the amount released by the atom bomb dropped on Hiroshima.

These studies constitute pioneering work, seeing as, according to Mousseau, "Surprisingly, there are few data on the abundance of animals in relation to radiation."

What we do know is that the popular press, both in the Soviet and post-Soviet eras, created a "propaganda curtain" around factual information. The absence of data implied that as many animals were roaming freely in the exclusion zone as before the accident.

The Japanese media has been little better with Fukushima. They have tended to give this impression, too, to lighten the disastrous effects of the disaster at the Fukushima No. 1 nuclear power plant and dampen the cause of compensation to victims.

Even NHK gave this impression on a news item broadcasted last month. They reported that the

number of feral wild boar has increased 4 or 5 times since March 2011. Well, if the wild boar are doing okay, then what's the fuss?

At the same time, however, officials from Fukushima Prefecture revealed a reading of 33,000 bequerels of radioactive cesium in a kilogram of wild boar caught near Iwaki City, the highest level ever recorded in a wild animal in the prefecture.

At a talk I attended at Tokyo's Sophia University on Nov. 20, Prof. Mousseau spoke of his work in Fukushima in a research team that has spent about 6 weeks in Fukushima since July 2011 conducting research on bird and insect abundance, biodiversity, and plant productivity to assess the dose received by some bird species and measurements of genetic damage to their DNA.

"A very large proportion of eastern Fukushima Prefecture is contaminated to some degree," says Mousseau. "By this I mean, more than five times natural background radiation levels. Essentially, most areas from Fukushima City and Koriyama towards the east have measurable levels of radioactive cesium. A large swath — 15-20 km wide, extending from the reactor site to 50 km to the northwest — is very highly contaminated, with levels that are certain to lead to long-term ecological consequences. In fact, we have already demonstrated impacts to birds, cicadas and butterflies.

"The reading on our Geiger counter in front of our hotel in Koriyama in July 2011 was above 2 microsievverts per hour, and rising. This was a big shock for us as we had not expected such

high levels in the downtown area of this large metropolitan city with more than 300,000 inhabitants."

He concludes: "Based on our previous work in Chernobyl, chronic exposure to this level of contamination is associated with many deleterious consequences for wildlife including elevated mutation rates, developmental abnormalities, tumors, neurological impairment, reduced fertility, and reduced longevity.

"The areas of high contamination are not confined to Fukushima Prefecture, but contamination has been detected in Tochigi, Ibaraki, Chiba, Tokyo, Miyagi, Yamagata, Niigata, Gunma and Nagano prefectures, among others. ... In terms of deposition onto land, the Chernobyl event was considerably larger with an area exceeding 200,000 sq. km .... However, very large amounts of contaminants were released into the ocean around Fukushima, and the size and impacts on marine systems are largely still unknown."

As someone who has been studying Russian affairs for 50 years, having made my first trip there in 1964, I strongly believe that the aftereffects — ecological, economic, political and psychological — of the Chernobyl accident constituted a prime factor in the fall of the Soviet regime.

Prof. Mousseau said to me, "Our second year of sampling in Fukushima in July 2012 suggests an increase in negative effects on animals living in the areas of high contamination, so it is imperative that these studies continue."

I would like the politicians touting the virtues of nuclear power to look at the congenitally deformed piglet in Kiev. That little pig brought down a corrupt regime.

Something similar might happen here. If I were a member of the nuclear lobby or a politician in its greedy sway, I would fear the wild boar roaming the lands of Fukushima more than anything.

If we give leaders a free hand in this, we who live here will be sold a pig in a poke — and a deadly one at that.

### III) Earthquake Prone Tsuruga as a Foundation for Japan’s Nuclear Future

If you remember the Pinto, dear reader, then you may be as old as the hills — or at least as old as I am.

No, I am not referring to the horse that the Cisco Kid rode, a feisty pinto named Diablo. I'm talking about a small car that Ford began marketing in 1970. The Pinto takes the Grand Citrus Prize for being "the lemon of that decade."

But it wasn't a lemon by accident, though the accidents it caused led to injury and death. During the process of manufacture, Ford engineers knew that positioning the fuel tank

behind the rear axle meant it could explode in a rear-end collision. But instead of protecting it for a mere \$11 per vehicle, Ford decided to "pass on" the fault to the unsuspecting consumer.

I bring up this crass example of corporate negligence as a metaphor for what the nuclear industry has done to all of us in this country for more than half a century. By employing manipulated criteria for the construction of power plants in or near zones with active fault systems — and ensuring those criteria were rubber-stamped by sycophantic scholars in their pay — the captains of the nuclear industry managed to lure the entire populace into dependence on a horrendously dangerous and ultimately costly enterprise. But in light of the ongoing nuclear disaster that began in March 2011, we can no longer say we are unsuspecting as the industry prepares to numb us once again with shoddy excuses for safety.

The case in point now is the Tsuruga nuclear power plant in Fukui Prefecture. Tsuruga is a lovely town on the Sea of Japan coast; and in prewar days it was a port of call for Russian ships from Vladivostok.



Early in December, a five-member team of fault-system experts was sent to the plant by the Nuclear Regulation Authority (NRA), an administrative body of the Cabinet. They went to determine the extent of the active faults surrounding and running under the plant. No reactor is permitted to operate in a plant situated above an active fault; and yet, Japan Atomic Power Co., the plant owners, are anxious to get the two existing reactors into operation and two others under construction completed.

This is despite the fact that one of the existing reactors is the oldest in operation in this country. The Tsuruga No. 1 reactor was commissioned on March 14, 1970. Actually, I remember that clearly, as it was the same day that the World Exposition, known as Expo, opened its doors in Osaka. It was a red-letter day for nuclear power, seeing as some of the power for Expo was provided by the No. 1 reactor. Now, though, what we have is a nuclear reactor built to specifications from nearly half a century ago.

Japan Atomic Power Co. had announced, as a result of their own investigations, that no movement had occurred in the fault system near the plant in 130,000 years. In fact, however, multiple faults are dangerously close to the reactors, one being a mere 250 meters away; and a crush zone linked to the fault courses directly under the No. 2 reactor.

The so-called Urasoko Fault System which runs for a total of 64 km lies near or below the Tsuruga plant. I checked the geological data on

the fault system. They state that activity in sections of the system has been verified as having occurred between 2,300 and 7,200 years ago — and that a quake of magnitude 8.2 is possible in the system's north-central section.

The crush zone directly beneath the reactor contains rocks made up of broken fragments of smaller rocks, as well as stratum deformation caused by shear strain, and non-cohesive rocks formed by tectonic movement. This would indicate that the strata are unstable and liable to shift significantly in an earthquake.

Does the company want to risk contaminating Japan's biggest lake, Lake Biwa, the primary source of drinking water in the Kansai region, thereby crippling its economy? The lake is but 30 km from the nuclear plant.

Does the company want to pollute Kyoto, Japan's ancient cultural capital, to eke out the profits they expected before shutdown?

The damage incurred in the northeastern Tohoku region by radioactive contamination spread from the Fukushima No. 1 nuclear power plant following the Great East Japan Earthquake and tsunami of March 11, 2011 pales in comparison with the potential damage caused by a similar accident in Tsuruga.

And yet ... we are faced with a nuclear industry that is willing to blindfold us to these dangers in the interests of "getting this country moving again." Moving toward what, we might well ask.

NRA teams will be investigating 18 power plants for active faults, including the Shika plant in Ishikawa Prefecture which was taken up for fault issues in Counterpoint on Oct. 21 this year ([www.japantimes.co.jp/text/fl20121021rp.html](http://www.japantimes.co.jp/text/fl20121021rp.html))

But back to the team of experts that examined the Urasoko Fault System, for this is a test case that calls into question the future of other nuclear reactors in Japan.

They completed their survey on Dec. 2, finding that the D-1 Crush Zone running directly under the plant was "comparatively new" and that there were deformations suggesting as yet undiscovered faults. The western side of the trench they dug was, as the Tokyo Shimbun reported on Dec. 2, "disturbed on a large scale."

According to a member of the team, Miyauchi Takahiro, a professor in the Department of Earth Sciences at Chiba University, "the disturbances (in the crush zone) occur in more than one place and are complex."

On Dec. 10, the team reported their unanimous findings: There is a "distinct possibility" that the fault is an active one and the two reactors "cannot be restarted."

Why weren't these surveys conducted before the construction of the nuclear power plant was undertaken?

The answer is that surveys were conducted. But they were done at the behest and under the watchful eye of the plant's owner, in what any fair-minded person would regard as a blatant case of asking the fox to inspect the fencing on the chicken coop.

This is not a case of mere oversight, willful or otherwise. What is at work here is an entire culture of railroading through predetermined policy, with the collusion of the bureaucracy, the politicians who do their bidding and the media that strives to keep up a pretence of objectivity while all the while cajoling the populace into acquiescence (and trousering advertising-revenue "sweeteners").

Power plants are generally built in areas of rural decline, where local authorities sympathetic to their establishment are put in power. Any opposition in the past was, at best, marginalized by the government-industry-media machine or, at worst, attacked verbally and physically by thugs who were cogs integral to that machine.

Where does this leave us, with a new government dedicated to restarting most, if not all, of the country's reactors?

It leaves us with a sense of helplessness and despair, that our welfare and safety are thought insignificant in comparison with the greed of the powerful interests that tightly control this country's failing economy.

We are all about to get into that seriously flawed car and be driven at breakneck speed ahead. If we are maimed or we die in an

"accident," don't worry — any survivors will eventually be paid off with a pittance for their grief.

That's the Japanese way as we enter the year 2013: Let them eat yellowcake.

Roger Pulvers is an American-born Australian author, playwright, theatre director and translator living in Japan. An Asia-Pacific Journal associate, he has published 40 books in Japanese and English and, in 2008, was the recipient of the Miyazawa Kenji Prize. In 2009 he was awarded Best Script Prize at the Teheran International Film Festival for “Ashita e no Yuigon.” He is the translator of Kenji Miyazawa, [Strong in the Rain: Selected Poems](#). [The Dream of Lafcadio Hearn](#) is his most recent book.