

Opinion: Five years after Fukushima, there are big lessons for nuclear disaster liability

March 15 2016, by Makoto Takahashi, University Of Cambridge



Anti-nuclear demonstration in Nagatacho, 2015. Credit: TK Kurikawa

As four reactors at the Fukushima Daiichi Nuclear Power plant suffered [catastrophic cooling failures](#) and exploded in March 2011, the world

watched in disbelief. For Japan, this was not just the greatest nuclear disaster since [Chernobyl](#). [It was](#) "the most severe crisis ... since World War II."

Five years on, the nation continues to struggle with the effects. Towns [up to 40km](#) from the plant remain a dead-zone: desolate and uninhabited. As many as 100,000 people [still remain displaced](#), unable to return to their homes. Workers at the [Tokyo Electric Power Company \(TEPCO\)](#) still don claustrophobic masks and rubber suits to venture into the Fukushima facility. Their job is to decommission the plant safely, a task that plant manager Akira Ono [recently said](#) was "about 10% complete".

The task is beset with setbacks and spiralling costs. In December 2011 the government estimated that managing Fukushima would cost US\$50 billion. By 2014 this [had nearly doubled](#) to include US\$19 billion to decommission the Fukushima plant; US\$22 billion to decontaminate the surrounding area; US\$9 billion to build temporary storage facilities for nuclear waste; and US\$43 billion to compensate the victims. Today even this looks [hopelessly optimistic](#).

Compensation

Fukushima [is now](#) the biggest civil liability case in history. More than two million people have sued TEPCO and US\$50 billion has [already been](#) paid out. This is already equivalent to 49 [Exxon Valdez](#) oil spill settlements, and experts [predict](#) the total cost of compensation could rise to US\$120 billion.

One notable subplot has been compensation for cases of suicide. A court's [landmark decision](#) that TEPCO pay US\$470,000 to the heirs of a 58-year-old farmer's wife named Hamako Watanabe could prove much more costly. The Watanabe family were evacuated from the village of Yamakiya in April 2011, losing their farm and leaving them with a

US\$140,000 mortgage on their now uninhabitable home. Watanabe became severely depressed and during an authorised one-night visit to their home in June the same year, she burned herself to death.

Other bereaved families have also come forward. Two similar cases are now underway, and the Japanese government [anticipates that](#) as many as 56 suicides could be tied to the disaster. And this looks conservative: the NHK broadcasting service [has put](#) the number at 130. What is certain is that the number is rising. A further 19 evacuees [took their lives](#) in 2015 and there is no reason to believe 2016 will be any different.

Who pays

Officially the buck for everything stops with TEPCO. Under [Japanese nuclear-liability law](#), the nuclear operator is responsible for the full cost of an accident, even if it is not proven to be negligent.

In practice, the Japanese taxpayer [is bearing](#) the burden. TEPCO's liability may be unlimited, but its assets are not. Despite the country's [seismic history](#), TEPCO's insurance policy incredibly did not cover earthquakes or tsunamis. And in accordance with [regulations introduced](#) in 2009, TEPCO was insured for up to only US\$1.1 billion anyway: about a fiftieth of the damages paid out so far.

The government has been forced to prevent TEPCO's bankruptcy – over and above all of its other Fukushima-related outgoings. It [has bought](#) a majority share and has continued to finance compensation payments through a [series of](#) indemnity agreements and loans in the form of government compensation bonds.

One has to ask whether the concept of unlimited liability has any real meaning when the operator's capacity to pay is so limited. It also raises questions for other parts of the world. In the UK, for example, nuclear

liability is [capped at](#) a mere US\$220m, less than two hundredths of what TEPCO has already paid in compensation claims. Japan is evidently not the only country that should be taking lessons from Fukushima.

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