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Experts warn of another disaster awaiting at Fukushima

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Reporter: Mark Willacy

Japanese and US nuclear experts warn that another earthquake hitting Fukushima could spark a disaster worse than Chernobyl.

Transcript

LEIGH SALES, PRESENTER: One more major earthquake in Japan and the nation could face a nuclear disaster 10 times the scale of Chernobyl. That's what experts are telling 7.30.

When Japan was hit last year by a massive earthquake and tsunami, the world feared nuclear catastrophe.

The nation's Fukushima nuclear reactors were inside the disaster zone.

We've not heard much about them for a while, but the danger certainly hasn't passed.

Experts say the situation inside Fukushima reactor number four is precarious, as North Asia correspondent Mark Willacy reports from Fukushima.

MARK WILLACY, REPORTER: It's said fortune favours the brave. And after enduring an earthquake, a tsunami

and a series of nuclear meltdowns, the people of Fukushima reckon they're due for some luck.

For 13 months, this track was idle. Horses and people kept away because of the fear of radiation. But today, Fukushima is out for a flutter.

So is this a sign that Fukushima's luck is turning? Possibly. But few here actually realise that a few kilometres to the east is the spent fuel pool of the Fukushima nuclear plant, containing enough nuclear fuel to spawn a catastrophe to dwarf Chernobyl.

In the gloom of this pool, a 1,331 highly radioactive spent nuclear fuel assemblies each containing dozens of rods.

ROBERT ALVAREZ, INSTITUTE OF POLICY STUDIES: The spent fuel pool number four at Fukushima, based on my sorta calculations, contains roughly 10 times more cesium 137 than released by the Chernobyl accident.

MARK WILLACY: It's also clear from this footage that the pool is littered with debris from last year's disaster.

HIROAKI KOIDE, NUCLEAR ENGINEER (voiceover translation): The nuclear fuel in that pool is 2.5 times what's needed in a reactor core. It contains 5,000 times more cesium than was released by the Hiroshima bomb and the pool is just hanging there. We don't know when it could collapse.

MARK WILLACY: This is where the pool sits, five storeys above the ground next to the reactor. That is how things are supposed to look. This is how the reactor building looks now after a hydrogen explosion blew it apart. The blast tore off the roof and caused a reinforced wall of the fuel pool to bulge by up to 3.5 centimetres. As for the hundreds of tonnes of spent fuel, until this month its only protection from the elements was a white plastic sheet. Some nuclear experts warn Japan is literally playing with fire.

HIROAKI KOIDE (voiceover translation): If there's a crack in the pool and water drains out, the fuel rods will be exposed. It will then be impossible to cool the fuel. So if an accident happens, 10 times more cesium than has already been released by the Fukushima meltdown will go into the atmosphere. Depending on which way the wind is blowing, Tokyo could become uninhabitable.

MARK WILLACY: Hiroaki Koide is a senior nuclear reactor engineer at Japan's prestigious Kyoto University and one of the experts raising the alarm.

HIROAKI KOIDE (voiceover translation): As soon as possible, those fuel rods should be removed. Earthquakes are striking almost every day around the Fukushima plant, so I'm praying that a big one won't hit.

MARK WILLACY: This warning is echoed by international nuclear safety experts, among them, Robert Alvarez, a former advisor to the US Secretary of Energy.

ROBERT ALVAREZ: You have a very, very large concentration of radioactivity where the only thing that keeps that radioactivity from being released through a catastrophic fire is a pool of water. That pool is 100 feet off the ground in a structurally damaged building in a high-risk earthquake zone. I mean, what more you can be worried about?

MARK WILLACY: But the operator of Fukushima TEPCO brushes all this aside, arguing that despite being open to the elements and in a damaged building 30 metres above the ground, the pool is safe.

YOSHIMI HITOSUGI, TEPCO SPOKESMAN (voiceover translation): We checked its condition the other day and although there is a bulge in one wall, we don't think this will have any effect on the soundness of the pool or the building. We believe both can withstand a large earthquake.

MARK WILLACY: And on the matter of removing the fuel rods, TEPCO appears in no great hurry.

YOSHIMI HITOSUGI (voiceover translation): The original method was to take out the spent fuel via crane attached to the ceiling of the building, but that's been damaged, so we are thinking of installing a crane for this. We would like to start removing the fuel some time next year.

ROBERT ALVAREZ: They have to have a heavy overhead crane. They're going to have to manipulate the spent fuel under water constantly, put it into containers that are very heavy involving perhaps containers that may weigh as much as 100 tonnes. ... This requires extraordinary precautions, even under a routine basis, so given the magnitude of the damage, that sort of ups the stakes quite a bit in terms of the capability to safely remove this material.

MARK WILLACY: Ever since the meltdowns, TEPCO has maintained a veil of secrecy over what's happening at Fukushima. But one man has managed to penetrate it. Tomohiko Suzuki is a rarity in Japanese journalism: a reporter prepared to put his health on the line to get to the truth.

TOMOHIKO SUZUKI, JOURNALIST (voiceover translation): When I went undercover as a worker at the Fukushima plant, I wore protection gear, but over my sleeve I wore this watch, which has a secret camera inside.

MARK WILLACY: With his secret camera watch and other hidden devices, Suzuki recorded life inside the Fukushima plant. Working next to the reactor four building, he was shocked by what he was told about the fuel pool 30 metres above him.

TOMOHIKO SUZUKI (voiceover translation): I spoke to a worker who helped reinforce the reactor four building. He said the spent fuel pool has vast amounts of heavy water in it and that the steel support frames were damaged, but he told me that the reinforcement of the pool was jerry-rigged, so if a typhoon or a tornado hits, it will be dangerous.

MARK WILLACY: Sound far-fetched? Well, just last month a neighbouring prefecture to Fukushima was smashed by the most violent tornados recorded in Japanese history.

MISUHEI MURATA, FORMER JAPANESE DIPLOMAT: I call it the sickness of Japan. First, we hide, then we postpone and then we assume no responsibility.

MARK WILLACY: Misuhei Murata is a former Japanese ambassador to Switzerland. He's brought his fears about the fuel pool to the attention of the United Nations Secretary-General Ban Ki-moon.

MISUHEI MURATA: TEPCO and the Government of Japan not only lacks the ability, but the intention.

MARK WILLACY: So in your opinion if there was a problem with that fuel pool, it would be the end of Japan?

MISUHEI MURATA: Yes. There is no-one who denies that. ... We cannot sleep peacefully.

MARK WILLACY: So who should be the people of Fukushima back? A collection of nuclear experts, journalists

and concerned activists struggling to be heard, or TEPCO with its history of cover-ups and incompetence?

VOX POP (voiceover translation): I do not believe TEPCO. I do not feel safe at all. Radiation levels are still high.

HIROAKI KOIDE (voiceover translation): TEPCO says the fuel pool can withstand the next big earthquake, but I can't believe this. That's why I'm so worried.

ROBERT ALVAREZ: Nothing like this has ever happened before and we are sort of charting unknown waters here. And this is a problem that if such an event were to occur, it would be of an international dimension.

LEIGH SALES: Mark Willacy reporting.

Images



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