



Protesters near the Kudankulam nuclear project in the state of Tamil Nadu in 2012. *REUTERS*

India's Nuclear Ambitions Rattle Tsunami-Hit Coast

Locals Fear Fukushima Scenario at Plant on Shores Ravaged in '04

By **JESSE PESTA** and
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IDINTHA KARAI, India—Here along India's southern coast—ravaged by tsunami waves 10 years ago—the country's newest nuclear plant towers over the shoreline.

It is one of India's biggest nuclear plants, and in the coming weeks it is expected to officially start selling power into the Indian grid. The Russian-designed, 2,000-megawatt Kudankulam Nuclear

Power Project is part of an aggressive nuclear expansion as India struggles to solve severe power shortages.

It comes a decade after the Dec. 26, 2004, tsunami, in which 228,000 people were lost across countries on the Indian Ocean's rim, and amid concern about nuclear plants on tsunami-prone shorelines since the 2011 meltdown in Fukushima, Japan.

Just this month, Russian President Vladimir Putin visited India and agreed to supply at least 10 more reactors over two decades. Indian Prime Minister Narendra Modi said the two leaders "outlined an ambitious vision for nuclear energy" during the visit and pledged the "highest standards of safety."

Activists, however, have been calling for Kudankulam's shutdown. "We are really afraid," said Anthony Rayappan Suresh, a fisherman working along the shoreline in Idintha Karai and wearing a skull-and-bones antinuclear T-shirt. "We've seen the earlier tsunami, and this plant is not that safe."

The protesters filed a lawsuit in 2012 to shut down the \$2.74 billion plant. Last year, India's Supreme Court said the plant could proceed but instructed the government to ensure public safety before it starts running.

The fight over the plant echoes wider debates over how authorities should treat low-lying areas after disasters. Japan shut down its nuclear plants after the 2011 tsunami and has yet to restart them.

In India, the 2004 tsunami flooded hundreds of miles of coastline, sweeping away villages and killing about 16,000. Some homes and communities remain abandoned, while others have rebuilt.

But few places have debated the risks of coastal development more than the area just up the coast from Kudankulam, where the village of Idintha Karai

was devastated by the waves.

Sitting under the eaves of a century-old Catholic church in the village center, Father Jaya Kumar described the moment. It was “a massive, massive wave,” he said. “I was asking the people to run.”



At the time, work on Kudankulam, which sits directly on the shoreline, had only just begun. But the 2004 tsunami forced another coastal Indian plant, at Kalpakkam some 400 miles or 640 kilometers, up the coast, to automatically shut down after the waves overwhelmed cooling-water intakes, a government official said. The tsunami claimed the lives of 25 people living nearby, he said, but the plant’s safeguards worked as designed.

Now, as Kudankulam nears commercial operation, it is “a model plant” with “very advanced safety features,” said Swapnesh Kumar Malhotra of India’s

Department of Atomic Energy. It has a shore protection wall that rises about 8 meters above mean sea level, according to government documents—above the 2.4-meter level of the 2004 waves at the site, the documents show.

The waves in Japan were higher, but comparisons between the two countries are difficult given the different seismic conditions.

After Fukushima, Mr. Malhotra said, India examined its nuclear plants—there are now 20, some of which have been in operation for decades—and made some changes to safety measures. No changes were found necessary in Kudankulam's design, he said.

India's unreliable electrical grid represents one of the country's biggest obstacles to economic development. Millions of people don't have electricity, and those who do can't count on it working.

According to Mr. Malhotra, by midcentury India wants to be able to generate 5,000 kilowatt-hours of power per person, a year, up from today's 800 kwh. (The equivalent in the U.S. is around 13,000 kwh, he said.) India also wants to tame its import bill for fossil fuels.

Nuclear is the only way for India to get there, he argues. Doing it with coal would require some 50% of the world's supply annually, he said. Mr. Malhotra said India's plan is to tap as much renewable power as possible, including wind and water power, to supply 20% of its electricity by the middle of the century.

At least 25% should be coming from nuclear by then, he said, with the rest mainly from fossil fuels.

Locations near the ocean are seen as particularly desirable because of the need for cooling water.

Protests against Kudankulam continue, especially in Idintha Karai. Opponents to the project gather daily under a thatched-roof shelter in front of the Catholic

church built by Dutch missionaries.

The protests gained momentum after the Fukushima disaster in 2011, said Sundari, one of the protesters, at the church on a recent Friday. Ms. Sundari, who uses only one name, said that until then, “we didn’t know what a nuclear plant is.”

Activists from a few groups have organized marches and protests at sea, in some cases swimming or sailing near the plant. Some protests have drawn 1,000 or more people.

Law-enforcement officials have responded by, among other things, charging 227,000 people—including entire villages—with a variety of crimes including sedition and war against the state, according to a lawyer for the protesters.

The Supreme Court ruling also details some of the charges, including laying “siege through sea.” Many, but not all, of the charges subsequently have been dropped.

S.P. Udayakumar of the People’s Movement Against Nuclear Energy, one of the main activist groups, calls that a “mockery” of the legal system, saying he personally faces 21 charges of sedition for opposing the plant. He called a practice of charging entire communities, rather than named individuals, harassment. “We are not saying that we don’t need electricity, we don’t need development,” he said. “All we say is, the poor people also have to be included in the development scheme.”

A senior local law-enforcement officer declined to comment on the number of people charged, or the charges, but said that filing charges against unnamed groups of people is routine.

“When a mob protests, it’s not possible to know everybody’s name,” he said.

The law-enforcement official said he expects protesters will eventually accept the power plant in

their community. “When trains came in for the first time, people ran away, saying it’s a ghost,” he said. It is “natural to oppose something new.”

— *Saurabh Chaturvedi in New Delhi contributed to this article.*