

New User? [Register](#) | [Sign In](#) | [Help](#)

YAHOO! NEWS

[HOME](#) [U.S.](#) [BUSINESS](#) [WORLD](#) [ENTERTAINMENT](#) [SPORTS](#) [TECH](#) [POLITICS](#) [SCIENCE](#)

[Science Video](#) [Weather News](#) [Space & Astronomy](#) [Animals & Pets](#) [Dinosaurs & Fossils](#) [Biotech](#) [Er](#)



YAHOO! WEATHER: Check the latest forecast in your area

For battered Japan, a new threat: nuclear meltdown

AP Associated Press

Share **26K** retweet **1116** [Email](#) [Print](#)



AP – Raw video: Smoke pours from Japan nuclear plant



Slideshow: [Huge Japan quake spawns tsunami](#)



Video: [Americans Waiting for Word](#) ABC News



Video: [Explosion at nuclear plant in Japan](#) Reuters

AP – Minamisanriku town is submerged after Friday's strong earthquake-triggered tsunami in Miyagi prefecture, ...

By ERIC TALMADGE and YURI KAGEYAMA, Associated Press – 1 hr 35 mins ago

IWAKI, Japan – An explosion at a nuclear power plant on Japan's devastated coast destroyed a building Saturday and made leaking radiation, or even outright meltdown, the central threat menacing a nation just beginning to grasp the scale of a catastrophic earthquake and tsunami.

The Japanese government said radiation emanating from the plant appeared to have decreased after the blast, which produced an intensifying cloud of white smoke that swallowed the complex. But authorities did not say why, and the precise cause of the explosion and the extent of the ongoing danger were not clear.

Japan dealt with the nuclear threat as it struggled to determine the scope of the earthquake, the most powerful in its recorded history, and the tsunami that ravaged its northeast Friday with breathtaking speed and power. The official count of the dead was 686, but the government said the figure could far exceed 1,000.

Teams searched for the missing along hundreds of miles of the Japanese coast, and thousands of hungry survivors huddled in darkened emergency centers that were cut off from rescuers and aid. At least a million households had gone without water since the quake struck. Large areas of the countryside were surrounded by water and unreachable.

The explosion at the nuclear plant, Fukushima Dai-ichi, 170 miles northeast of Tokyo, appeared to be a consequence of steps taken to



prevent a meltdown after the quake and tsunami knocked out power to the plant, crippling the system used to cool fuel rods there.

The blast destroyed the building housing the reactor, but not the reactor itself, which is enveloped by stainless steel 6 inches thick.

Inside that superheated steel vessel, water being poured over the fuel rods to cool them formed hydrogen. When officials released some of the hydrogen gas to relieve pressure inside the reactor, the hydrogen apparently reacted with oxygen, either in the air or the cooling water, and caused the explosion.

"They are working furiously to find a solution to cool the core," said Mark Hibbs, a senior associate at the Nuclear Policy Program for the Carnegie Endowment for International Peace.

Click image to see photos of tsunami, quake damage



AP/Kyodo News

Nuclear agency officials said Japan was injecting sea water into the core — an indication, Hibbs said, of "how serious the problem is and how the Japanese had to resort to unusual and improvised solutions to cool the reactor core."

Officials declined to say what the temperature was inside the troubled reactor, Unit 1. At 2,200 degrees Fahrenheit, the zirconium casings of the fuel rods can react with the cooling water and create hydrogen. At 4,000 degrees, the uranium fuel pellets inside the rods start to melt, the beginning of a meltdown.

Chief Cabinet Secretary Yukio Edano said radiation around the plant had fallen, not risen, after the blast. Virtually any increase in dispersed radiation can raise the risk of cancer, and authorities were planning to distribute iodine, which helps protect against thyroid cancer. Authorities urged people within 12 miles of the reactor to leave.

It was the first time Japan had confronted the threat of a significant spread of radiation since the greatest nightmare in its history, a catastrophe exponentially worse: the 1945 atomic bombings of Hiroshima and Nagasaki by the United States, which resulted in more than 200,000 deaths from the explosions, fallout and radiation sickness.

Officials have said that radiation levels at Fukushima were elevated before the blast: At one point, the plant was releasing each hour the amount of radiation a person normally absorbs from the environment each year.

The Japanese utility that runs the plant said four workers suffered fractures and bruises and were being treated at a hospital.

As Japan entered its second night since the magnitude-8.9 quake, there were grim signs that the death toll could soar. One report said no one could find four whole trains. Others said 9,500 people in one coastal town were unaccounted for and that at least 200 bodies had washed ashore elsewhere.

The government said 642 people were missing and 1,426 injured.

Atsushi Ito, an official in Miyagi prefecture, among the worst hit states, could not confirm the figures, noting that with so little access to the area, thousands of people in scores of towns could not yet be reached.

"Our estimates based on reported cases alone suggest that more than 1,000 people have lost their lives in the disaster," Edano said. "Unfortunately, the actual damage could far exceed that number considering the difficulty assessing the full extent of damage."

Japan, among the most technologically advanced countries in the world, is well-prepared for earthquakes. Its buildings are made to withstand strong jolts — even Friday's, the strongest in Japan since official records began in the late 1800s. The tsunami that followed was beyond human control.

With waves 23 feet high and the speed of a jumbo jet, it raced inland as far as six miles, swallowing homes, cars, trees, people and anything else in its path.

"The tsunami was unbelievably fast," said Koichi Takairin, a 34-year-old truck driver who was inside his sturdy, four-ton rig when the wave hit the port town of Sendai. "Smaller cars were being swept around me. All I could do was sit in my truck."

His rig ruined, he joined the steady flow of survivors who walked along the road away from the sea and back into the city Saturday.

Smashed cars and small airplanes were jumbled against buildings near the local airport, several miles from the shore. Felled trees and wooden debris lay everywhere as rescue workers in boats nosed through murky waters and around flooded structures.

The tsunami set off warnings across the Pacific Ocean, and waves sent boats crashing into one another and demolished docs on the U.S. West Coast. In Crescent City, Calif., near the Oregon state line, one person was swept out to sea and had not been found Saturday.

In Japan early Sunday, firefighters had yet to contain a large blaze at the Cosmo Oil refinery in the city of Ichihara. Four million households remained without power. The Russian news agency RIA Novosti reported that Japan had asked for additional energy supplies from Russia.

Prime Minister Naoto Kan said 50,000 troops had joined the rescue and recovery efforts, helped by boats and helicopters. Dozens of countries offered to pitch in. President Barack Obama said one American aircraft carrier was already off Japan and a second on its way.

Aid had just begun to trickle into many areas. More than 215,000 people were living in 1,350 temporary shelters in five prefectures, the Japanese national police agency said.

"All we have to eat are biscuits and rice balls," said Noboru Uehara, 24, a delivery truck driver who was wrapped in a blanket against the cold at a shelter in Iwake. "I'm worried that we will run out of food."

The transport ministry said all highways from Tokyo leading to quake-stricken areas were closed, except for emergency vehicles. Mobile communications were spotty and calls to the devastated areas were going unanswered.

One hospital in Miyagi prefecture was seen surrounded by water, and the staff had painted "SOS," in English, on its rooftop and were waving white flags.

Around the nuclear plant, where 51,000 people had previously been urged to leave, others struggled to get away.

"Everyone wants to get out of the town. But the roads are terrible," said Reiko Takagi, a middle-aged woman, standing outside a taxi company. "It is too dangerous to go anywhere. But we are afraid that winds may change and bring radiation toward us."

Although the government played down fears of radiation leak, Japanese nuclear agency spokesman Shinji Kinjo acknowledged there were still fears of a meltdown — the collapse of a power plant's systems, rendering it unable regulate temperatures and keep the reactor fuel cool.

Yaroslov Shtrombakh, a Russian nuclear expert, said it was unlikely that the Japanese plant would suffer a meltdown like the one in 1986 at Chernobyl, when a reactor exploded and sent a cloud of radiation over much of Europe. That reactor, unlike the reactor at Fukushima, was not housed in a sealed container.

Kageyama reported from Tokyo. Associated Press writers Malcolm J. Foster, Mari Yamaguchi, Tomoko A. Hosaka and Shino Yuasa in Tokyo, Jay Alabaster in Sendai, Sylvia Hui in London, David Nowak in Moscow, and Margie Mason in Hanoi also contributed.

Follow Yahoo! News on [Twitter](#), become a fan on [Facebook](#)

Share **26K** retweet **1116** [Email](#) [Print](#)

Explore Related Content

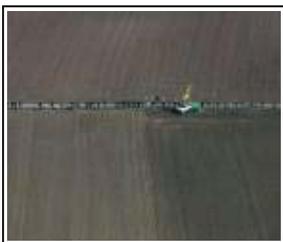


Photo: [Anti-nuclear protesters form a line near ... nuclear power plant](#)



Video: [Nuke protesters: Technology is moving forward, is ... Nuclear energy](#)



Video: [Explosion at nuclear plant in Japan ... Fukushima](#)

Japan warns of meltdown at quake ...

- TOKYO (MarketWatch)
-- Japanese nuclear authorities warned of a meltdown ... [Full Story »](#)
Market Watch

Related

[Factbox: Experts on explosion at Japan nuclear plant](#)
Reuters

More...

Video: [10,000 missing after Japan quake](#) AFP

[Why America Isn't Ready for a Disaster](#) The Daily Beast

Video: [Canadians search for missing family](#) CBC.ca

[Scenes of devastation at heart of Japan disaster](#) AP

Video: [Canadian eyewitness to quake](#) CBC.ca

[Japanese-Americans seek news of quake back home](#) AP

[Japan Tsunami: A First-Person Account](#) The Daily Beast

[Tsunami damage minimal in Latin America](#) AP

[Japan: Officials Monitor Blast at Nuclear Plant North of Tokyo](#) Time.com

[Japan Earthquake: Time Out Tokyo Tweets the Aftermath](#) Time.com

16,204 Comments

Show:

[Post a Comment](#)

Comments 1 - 10 of 16204 [First](#) | [Prev](#) | [Next](#) | [Last](#)

Tokyoresident Fri Mar 11, 2011 12:59 am PST | [Report Abuse](#)

9545 **329**

I just wanted to thank everybody who has posted supportive and kind things. It has actually been a great comfort.

A mother in Tokyo

[Replies \(673\)](#)

Shyshy Fri Mar 11, 2011 01:02 am PST | [Report Abuse](#)

5771 **209**

Its times like this we should all realize were humans, and act like it. Not making racist comments to any race/religion. But to wish this group of people well, health, and a bright future. It doesn't matter whether you are japanese, jewish, persian, african, or european. In times like this everyone needs to help each other out.

[Replies \(86\)](#)

Pacifico Tue Mar 08, 2011 07:15 pm PST | [Report Abuse](#)

5412 **198**

Be well people of Japan!!!

[Replies \(34\)](#)

Roy Tue Dec 21, 2010 03:58 pm PST | [Report Abuse](#)

4010 **147**

To all the earthquake victims: I wish them all WELL!

[Replies \(20\)](#)

ManilaBoy Tue Mar 08, 2011 08:02 pm PST | [Report Abuse](#)

3462 **151**

Hope everyone is SAFE and OK...

[Replies \(35\)](#)

Roma Fri Mar 11, 2011 04:29 am PST | [Report Abuse](#)

1763

89

To all the people that wish bad things to other people of other nations: Your day is on the horizon and I hope when it does come you will remember what you typed on this board.

To the people of Japan we Euro/Americans all wish you the best.

[Replies \(40\)](#)

Mon Nov 29, 2010 10:20 pm PST | [Report Abuse](#)

1994

105

I'm in Tokyo, it lasted quite a long time, the whole restaurant I was in was swaying for at least 60 seconds.

[Replies \(60\)](#)

Tokyo4me Sun Mar 14, 2010 12:52 am PST | [Report Abuse](#)

1299

78

We felt it in Minato-ku. It seemed to last a little longer than typical tremors we feel here in Tokyo area.

[Replies \(27\)](#)

Clareb Fri Mar 11, 2011 02:44 am PST | [Report Abuse](#)

599

39

This is no place for nastiness. Love and Hope to those affected by the earthquake. If you have an agenda...blog, bitches; this is not the place for bad wishes.

[Replies \(10\)](#)

. Fri Mar 11, 2011 08:53 am PST | [Report Abuse](#)

334

20

Even while watching with your own eyes, the devastation happening to our fellow man, the clowns still make jokes. Sad, just sad.

Know this my Japanese brothers, that these cowards are few and do not represent America

[Replies \(15\)](#)

Comments 1 - 10 of 16204 [First](#) | [Prev](#) | [Next](#) | [Last](#)

Post a Comment

[Sign in](#) to post a comment, or [Sign up](#) for a free account.

Most Viewed - Science

Quake is 5th biggest, but Japan best prepared AP

Why Japan's Tsunami Triggered Enormous Whirlpool

LiveScience.com

Japan quake causes day to get a wee bit shorter AP

Mercury visible Sunday as NASA craft approaches AP

Incredibly, 20 Quakes of Magnitude 6.0 or Greater Rock Japan LiveScience.com

[All Most Viewed »](#)

Daily Features

[All Comics »](#)

Opinions & Editorials: Diverse views on news from the right, left, and center.

[All Opinion »](#)



[Home](#) | [U.S.](#) | [Business](#) | [World](#) | [Entertainment](#) | [Sports](#) | [Tech](#) | [Politics](#) | [Science](#) | [Health](#) | [Tr](#)

[Yahoo! News Network](#) [RSS](#) [News Alerts](#) [Weather Alerts](#) [Site Map](#) [Help](#)

Copyright © 2011 The Associated Press. All rights reserved. The information contained in the AP News report may not be published, b authority of The Associated Press.

Copyright © 2011 Yahoo! Inc. All rights reserved. [Questions or Comments](#) [Privacy Policy](#) [About Our Ads](#) [T](#)