



Hazard pay: A worker at the Fukushima No. 1 nuclear complex gets a radiation reading of 114 microsieverts per hour on March 6 near reactor 4, which stands surrounded by cranes next to the concrete foundations for a storage facility for melted fuel rods. | POOL

NATIONAL

Japan urged to send out global SOS over No. 1 plant

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OSAKA - Two years after the March 11, 2011, earthquake and tsunami, the herculean task of decommissioning the Fukushima No. 1 nuclear plant is the subject of growing international involvement, with the International Atomic Energy Agency looking to step up its role.

But even as Tokyo and the IAEA trumpet increased cooperation, other international experts, and many Japanese who distrust claims by the government and Tokyo Electric Power Co. that progress is being made in containing the triple-meltdown crisis, are calling for a broader range of international experts to be brought on board, including those whose views run counter to the claims of government bureaucrats, engineers and medical professionals.

In general, Japan has received high marks from the U.N.'s nuclear watchdog. At a meeting on nuclear safety in Fukushima in December, IAEA members said Japan had made tangible progress in stabilizing the Fukushima No. 1 complex and in decreasing the amount of radioactive discharges. The establishment of the independent Nuclear Regulation Authority in September, which had long been called for by pro- and antinuclear experts abroad, was also welcomed.

In late February, the IAEA announced plans for a multinational mission to decommission the Fukushima No. 1 plant's wrecked reactors, a process that will take decades. Japan is also expected to host an IAEA international expert mission on how to dismantle the facility later this year, but the agency has also called on Tokyo to ensure there is international participation in the cleanup.

"The safe decommissioning (of the reactors) should be undertaken not just by Japan, but should draw on the wisdom of the most advanced technologies from around the world," IAEA Director General Yukiya Amano said. "We will make use of experts involved in the Chernobyl nuclear accident and other incidents."

Critics charge that the IAEA can't have the last word on nuclear safety because its mandate is fundamentally contradictory. On the one hand, it's supposed to monitor nuclear safety worldwide, while on the other, it's also supposed to support nuclear power, which means many antinuclear activists in particular, regardless of their expertise, may not get heard.

But the bigger problem, experts say, is that Japan itself is not tapping the advice of a wide body of international expertise outside the IAEA on everything from decommissioning to disposing of nuclear waste and monitoring the health effects of radiation.

As a result, certain questions don't get asked.

"There are some bilateral cooperation activities that are heavily biased by the specific interests of the assisting states. But nothing, absolutely nothing, is visible that would resemble a concerted international effort to solve the unprecedented problems at the Fukushima site," said Mycle Schneider, a Paris-based consultant on energy and nuclear policy who has advised the IAEA and several European governments, and who has called for the broadest possible range of international experts and global assistance to monitor the Fukushima disaster long term.

Cooperation from the U.S. government, industry and nuclear experts on a host of technical and environmental issues related to the Fukushima plant has greatly increased since it experienced three core meltdowns in March 2011. Three U.S. experts, Robert Sindelar from the U.S. Department of Energy; Mark Triplett from Pacific Northwest National Laboratory (PNNL), a government research laboratory; and Sang Don Lee of the National Homeland Security Research Center, traveled to Japan in early February and will stay until the end of this month.

In addition, Tepco officials visited the Savannah River National Laboratory earlier this year to learn about waste management technologies that can be used in the Fukushima cleanup. Japanese-U.S. cooperation in this area is expected to expand further, especially as cleaning up and decommissioning the plant is expected to take decades. Besides the United States, French nuclear company Areva has worked with Japan on dealing with the radioactive water inside the damaged reactor buildings.

But in Schneider's view, such efforts are too narrow. The unprecedented scale of the disaster, he says, means Japan needs to seek all the expert advice it can get, from a wide variety of countries and from those who are not just nuclear engineers but have expertise in several technical fields.

"The most immediate and largest threats are probably still stemming from the spent-fuel pools of the four crippled reactors at Fukushima No. 1. Tepco's affirmation that there is no damage to the fuel assemblies seems to be more of an optimistic guess, rather than a certainty," he said.

Tepco is pumping several cubic meters of water per hour into the damaged reactors to keep them cool. The supply comes mainly from the water that has accumulated in the basements of the units' buildings, and is desalinated and decontaminated before being reinjected into the reactor cores.

"It's meant to be a closed system. But it's obvious that significant quantities of water must have evaporated, or are leaking from the basements to other areas, including into the sea.

"These basements were never constructed to hold radioactive water. And corrosion of the steel reinforcement in concrete walls, especially of the spent-fuel pools, remains another area of concern. Cracks in the concrete could lead to steel corrosion, to significant breaks of the walls and to ever-increasing levels of water leakage," Schneider said.

Tepco has been monitoring some of the sludge. Last month, workers in the reactor 1 building collected water and sediment. Radiation levels on the outside of the container that held the sediment registered 4 millisieverts per hour.

Then there are the concerns over health issues posed by the meltdowns, concerns that often contradict the government's policies. Anand Grover, the U.N. special rapporteur on the right to health, visited Japan in late November, traveling to Fukushima and Miyagi prefectures and meeting with central government and Tepco officials, as well as medical and legal experts, and NGOs.

In a Tokyo news conference at the end of his trip, Grover noted problems in two areas that international critics in and outside Japan, including Schneider, are especially worried about: the way Japan is conducting health surveys and food safety checks.

“(Japan) has undertaken a health management survey. However, it’s limited to the residents of, and visitors to, Fukushima Prefecture at the time of the disaster. They are also limited to thyroid examinations for children, comprehensive health checks, a mental and lifestyle survey, and to a pregnancy survey,” Grover said.

“The scope of the surveys is unfortunately narrow, as they draw on the limited lessons from the Chernobyl accident and ignore epidemiological studies that point to cancer as well as other diseases in low-dosage radiation, even in areas of exposure below 100 millisieverts per year,” he said. “I would urge the government to expand the health survey to all radiation-affected zones.”

The central government also has a long way to go to convince the world, and many Japanese, that the nation’s food is safe. There are calls at home and overseas for long-term independent monitoring and testing of food products. Under one suggestion made by Schneider last year, each product would be tested by a government-certified — but completely independent — laboratory, similar to the Underwriters’ Laboratory that conducts safety testing on technology in the U.S.

From April 2012, the government set some of the world’s strictest limits on radioactive cesium in food, including 10 becquerels per kilogram for drinking water, 50 for milk, 100 for foodstuffs, including dairy products, and 50 for baby food items. One U.S. company, Eden Foods, did its own independent testing in 2011 of Japanese foodstuffs and detected no radiation.

Grover noted that radioactive contamination of food is a long-term issue and commended Japan for reducing the threshold for food safety from 500 to 100 becquerels per kilogram.

“However, individual prefectures have imposed lower threshold levels. Moreover, residents have raised concerns about the enforcement of standards. The government should strengthen food safety in an urgent manner,” he added.

Despite the international calls for Japan to work harder in seeking out all kinds of advice overseas, the international media, antinuclear NGOs, and Japanese individuals and groups pushing for greater global involvement offer numerous reasons for the lack of effort on the part of the government and Tepco to bring in more outside help.

Last autumn, the group Skilled Veterans Corps for Fukushima, which consists of older Japanese nuclear experts who have been pressing Tepco to allow its members to work at the No. 1 complex in order to reduce younger workers’ radiation exposure, traveled to the United States.

Their purpose was to update federal government officials, nuclear experts and civil society organizations on the state of the Fukushima reactors, and to call for more international assistance in cleaning up the Fukushima mess.

But the group told its audiences that the main problems in convincing Japan to accept new offers of international assistance started with the large number of multilayered contracts between subcontractors to traditional heavy industries and Tepco, which can't be controlled.

Buck-passing by Tokyo, a fragmented bureaucracy, communities that have been bribed, and an alliance between central and local government leaders and the businesses involved in the cleanup process are also problems, the group added.

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