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In Nuclear Crisis, Crippling Mistrust

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TOKYO — On the evening of March 12, the Fukushima Daiichi nuclear plant's oldest reactor had suffered a hydrogen explosion and risked a complete meltdown. Prime Minister Naoto Kan asked aides to weigh the risks of injecting seawater into the reactor to cool it down.

At this crucial moment, it became clear that a prime minister who had built his career on suspicion of the collusive ties between Japan's industry and bureaucracy was acting nearly in the dark. He had received a confusing risk analysis from the chief nuclear regulator, a fervently pro-nuclear academic whom aides said Mr. Kan did not trust. He was also wary of the company that operated the plant, given its history of trying to cover up troubles.

Mr. Kan did not know that the plant manager had already begun using seawater. Based on a guess of the mood at the prime minister's office, the company ordered the plant manager to stop.

But the manager did something unthinkable in corporate Japan: he disobeyed the order and secretly continued using seawater, a decision that experts say almost certainly prevented a more serious meltdown and has made him an unlikely hero.

The convoluted drama has exposed the underlying rifts behind Japan's handling of the worst nuclear disaster since Chernobyl, which eventually resulted in explosions at four of the plant's six reactors. Mutually suspicious relations between the prime minister's aides, government bureaucrats and company officials obstructed smooth decision-making.

At the drama's heart was an outsider prime minister who saw the need for quick action but whose well-founded mistrust of a system of alliances between powerful plant operators, compliant bureaucrats and sympathetic politicians deprived him of resources he could have used to make better-informed decisions.

A onetime grass-roots activist, Mr. Kan struggled to manage the nuclear crisis because he felt he could not rely on the very mechanisms established by his predecessors to respond to such a crisis.

Instead, he turned at the beginning only to a handful of close, overwhelmed advisers who knew little about nuclear plants and who barely exchanged information with the plant's operator and nuclear regulators. Struggling to manage a humanitarian disaster caused by the tsunami, Mr. Kan improvised his government's response to the worsening nuclear crisis, seeming to vacillate between personally intervening at the plant and leaving it to the operator, the Tokyo Electric Power Company, known as Tepco.

"There were delays. First of all, we weren't getting accurate information from Tepco," said Kenichi Matsumoto, an adviser to Mr. Kan. But Mr. Matsumoto added that the prime minister's distrust of Tepco and bureaucrats "interfered" with the overall response.

The early disarray alarmed the United States government enough that it increasingly urged the Japanese to take more decisive action, and to be more forthcoming in sharing information. Making matters worse was Mr. Kan's initial reluctance to accept the help of the United States, which offered pump trucks, unmanned **drones** and the advice of American nuclear crisis experts.

"We found ourselves in a downward spiral, which hurt relations with the United States," said Manabu Terada, a lawmaker who served as an aide to Mr. Kan at that time. "We lost credibility with America, and Tepco lost credibility with us."

Lack of Experience

Even some supporters say that Mr. Kan could have moved faster and more decisively if he had used Japan's existing crisis management system.

The system was created in 1986 and subsequently strengthened by Japanese leaders who had sought more power for the prime minister. Modeled on crisis management in the White House — even down to the Situation Room under the prime minister's office — the system brought together bureaucrats from various ministries under the direct command of the prime minister, said Atsuyuki Sassa, the head of the Cabinet Security Affairs Office in the late 1980s.

Critics and supporters alike said Mr. Kan's decision to bypass this system, choosing instead to rely on a small circle of trusted advisers with little experience in handling a crisis of this scale, blocked him from grasping the severity of the disaster sooner. Sometimes those advisers did not even know all the resources available to them.

This includes the existence of a nationwide system of radiation detectors known as the System for Prediction of Environmental Emergency Dose Information, or Speedi. Mr.

Terada and other advisers said they did not learn of the system's existence until March 16, five days into the crisis.

If they had known earlier, they would have seen Speedi's early projections that radiation from the Fukushima plant would be blown northwest, said one critic, Hiroshi Kawauchi, a lawmaker in Mr. Kan's own party. Mr. Kawauchi said that many of the residents around the plant who evacuated went north, on the assumption that winds blew south during winter in that area. That took them directly into the radioactive plume, he said — exposing them to the very radiation that they were fleeing.

Mr. Kawauchi said that when he asked officials at the Ministry of Education, which administers Speedi, why they did not make the information available to the prime minister in those first crucial days, they replied that the prime minister's office had not asked them for it.

"It's more of an emotional thing," Mr. Matsumoto said of Mr. Kan. "He never trusts bureaucrats."

That is a legacy from Mr. Kan's stint as health minister in the mid-1990s, when he became wildly popular after exposing his own ministry's use of blood tainted with H.I.V., which led to hundreds of hemophiliacs dying of AIDS. Mr. Kan found that bureaucrats and pharmaceutical company officials had long known of the tainted blood.

To Mr. Kan, the nuclear establishment — with politically connected utilities abetted by bureaucrats in the Ministry of Economy, Trade and Industry and compliant academics — represented the worst example of this kind of collusion, Mr. Matsumoto said.

Ignoring Orders

The seawater example is telling.

In testimony in Parliament in late May, Mr. Kan said that he asked advisers to weigh the risks that the seawater injection could cause "recriticality," a phenomenon in which nuclear fission resumes in melted nuclear fuel lying on the floor of a storage pool or reactor core. Mr. Kan's aides said they grew worried after Haruki Madarame, the chairman of the Nuclear Safety Commission, a nuclear regulator in the prime minister's office, warned that the chances of this happening were "not zero."

On March 12, about 28 hours after the tsunami struck, Tepco executives had ordered workers to start injecting seawater into Reactor No. 1. But 21 minutes later, they ordered the plant's manager, Masao Yoshida, to suspend the operation. They were relying on an account

by the Tepco liaison to the prime minister, who reported back that he seemed to be against it.

“Well, he said that was the atmosphere or the mood,” Sakae Muto, Tepco’s executive vice president, explained at a news conference.

Mr. Sassa, the former head of the Cabinet Security Affairs Office, said: “Mood? Is this a joke? Making decisions based on mood?” But Mr. Yoshida chose to ignore the order. The injections were the only way left to cool the reactor, and halting them would mean possibly causing an even more severe meltdown and release of radiation, experts said.

Mr. Yoshida had the authority as the plant manager to make the decision, said Junichi Matsumoto, a senior official at Tepco. And indeed, guidelines from the International Atomic Energy Agency specify that technical decisions should be left to plant managers because a timely response is critical, said Sung Key-yong, a nuclear accident expert who participated in the agency’s recent fact-finding mission to Japan.

After revealing in May that he had ignored the order, Mr. Yoshida explained himself to a television reporter by saying that “suspending the seawater could have meant death” for those at the plant.

Mr. Yoshida, 56, according to friends, is a square-jawed, hard-drinking and sometimes rough-talking man who is a straight shooter. A practitioner of kendo in his youth, he also quotes from Raymond Chandler and enjoys cooking Italian food.

“In class, if a teacher didn’t explain something properly, he’d push for an explanation that satisfied him,” said Masanori Baba, a childhood friend.

His candor impressed Mr. Kan, who met him the day after the tsunami when he took a trip on a military helicopter to the plant. They shared a willingness to buck the system, as Mr. Kan had when he uncovered the tainted blood scandal. And, in a country where alumni ties are extremely important, they found they had attended the same college, the Tokyo Institute of Technology.

“One or two days later, Mr. Kan said Mr. Yoshida was the only one he could trust inside Tepco,” Mr. Matsumoto, the adviser to Mr. Kan, said.

Last week, Tepco gave Mr. Yoshida its lightest punishment of a verbal reprimand for defying the order.

Distrust and Distraction

Mr. Kan's critics and supporters alike say his suspicions of Tepco were well-founded. In the early days after the March 11 disaster, Tepco shared only limited information with the prime minister's office, trying instead to play down the risks at the plant, they said.

Tepco declined to make senior executives available for this article. Mr. Matsumoto, the Tepco senior official, said at a news conference that the company had provided information as best as it could. He declined to comment on Mr. Kan's reported lack of trust of Tepco.

Yet the Kan government essentially left the handling of the nuclear crisis in the crucial first three days to Tepco, focusing instead on relief efforts for the hundreds of thousands left homeless, Mr. Terada and other aides said. Then on March 14, the gravity of the plant's situation was revealed by a second explosion, this time at Reactor No. 3, and a startling request that night from Tepco's president, Masataka Shimizu: that Tepco be allowed to withdraw its employees from the plant because it had become too dangerous to remain.

When he heard this, Mr. Kan flew into a rage, said aides and advisers who were present. Abandoning the plant would mean losing control of the four stricken reactors; the next day, explosions occurred at the two remaining active reactors, No. 2 and No. 4.

"This is not a joke," the prime minister yelled, according to the aides.

They said Mr. Kan convened an emergency meeting early on March 15, asking advisers what more could be done to save the reactors. Then he gave Tepco barely two hours' warning that he planned to visit the company.

At 5:30 a.m., Mr. Kan marched into Tepco headquarters and stationed one of his most trusted aides, Goshi Hosono, there to keep tabs on the company.

Mr. Kan gave a five-minute impromptu pep talk, said his aide, Mr. Terada.

"Withdrawing from the plant is out of the question," Mr. Kan told them.

Advisers said the placement of Mr. Hosono in Tepco was a turning point, helping the prime minister to take direct control of damage-control efforts at the plant. "For the first time, we knew what Tepco was debating, and what they knew," said one adviser, who asked not to be identified.

However, even Mr. Kan's supporters acknowledge that the move came too late.

"We should have moved faster," said Masanori Aritomi, a nuclear engineer at the Tokyo Institute of Technology and an adviser to Mr. Kan. Mr. Aritomi said that even with Mr.

Hosono stationed inside Tepco, the company still did not disclose crucial information until mid-May, including final confirmation that three of the plant's four active reactors had melted down.

Strains With an Ally

The poor flow of information and ad hoc decision-making also strained Japan's relationship with the United States, which has about 50,000 military personnel stationed in Japan.

While Japan was quick to accept the American military's offers to help victims of the tsunami, the perception in Washington in the early days, that it was being rebuffed and misled in the unfolding nuclear disaster, had created "a crisis in the United States-Japan alliance," said Akihisa Nagashima, a former vice minister of defense.

Within 48 hours of the earthquake, officials from the United States Nuclear Regulatory Commission arrived in Tokyo, but they were unable to get information or even arrange meetings with Japanese counterparts. Meanwhile, Washington became convinced that Tokyo was understating the damage at the plant, based on readings that the Americans were getting around the plant from aircraft and satellites normally used to monitor North Korean nuclear tests, said one American official, who asked not to be named.

According to this official, the Obama administration made a decision "to lean on the Kan government" to share more information. On March 16, American officials, including the ambassador to Japan, John V. Roos, informed their Japanese counterparts that the United States would advise its citizens to evacuate an area 50 miles around the plant — much larger than the 18-mile voluntary evacuation zone then established by Japan.

The Americans also began voluntary evacuations of nonessential personnel at their bases, and hinted at more drastic steps, even pulling out some essential military personnel, if Tokyo did not share more information, said this American official and Japanese officials, including Mr. Terada.

To show Washington and an increasingly anxious Japanese public that utmost efforts were being made, Mr. Kan deployed military helicopters to drop water into the reactors, Mr. Terada and other Japanese advisers said, adding they knew this would have only a limited effect on cooling them. On March 17, on live television, the helicopters dropped water from the air, though strong winds clearly blew much of the water off course.

Still, Mr. Terada said that Mr. Kan personally called President Obama to tell him the operation was a success. Later that day in Washington, Mr. Obama paid a visit to the

Japanese Embassy to sign a book of condolences — a gesture seen in the prime minister's office as a nod of approval by the American president.

Mr. Nagashima said the American demands to be better informed ultimately improved Japan's own response. On March 20, he brought a proposal to Mr. Kan for a daily meeting between American and Japanese officials to coordinate information and discuss responses to the nuclear accident.

The first such meeting was held a day later at the prime minister's office. Mr. Nagashima said the meetings lasted an hour and a half, and usually involved about 50 people, including officials from the American Nuclear Regulatory Commission, the United States Embassy and the military, as well as a far larger Japanese group made of political leaders, people from five ministries, from nuclear agencies and from Tepco. The meeting was led by Mr. Hosono, who by then had become the prime minister's point man on the nuclear response.

Mr. Nagashima said that even more important was what happened before the Americans arrived: the Japanese met an hour beforehand to discuss developments and to work out what they were going to tell the Americans. Mr. Nagashima said the meeting brought together the various ministries and Tepco, with politicians setting the agenda, for the first time since the crisis began.

"The Japanese side needed to gather everybody in the same room," Mr. Nagashima said. "U.S. irritation became a chance for Japan to improve its disaster management."

Kantaro Suzuki contributed reporting.