

Fukushima: The Japanese prime minister denied crucial information?

Thursday 26 May 2011, by [LEGLU Dominique](#) (Date first published: 21 May 2011).

If the situation weren't so grim, it would have made a very beautiful photo of heads of state taking a very beautiful springtime walk on the very beautiful "Island of Happiness" - which we all know now translates into Japanese as: Fukushima. It was this Saturday indeed that Naoto Kan (Japanese prime minister) received Wen Jibao (Chinese prime minister) and Lee Myung Bak (President of South Korea) in the city of Fukushima, not far from the nuclear plant in ruins. The melted reactor cores are still very, very hot (the molten fuel reaching 2800°C). This will be the case for several months, perhaps even several years [1].

The Kyodo News press agency reports [2] that this two-day trilateral summit in particular seeks "to request China and South Korea to ease import restrictions on Japanese food products" to their territories. With bequerels in their spinach, curies in their ocean and their fish, and more generally the overall carelessness in crisis management to boot, Japan's neighbors are not too pleased. And they have thereby found a way to pressure Japan - formerly the region's economic locomotive - inasmuch as the giant's weakening has not been such a bad thing for them. Indeed, the drop in some Japanese exports, cars and high-tech products has been rather good news for South Korea in recent weeks...

This would be a tangible sign of dialogue, then, that can be imagined in advance to be interpreted to mean - with the cameras rolling - that "things are going better." In fact from a technical standpoint, they are not; but the crippled reactor's problems are invisible to the naked eye and to cameras, cannot be filmed and reviewed, even if the "core" of the problem is still far too radioactive for anyone to get near it. This is one of the major "advantages" to the nuclear accident, at least in appearance: because little or nothing can be seen (see one of the latest videos filmed in the plant on YouTube [3]) it becomes easier to forget.

Powerful neighbors visiting also must bring some pleasant distraction to the Japanese prime minister, who, we are astonished to learn, was not informed about certain crucial data at the disaster's start. Chief Cabinet Secretary Yukio Edano told a press conference: "The Prime Minister's office received a fax of the computer-simulated estimates about the dispersal of radioactive materials [4] in the early hours of the disaster; taking place between the nuclear reactor manager at TEPCO and the plant director, this concerned an issue now considered essential - that of containment enclosure depressurization. One thought depressurization had to happen fast; the other, that they had better wait. The American daily made a point of there being two opposing approaches among operators on this issue - and on how to run a nuclear plant. There are those who prefer to keep the enclosures closed to a maximum (to protect the exterior from any radioactive emissions) and those who think a little radioactivity should be allowed to escape to avoid much greater risks (hydrogen explosions, etc.). Clearly this risk is what happened at Fukushima, in part because the depressurization valves did not function as easily as expected; but it was also because there was no electricity, and because some valves must have remained blocked after the earthquake damaged so much at the start (pipes sheared off, walls destabilized, etc.).

After revelations as incredible as this, others seem banal. This is the case with those made Thursday

by the Japanese public television network NHK [5]: during April the Osaka Prefectural Institute of Public Health discovered radioactive materials (cesium 134 and 137) as far away as Osaka, Japan's third leading city. This is about 550 km west/southwest of Fukushima, much further away from the plant than Tokyo, well beyond Nagoya and even Kyoto. The Institute did nevertheless specify that one year of exposure to the levels found would be "less than one ten-thousandth the amount found occurring naturally," with "no impact on human health." A statement which cannot fail to be challenged; any increase in radioactivity is to be banned, and there is well-known controversy about "very low exposure" to radioactivity and its impact on human health - the impact on chromosomes but also on the proteome, the entire set of proteins expressed in our bodies. We will return to this in detail in another post, after having briefly evoked it during the 5 May Sciences and Avenir chat on Fukushima [6].

To return to this Saturday's encounter between the three great Asian leaders, it is taking place at a time when the AFP news agency has announced "the worst deficit recorded by a Japanese non-financial group." Indeed, the Fukushima plant operator, TEPCO, acknowledges a deficit of €11 billion - and it is losing its head over it: President Masataka Shimizu and Executive Vice President Sakae Muto have resigned and will be gone by the end of May.

Meanwhile, the plant remains in "serious" condition - a term the IAEA (International Atomic Energy Agency) no longer uses on its website. Today the international agency is more detailed and circumspect there in discussing the reactor's condition - which remains very problematic since the cores' fuel has melted. The agency states that Units 1 and 2 are now "subcritical"; there are no more chain reactions. This still cannot be said about Unit 3

[<http://www.slideshare.net/iaea/table-3-unit-3-reactor-fukushima-daiichi-nuclear-power-plant-18-may-2011>] any more than it can about the Unit 4 spent fuel pool [7], where the agency advises to continue injecting borated water (borate slows down neutrons) to reduce the criticality risk.

Difficult to put out this very particular "fire." It takes water, more water, and even more water, all while knowing the cracked containment enclosures cannot retain it.

The result: for example in Unit 1, "4.2 m of highly radioactive water have flooded the basement." At this writing we continue to wonder how long it will take and even whether it is possible to install the "closed circuit" Areva envisions in its decontamination plan (see the Sciences and Avenir website and video referred to in a preceding blogpost [8]).

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Footnotes

[1] It took eight years before it was possible to inspect the approximately 70% melted reactor core with a camera at Three Mile Island (1979 nuclear accident in the United States).

[2] <http://english.kyodonews.jp/news/2011/05/92378.html>

[3] http://www.youtube.com/watch?v=dDpyGy0z_i4&feature=player_embedded

[4] Estimations resulting from SPEEDI (System for Prediction of Environmental Emergency Dose Information) simulation conducted on the Nuclear Safety Technology Center networked computer system. See a reproduction of the simulation in Sciences and Avenir magazine, June 2011 (issue 772), page 13. <http://english.kyodonews.jp/news/2011/05/92206.html>. in the early hours of March 12... but it was not passed on ... to Prime Minister Naoto Kan." In other words, if this proves to be true, the Prime Minister could not have been completely aware of what was happening at the nuclear plant when he flew over the site on the morning of 12 March. Unless everything is laid at the door of it being an extremely confusing situation, we can only observe that the problem of being kept in the dark in Japan occurs even at the very summit of the Japanese State as far as the Fukushima disaster is concerned.

And now the finger-pointing battle begins in who is responsible for the errors in crisis management. A recent *New York Times* article described conflict within TEPCO itself
[[<http://www.nytimes.com/2011/05/18/world/asia/18japan.html?pagewanted=2&r=1>

[5] http://www3.nhk.or.jp/daily/english/19_36.html

[6] http://tchats.sciencesetavenir.fr/nature_environnement/la_crise_nucleaire_au_japon,20110429161150075.html

[7] <http://www.slideshare.net/iaea/table-4-unit-4-reactor-fukushima-daiichi-nuclear-power-plant-18-may-2011>

[8] <http://www.slideshare.net/iaea/table-4-unit-4-reactor-fukushima-daiichi-nuclear-power-plant-18-may-2011>