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[ZOOM](#)

Fukushima: a health disaster in the making.

4956 workers have been internally contaminated by nuclear radiation. However, this figure represents only 10% of the actual number of workers whose internal contamination has been monitored.

A day does not go by without its bad news revealing the magnitude of the environmental and human health disaster. The world is just beginning to realise this reality despite the reassuring tone of the authorities.

Unlike with Chernobyl, the prevaricator Mr. Michael Repacholi (WHO-IAEA) will, this time, not be able to pretend that the loss is negligible and, hence, bury the real number of contaminated liquidator-workers in stacks of statistical numbers. Internet did not exist then (1986, year of the Chernobyl disaster).

The population contaminated by internal nuclear radioactive particles: a taboo.

For the first time and two months after the beginning of the crisis, [The Mainichi Daily News](#) and the [Yomiuri Shimbun](#) published a controversial article on the subject whilst the government would have preferred the information therein to be kept away from the public. The article covers the event of the young and impulsive MP Mito Kakizawa who, in the middle of a parliamentary commission meeting, asked Mr. Terasaka Nonbuaki, the director of the Agency for Nuclear and Industrial Safety, the loaded and very relevant question regarding the number of workers who, following the first medical tests at the headquarters of Fukushima's prefecture, were declared positive [for internal contamination by nuclear particles](#) [[Hirose Takashi](#)].

Mr Nonbuaki's answer was: "There were a total of 4956 workers suffering from irradiation due to internal contamination while being on the sites of the nuclear power plants of the country and 4766 of them are workers from the Fukushima No.1 nuclear power plant. These figures have been gathered during health checks carried out at the prefecture after the beginning of the crisis"

The Yomiuri Shimbun gave details of Mr. Nobuaki's reply which bring an additional and essential information: "**only 10% of the workers were tested for internal irradiation** following an inhalation or ingestion of radioactive substances, the reason being that there were not enough monitoring devices"

The Yomiuri Shimbun also stated that "more and more people working to control the crisis are concerned by the lack of internal irradiation detection tests. Many professionals of the nuclear industry think that they have been contaminated not by inhalation (as they had sophisticated masks) but by the food and drinks consumed at the time. They are, nonetheless, not in the least less worried for their future because this internal irradiation comes in addition to the legal dose that was increased exclusively for the workers of Fukushima Daiichi from 100 to 250 mSv"

[\[Fukushima Radioactive Debris 1.000 mSv/h!\]](#)



Mito Kakizawa, member of parliament



Terasaka Nobuaki, head of the Nuclear and Industrial Safety Agency.

TEPCO has declared that there are only 3 modules for the control of the entire body at the Fukushima Daiichi nuclear station but, because of the high levels of radiation, they could not use them.

The Ministry of Health, Work and Social Affairs has requested TEPCO to conduct more control tests.

TEPCO has responded that it will increase the number of contamination detection devices to 14 and bring the frequency of tests for the workers to one test every three months.

Now that we can look back and have a better understanding of the situation, we can make extrapolations that might well uncover a human disaster of unimaginable proportion.

In fact, if only 10% of the workers in the entire Japanese nuclear industry have been controlled, that figure can only get worse even if proportionally this increase will not be the same amongst other workers elsewhere (outside Fukushima) in the industry.

The contaminated workers might be only the tip of the iceberg. In fact, the real and massive statistical figures regarding the number of contaminated people are yet to come as this disaster affects the entire population who will undoubtedly pay a heavy price for the dithering of the authorities with regard to the evacuation orders of the contaminated zones.

These orders should have been made at once and not with such a shameful delay of several days for the first zone and several weeks for the following ones.

With no protection or safety advice for several days it is possible that several thousand people, or even more, are contaminated yet unaware of their contamination, simply because there was a total lack of control and monitoring of internal contaminations by radioactive particles.

The radionuclide's particles of Fukushima are diverse and noxious, even in the least disastrous case (thyroid) of a contamination by iodine 131 which has a half life of 8 days. All the other contaminants are, undisputedly, highly toxic in the short and middle term.



The measure of the internal radioactive contamination value: The count rate.

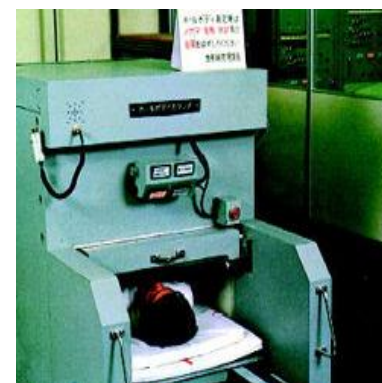
The internal contamination rate is measured and labelled CPM (count per minute). It indicates the rate of disintegration per minute, as measured by a Geiger counter which, in principle, also offers the option of showing automatic conversions from the value of the count rate to an [absorbed dose in mSv/h or \$\mu\$ Sv/h](#) [Fr].

-The normal level ranges from between several hundreds and 1.000 cpm.

- A person is considered contaminated if his or her rate of internal radiation is above 1.500 cpm.

Terasaka Nobuaki director of the nuclear and industrial safety agency has revealed that in the majority of the cases reported at Fukushima, the contamination is 1.500 cpm or above at ΔT and in the case of iodine 131 (radiation γ and electromagnetic radiation β) it decreases rapidly within a few days.

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A photograph shows a whole-body counter.
(Photo courtesy of the
Nuclear and Industrial Safety Agency)

Nobuaki also provided another major piece of information: It has been noted that 1193 workers had levels of internal radioactive contamination above 10.000 cpm corresponding to 100 μ S/h. In other words, 100 multiplied by 24 hours multiplied by 364 days = 873mSv/year!

If the value of the internal contamination is superior to 6.000 cpm decontamination is considered vital.

As they were not able to respect these values in the case of the Fukushima disaster, the Japanese government "on the advice of experts" of the IAEA simply raised the levels from 6.000 cpm to 100.000 cpm!

This decision, in these circumstances, is an admission of failure in the face of reality, but also a health scandal that will have massive consequences for the future of the population, in particular for the sick, children and elderly people etc.

[\[Kyodo News : Traces of radioactive substances detected in water in 9 prefectures\]](#)

[The Mainichi Daily News](#) adds: being aware of the problem and in response to the heavy contamination of a vast zone by radioactive particles, "the governmental health authorities of the county of Fukushima will select babies and persons who have an outdoor activity in order to conduct controls of the value of the internal contamination with control modules for the entire body"

Continuous internal contamination by nuclear particles nearby the source of radioactivity and within unsafe distances is, by far, more dangerous than the risks to an external exposure; it is also this type of contamination that, with time, will increase more and more all over the northern hemisphere.

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Translation : Jacqueline and Michael