

Disaster in Fukushima and 2020 Tokyo Olympics

On March 11th 2011 a severe earthquake struck the Tōhoku region in Japan causing several Tsunami waves which hit the pacific coast of Fukushima, Miyagi, Iwate prefectures causing a power failure at the Fukushima Daiichi Nuclear Power Plant.

As all scientists know, a total outage can lead to a potentially catastrophic incident.

According to their prediction, the cooling system failed and the nucleus core melted down; thus high levels of radiation was spread in the surrounding environment.

According to the report which Japanese government handed in to the International Atomic Energy Agency (IAEA), 1.5×10^{16} Becquerel (equal to 168 times of cesium of Hiroshima nuclear bomb) was released by that accident.

The atomic bomb which was dropped in Hiroshima was just one bomb, and yet had extremely destructive force; the Japanese Government reported that Fukushima's accident released Cesium137 in an amount equal to 168 times the Hiroshima atomic bombs.

The meltdown of cores of unit 1, unit 2 and unit 3 released 7×10^{17} Becquerel equal to 8000 times the quantity of cesium137 spread by the Hiroshima atomic device.

As a consequence radioactivity equal to 168 times of power of the Hiroshima bomb was released in the air and some was poured at sea making a total estimate of almost 1000 Hiroshima bombs radiation to be released in the environment till now.

With Units 1-2-3 containing, before the accident, 8000 times the cesium137 of the Hiroshima bomb , it is safe to believe that a large part of the radioactivity still remains in those damaged Reactors at the Fukushima Nuclear Power Plant.

Tepco (the Tokyo Electric Power Company Holdings) which owns Fukushima Daiichi Nuclear Power Plant, do not know where the now melted cores exactly are at the moment and they still keep to pour huge amounts of water in the area in an effort to cool them off, as it is imperative to prevent the cores from melting further and reduce further radiation release.

The constant watering implies contamination of several hundred tons of water per day and the administration was forced to built over 1000 tanks inside the Plant to keep the contaminated water.

Today the total quantity of contaminated water in those tanks has already exceeded 1 million tons.

In the future , when the tanks clearance will be exceeded, the contaminated water will be poured at sea.

Although the best we could do is to move the melted cores to a safe sealed place, after 7years the administration is neither able to exactly locate the cores nor to determine their actual condition.

Nobody can get near the site to investigate.

Approaching a damaged Nuclear site means exposing any person entrusted with this task to high levels of radioactivity and most probably death.

The government and TEPCO tried to send a robot. The radioactivity is so strong that it interfered with the Robot's IC chip's memories making it useless.

Of all the robots they sent to the site, none has returned.

At the end of January 2017, TEPCO managed to insert a remote control camera, similar to a gastro scope, inside of the pedestal on which the reactor lies and found out that there the core is leaking through a big hole at the reactor's very bottom.

On that occasion they were able to measure 20Sv radioactivity level per hour under the reactor when the maximum threshold for human beings is 8Sv. On the way to the reactor the radiation counter peaked at 539-650 Sv numerous times.

The place with the highest radioactivity levels is not inside the pedestal rather outside, between the pedestal's wall and vessel's wall.

After the accident TEPCO and the government speculated that most cores melted through the reactor and stopped inside pedestal, lying intact at the bottom of the containment vessel.

This would allow recovery of the cores in 30-40 years and storage in another vessels, thus allowing for declaration of full and complete settlement of Fukushima's disasters.

Contrary to their hypothesis the melted cores are not intact at all and are scattering outside of the pedestal, making it impossible to be recovered as envisaged by the authority.

TEPCO and the government then have to change their " Road Map".

Myself, I used to insist that the reactors affected by the disaster be sealed by the use of a "sarcophagus" such as the one used by the former Soviet government following the Chernobyl's disaster, although this is not the ultimate solution as covers do deteriorate and the situation must be monitored for potentially several hundreds to millions of years

The tragedy is still in progress in the area around the Fukushima Daiichi Nuclear Plant.

In the day of the disaster, the Japanese government declared the status of nuclear emergency. All residents were evacuated, starting with the residents in a range of 3km from the Nuclear Plant only to include straight afterwards an area between 10km to 20km. Evacuated procedures were so quick that people were permitted to bring only what was strictly necessary, leaving most personal belongings, their livestock and even their pets behind.

litate is one of the villages in Fukushima Prefecture, lying something 40-50km away from Fukushima Daiichi Nuclear Plant.

Its citizens were informed of the extreme contamination of their village 1 month after the accident and were forced to immediately abandon their village.

At first they have been moved to temporary shelter, then to a small house with one small room for 2 person. In any event they have been isolated from their former community; families were forced to live separately and many could not cope with the situation and collapsed.

Their former life was destroyed and people, out of deep despair, never stop to take their lives..

The whole social structure of a community has been affected along with the concept of happiness in Japanese culture which does not differs from any other culture in the world:

What is happiness?

It implies a lot of simple, yet not granted things, such as living together with their families, friends, neighbors and lovers for the entire duration of their lives.

But in Fukushima their happiness came to an abrupt end as unexpectedly they lost everything they had.

Nuclear fall out affects another vast area around the evacuated zones. This is the so called "Radiation Control Area or RCA."

A RCA is a restricted area where entrance is strictly prohibited except to authorized personnel, generally professionals and nuclear engineers.

No one is permitted to drink, eat, sleep inside the area.

However the Japanese government, allows millions of residents to live in areas that have the same characteristics of the RCA without qualifying these areas as such, in contempt to the formerly applicable law.

The Japanese government justified this deviation from the applicable law on account of emergency conditions.

Such residents include infants and children who are forced to live in a place so contaminated as the RCA and are exposed to an adverse environment on a daily basis

Some families have decided to quit their job and leave Fukushima in order to protect their children from exposure; some others have decided to live separately where the man usually stays and continues to work in Fukushima and his wife with children moved out

Fukushima is a conservative social environment; people respect their traditions and are used to living there from generations to generation.

Such a separation will deeply affect the family structure as they lose their normal life.

They are left with only two painful options; whether they stick to their homes and traditions in a now contaminated country exposing themselves to the risk of damaging their health, or they leave and suffer from leaving the lives they once knew

This people have been living the hardest life ever for the past 7years and probably will, for many years to come.

To add insult to injury since March 2017 the government has started to relocate Fukushima refugees back to their home towns where radioactivity levels are below 20mSv par year; as a consequence any contribution for housing compensation is revoked.

Nowadays reconstruction represents priority one for the Fukushima municipality and people who do not have another choice but to live in Fukushima will probably follow suit with the wishes of the government and will settle and forget that Fukushima still is a dangerous place instead of living their whole lives in fear and anxiousness.

They might even happen to forget radioactive contamination which, luckily or not, is invisible.

The government and local municipality let people to forget in anyway.

It is worth to mention that the Japanese government, after the accident, has reviews the legal limit of radiation exposure by raising it from the former 1mSv/y to 20. It must be said that 20mSv/y was once the set as limit only for experts or scientists who worked with nuclear radiation as I did and was never applied to regular civilians.

Especially infants and children who are more sensitive to radiation and who have no responsibility neither for corrupted politics nor for the Fukushima's nuclear disaster.

The Japanese government keeps on saying that there not much they can do because nuclear emergency condition. It must be said, for the sake of truth, that there has been no official declaration for a nuclear emergency condition on the side of the Government and, even if there were one, an emergency can last for a limited period of time, definitely not for over 7 and half years.

Apparently the government actively promotes oblivion about Fukushima disaster in cooperation with mass media which fail to report about the real contamination's risk and the actual true situation at Fukushima.

Most Japaneses are not aware that Fukushima still is a Nuclear Emergency.

The most harmful element for the environment and health is cesium137; it takes 30years to reduce its quantity by half and after 100 years 10% of it still remains. It is enough to state that 100years from now Japan will still be under Nuclear Emergency Condition.

Olympic has always been used as propaganda to promote people's Nationalism.

Building many huge structures without any prospect of use after the Olympics , is just an appetite for business for construction companies who make huge profit.

I think the Japanese government has to make a huge effort and do its best to solve Fukushima Nuclear Emergency Condition and to save Fukushima's residents who still live in tremendous situations, saving children first if they cannot act simultaneously.

However the Japanese government considers a successful 2020 Tokyo Olympics its most important objective.

They need to organize big event like Olympics for distracting people from other serious problems involving the mass media in raising the "Olympic Fever" making whoever is against 2020 Tokyo Olympics a bad citizen.

During the Second World War the Japanese government spread just convenient information for their propaganda.

Almost Japanese citizen cooperated the government, and "good citizen " accused their "bad citizen " neighbors who were opposed and led them arrested. If my state considers successful 2020 Tokyo Olympics more important objective than to save the innocent citizen, I would prefer to be a "bad citizen"

The truth is that the Fukushima's disaster will last over 100years and, to my utmost surprise, no one has been formally incriminated yet, no TEPCO representative, director, manager, no minister, no politician, no specialists who have caused it.

Nobody has even been accused taken responsibility for the Fukushima's disaster.

To add insult to injury, our government want to restart those old nuclear plants which aren't in operation and have intention to export the nuclear plant's construction to other foreign countries.

The host the Olympic Games in the country under nuclear emergency is absurd and whoever participates takes the risk of being exposed, on the one hand; on the other is an accomplice to criminal conducts, guilty for his silence and denial..

23th August 2018

Hiroaki Koide

Former assistant professor in Research Reactor Institute of Kyoto University

(translated from Japanese to English by Junko KUSUMOTO)