A COMPARISON OF

The CNSC Study (June 4 2014):

Consequences of a Hypothetical Severe Nuclear Accident

and

The Japanese Government's On-Going Radioactive Decontamination Efforts (Sept 2013)

The recently released CNSC study says nothing about the actual deposition of radioactive materials on roofs, walls, gardens, trees, and soil, leading to stubborn radioactive contamination that delivers lingering radioactive exposures to citizens over a very wide area – contamination that lasts years or even decades after the accident, preventing reoccupation of evacuated areas for two years or more, and requiring extensive and expensive decontamination efforts that are only partially successful.

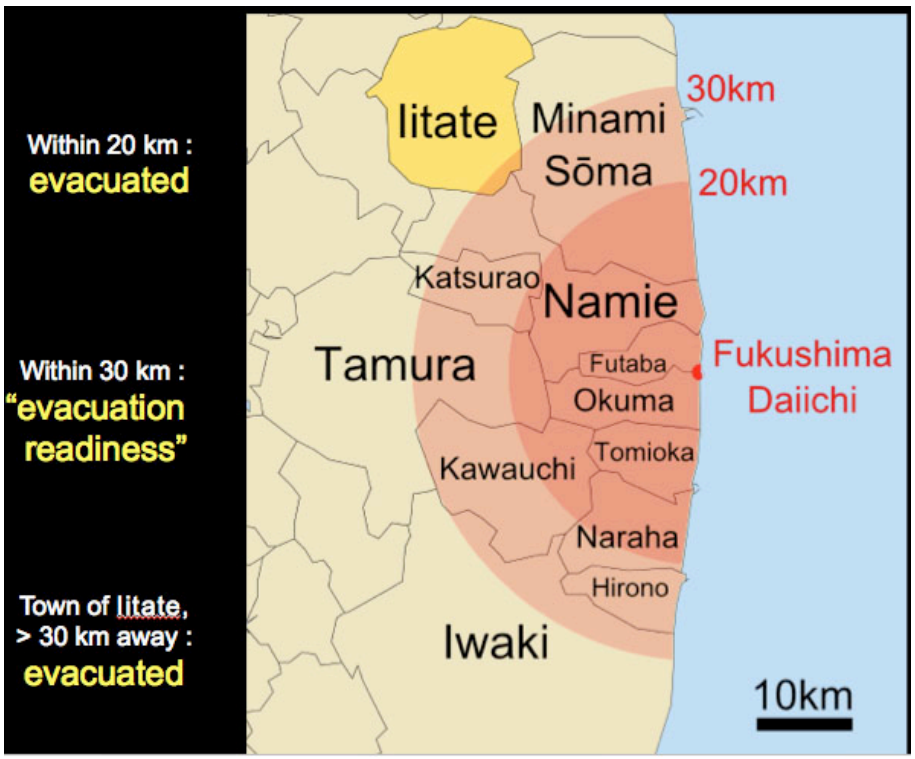
It is also important to bear in mind that every home insurance policy issued in Canada contains a "nuclear exclusion clause" which voids all coverage in the event of such radioactive contamination.

From p.19 of the CNSC Study: *"The variability in wind direction for the longer release scenarios reflects the fact that dose to any fixed location would be affected by changes in wind direction ... the dominant winds in the region blow from the northwest quarter 28 percent of the time, from the west–southwest 10 percent of the time, and 9 percent of the time from the east."*

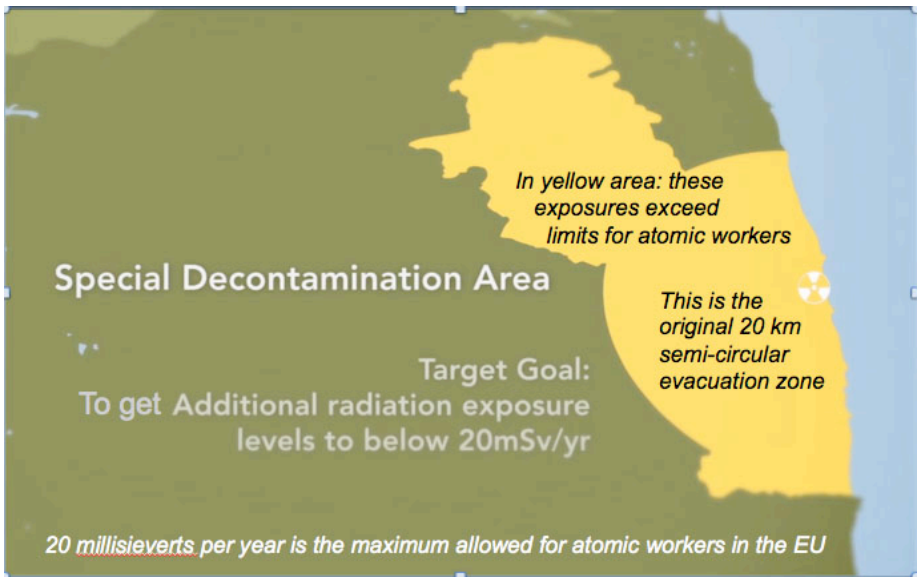
The town of Iitate in Japan, more than 30 km from the Fukushima Dai-ichi nuclear plant, was one of the most contaminated sites and is still under total evacuation three years after the accident. Bearing in mind that Scarborough is only about 40 km from Darlington, and only about 20 km from Pickering, and that the wind blows from the east about 9 percent of the time, the long-term consequences of a severe release could be severely disruptive for many years.

The images below come from a Japanese video presentation posted by the Ministry of Environment (linked below) in September 2013 -- 2 1/2 years after the Fukushima Dai-ichi atmospheric releases.

Here is a graphic showing the original evacuation zone (within 20 km of the plant) and the area between 20km and 30km where people were ordered to be "evacuation ready". However, the town of Iitate -- more than 30km away, NW -- also had to be evacuated and remains evacuated to this day.

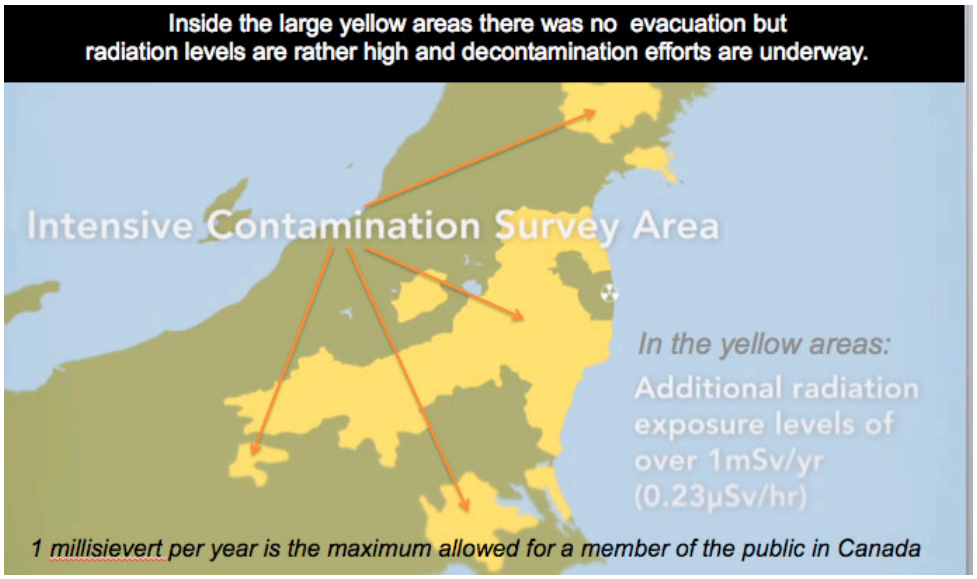


The most heavily contaminated areas include the original 20km evacuation zone and some irregular areas northwest and a bit south of that. In the yellow area, below, the radiation levels (from contamination) are HIGHER than the MAXIMUM exposure allowed for atomic workers in the EU (20 millisieverts per year). More than 2 years after the accident.

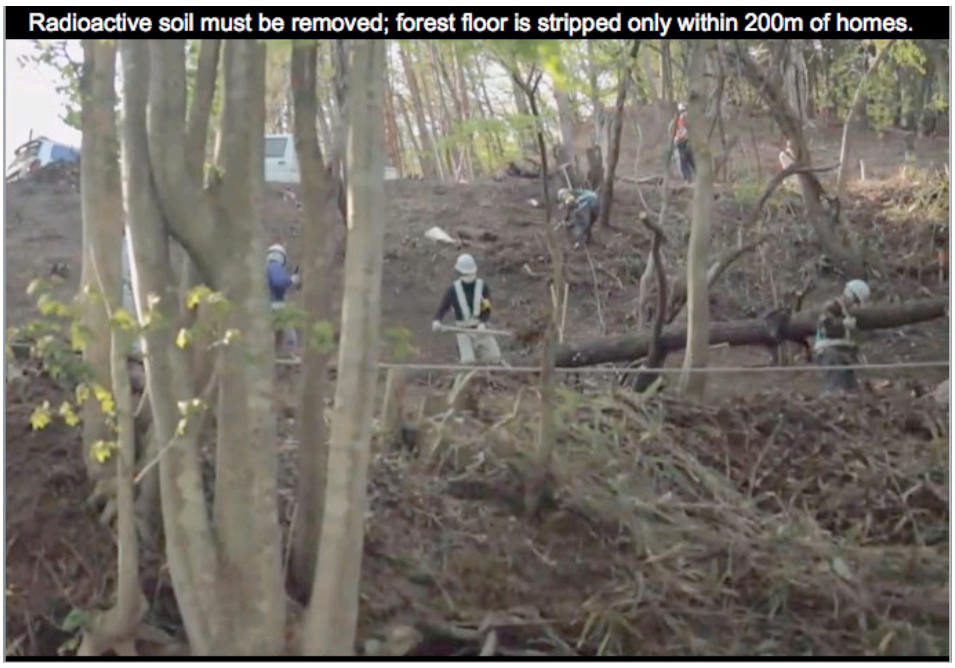


The above graphic has been modified very slightly from a September 2013 video by the Japanese Ministry of Environment -- a link to that video is given below in the post-script. Most of the other graphics are also taken from that video.

In the next graphic, the "Special Decontamination Area" appears as a green patch inside a yellow area where the radiation levels are BELOW the 20 millisievert/year limit for atomic workers but ABOVE the 1 millisievert/year limit for members of the general public. These yellow areas come right up to the outskirts of Tokyo, about 240 km to the south (SSW).



Huge volumes of contaminated soil are dug up and bagged as radioactive waste, including parts of the forest floor within 200 metres of a residence.

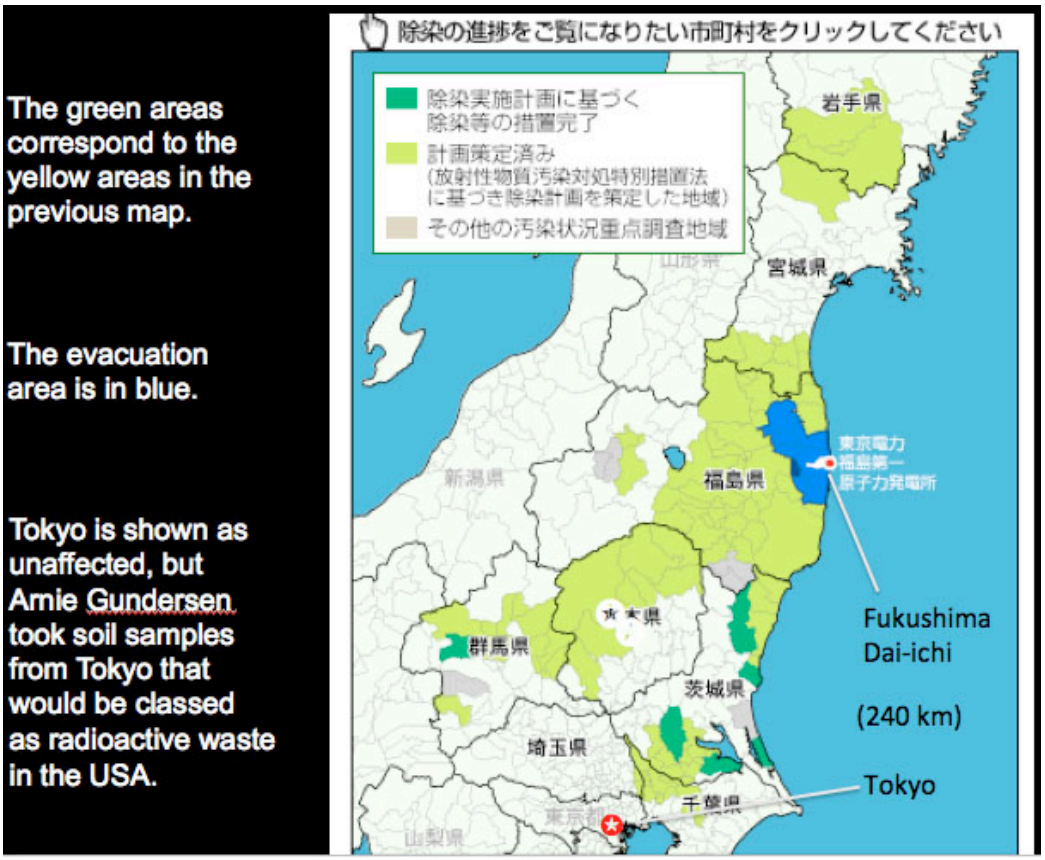


The following caption is taken directly from the government video:

Decontaminating a home takes several days to a few weeks. Contaminated garden soil is dug up and bagged, and replaced with uncontaminated soil. House walls and even garden rocks are scrubbed to try to decontaminate these surfaces, with partial success. The radioactivity is extremely difficult to dislodge from the surfaces where it has "bonded".

Tokyo has in fact been affected by the fallout from Fukushima but the Japanese government does not want to admit this.

Gordon Edwards.

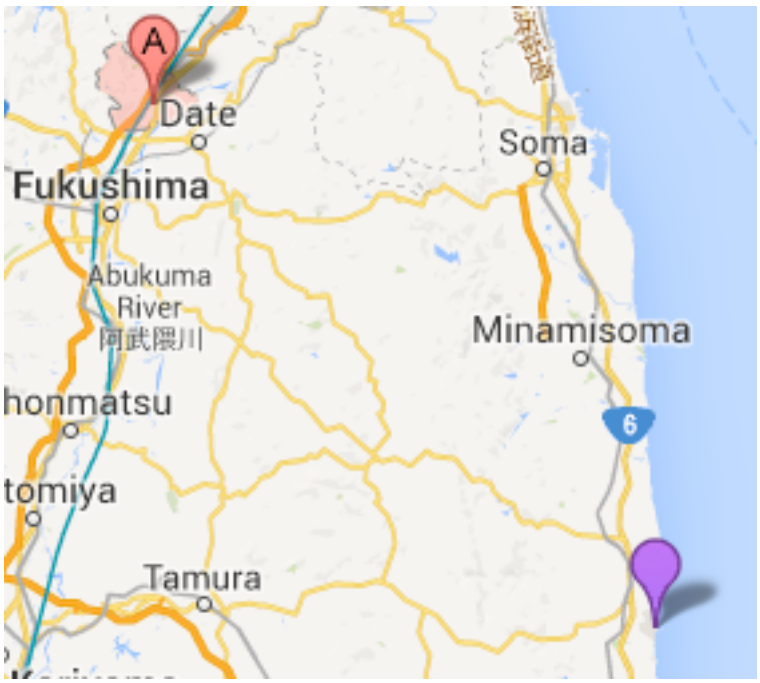


Post-Script:

The 40 minute video from which these images were taken comes from the Ministry of the Environment in Japan. It was put together in September 2013, about 9 months ago. It talks about radioactive decontamination efforts in places such as Fukushima City and the town of Koori, some 65 kilometres away from the reactors in a northwest direction.

Video: http://josen-plaza.env.go.jp/materials_links/index.html#movie131007en

Map: [In this Google map, below, Koori is located at the red marker, a little north and a bit east of Fukushima City; the crippled Fukushima Daiichi reactors are located at the purple marker, about 65 km away.]



As you can see in the video, there are extensive decontamination efforts deemed necessary on a house-by-house basis to reduce the radiation levels. It is remarkable that after 2 1/2 years, only about 1/4 of the homes in Fukushima City had been even partially decontaminated.

All of this decontamination is reasonable and helpful, but only partially effective. I know of several instances where people have been told (e.g. by US government officials or Canadian nuclear authorities) that they could safely return to live in or work in areas that had been successfully decontaminated, without any need for protective clothing or equipment, only to find out later on that the authorities had been wrong and the areas were in fact not safe for the people to re-inhabit or to work without protection. [e.g. exposure of hundreds of workers at Bruce Nuclear Station to inhalation of plutonium dust over a period of several weeks]

The Japanese Government web site where this video was posted is entitled
"Measures for Decontamination of Radioactive Materials
Discharged by TEPCO's Fukushima Daiichi NPS Accident"

Here is the link to the Government site:
http://josen.env.go.jp/en/

G.E.