

The Japanese Government Is Lying to the International Community: the Radiological Situation in and around Fukushima is NOT Safe

Appeal from a Japanese Anti-nuclear Activist

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Nov.29 2017 Revised (Oct.12 2017)

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Special thanks to Mrs Yuko Kato, Mr Ruiwen Song, Ms Nozomi Ishizu, Mrs Kurly Burch, Ms Jennifer Alpern, and Mark Bennett

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Ruiwen Song: Taiwanese freelance journalist

The Japanese government has created foreign language websites which provide the information about radiology in general and the radiological situation in Fukushima. Journalists around the world, our friends and acquaintances living abroad are continually asking us whether the information that these Japanese central and local government websites present to the international community is correct or not. The following is our answer.

[Question 1]

The stories uploaded on these websites give people the impression that worrying about radiation is unnecessary. As for this impression, has Fukushima now really become a safe place to live or visit?

[Answer]

First of all, Japanese anti-nuclear activists and evacuees from contaminated areas in Fukushima and Kanto, have been warning people all over the world NEVER to trust what the Japanese government is saying about both radiology in general and the specific radiological health effects caused by the Fukushima Dai-ichi nuclear power plant disaster (hereafter Fukushima accident) following the Great East Japan

Earthquake and Tsunami on March 11th, 2011.

Prime-minister Shinzo Abe and the Japanese government as a whole including Fukushima prefectural government have repeatedly declared that “with regard to health-related problems (of the Fukushima accident), I (Abe) will state in the most emphatic and unequivocal terms that there have been no problems until now, nor are there any at present, nor will there be in the future.” (Abe’s statement at a news conference). See the Japanese government website below.

http://japan.kantei.go.jp/96_abe/statement/201309/07argentine_naigai_e.html

This claim is completely fabricated and false. In making these claims, the Japanese government is blatantly ignoring the vast number of studies in radiological sciences and epidemiology that have been accumulating historically. By engaging in this behavior, the Japanese government has been systematically deceiving the public, both nationally and internationally.

Just think of the amount of radioactivity released during the Fukushima accident. As you know, one of the standards used to assess the extent of radioactive releases and longtime human health effects is the levels of cesium 137 (Cs137) released into the environment. Based on the Japanese government data (which is an underestimate), the Fukushima accident released 168 times the Cs137 discharged by the atomic bomb dropped on Hiroshima. This amount is almost the equivalent to the total atmospheric nuclear explosions conducted by the United States on the Nevada test ground. The Nevada desert is not designated as a residential area, but the Japanese government has recommended evacuated residents return to live in areas with radiation levels of up to 20 mSv/year. By removing economic support for evacuees, the Japanese government has forced many people who had evacuated from these areas to return.

We estimate that in the Fukushima accident approximately 400-600 times the Cs137 were released into the atmosphere by the atomic bomb blast in Hiroshima. Roughly 20% of the Cs137, or 80-120 Hiroshima-equivalents, were deposited on Japan. Of this, the decontamination efforts have only been able to retrieve five Hiroshima-equivalents. The waste from decontamination efforts is typically stored all over Fukushima mostly in mountainous heaps of large plastic bags. This means that 75-115 Hiroshima-equivalents of Cs137 still remain in Fukushima, surrounding prefectures, and all over Japan.





In addition, the Japanese government is now planning to reuse the retrieved contaminated soil under 8000Bq/kg in public works projects all over Japan. This self-destructive program has now been partially started without any announcements as to where the contaminated soil are and will be reused, under the pretext of “avoiding damage caused by harmful rumors”. This project is tantamount to scattering lethal fallout of Cs137 equivalent to about 5 times that of Hiroshima bomb all over Japan. The Japanese government is literally behaving like a nuclear terrorist.

Do you really imagine that Fukushima prefecture and surrounding areas, contaminated as they are to levels similar to the Nevada test site, is really a safe place for people to permanently live, or for foreign tourists to visit and go sightseeing?

Regrettably, we must conclude that it is not, for either residents or tourists the situation in Fukushima is not safe.

[Question 2]

These websites also point out that the international annual dose limit for the public is at 1mSv, but this level is easily exceeded by only one CT-scan, insinuating that this 1mSv standard is set too low and thus not a useful indicator.

[Answer]

CT-Scans are often cited as if they had no radiation risks, But this is not true. A recent study clearly shows that every CT-scan (about 4.5mSv irradiation) increases the risk of cancers in children by 24%. See the website below.

<http://www.bmj.com/content/346/bmj.f2360>

In Fukushima the allowable level of radiation per year for residents is now 20mSv. Can you imagine having 4-5 CT-scans every year?

[Question 3]

One of the websites states: “In Fukushima, the indoor radiation doses are now so reduced that no radioactive cesium can be found in the air. Therefore, no radioactive particles can invade the human body during breathing.” What do you think of this statement?

[Answer]

The Japanese government also ignores the long term peril caused by “hot particles” —micron-and- nano-sized radioactive particulates—which, if inhaled or absorbed into the human body, may lead to many kinds of cancers and other diseases including cardiac failure. We should consider internal irradiation to the cells near the radiation sources to be 500 times more dangerous than external irradiation because particles inside the body radiates very near or even inside cells, causing intensive damage to DNAs and other cell organs such as mitochondria.

[Question 4]

These websites explain that there exists not only artificial but also natural radioactivity, thus people are living in an environment surrounded by radiation all the time in everyday life.

[Answer]

One of the main tactics that the Japanese government often uses to propagate the “safety of low level irradiation” is to compare artificial radioactivity with natural radioactivity. But this logic is a methodological sleight of hand. It is crystal-clear that even exposure to natural radioactivity has its own health risks. Cancers sickened and killed people long before artificial radioactivity was used. For example, Seishu Hanaoka, one of the founders of Japan’s medicine, carried out 152 breast cancer surgeries from 1804 to 1836.

Both kinds of radioactivity have their own health risks. Risks caused by artificial radioactivity should not be compared but be added to the natural radioactivity risks as they both lead to the accumulation of exposure.

For example, potassium 40 (K40) is a typical natural radioactive nuclide. According to the Japanese government, the average internal exposure dose for adults from K40 is about 4,000Bq/year or 0.17mSv/year. See the website below (in Japanese).

http://www.kantei.go.jp/saigai/pdf/g31_siryoushi.pdf

The ICRP risk model (2007) allows us to estimate the approximate risk posed by K40. The calculation shows that K40 is responsible for approximately 4,000 cancer cases and 1,000 deaths every year. If the same amount of radiation was added to that of K40 in the human body by artificial sources, the cancers and mortalities would be doubled to 8,000 and 2,000 a year, respectively. Based on the ECRR (2010) model, which criticizes the ICRP risk model as a severe underestimate, these figures should be multiplied by 40, reaching 320,000 and 80,000, respectively.

The extract you cite from the Fukushima government website is completely fake: “In Fukushima, the indoor radiation doses are now so reduced that no radioactive cesium can be found in the air. Therefore, no radioactive particles can invade the human body during respiration”. Reports from civic radiation measurement stations refute this claim. For example, dust collecting paper packs of vacuum cleaners used in Iwaki City, Fukushima prefecture, are radiologically measured and 4,800-53,900Bq/kg radioactive cesium was detected in Oct-Dec 2015. See the website below (in Japanese).

<http://www.iwakisokuteishitu.com/pdf/tsushin011.pdf>

[Question 5]

One of the websites says that the Fukushima prefecture has conducted whole-body counter screenings of the 170,000 local population so far but cesium was rarely detected.” Does this mean that we can safely consume food from Fukushima, and Fukushima residents are no longer being exposed internally to radiation?

[Answer]

This is a typical example of demagoguery by the Japanese government: vague expressions lacking specific data, using the words “safe and secure” without clear explanation. In reality, the government has not publicized any data indicating serious irradiation of the population. For example, you mentioned the Fukushima prefectural government website saying that whole-body counter screenings of 170,000 members of the local

population have found radioactive Cs only in very few cases. However, the fact that no specific number is given makes the statement suspicious.

These statistics, more than likely, exclude many firefighters or other municipal employees who, at the time of accident, helped local residents evacuate from a lot of contaminated areas surrounding the defunct Fukushima plant. These people were subjected to serious radiation doses.

Civic groups' efforts for the disclosure of information has recently prompted city officials near the defunct plant to disclose the fact that it conducted whole-body counter check-ups on about 180 firefighters, nurses and municipal employees. According to Koichi Ohyama, a member of the municipal assembly of Minami Soma, the screening conducted in July, 2011, showed almost all of these people tested positive in Cs. The maximum Cs137 dose among the firefighters was as high as 140,000 Bq. This data reveals a part of the reality of irradiation but it is only a tiny part.

[Question 6]

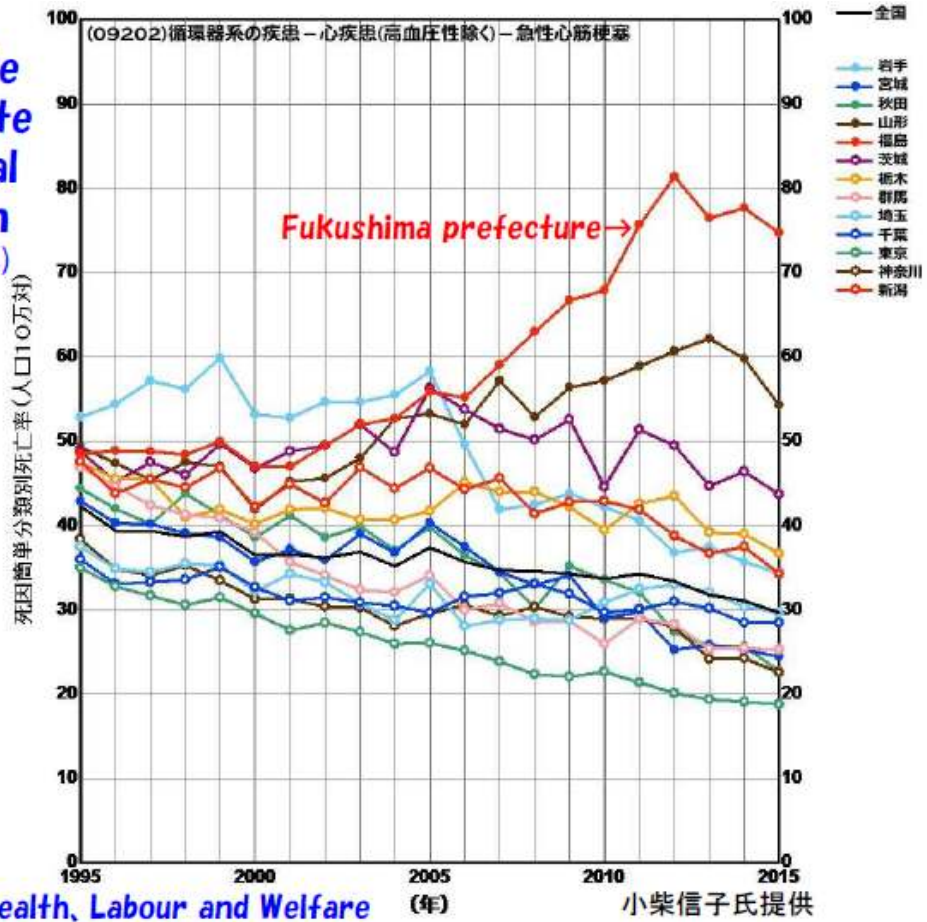
The government websites suggest that no health effects from irradiation have been reported in Fukushima. Is this true? Or have any symptoms appeared that indicate an increase in radiation-induced diseases in Fukushima?

[Answer]

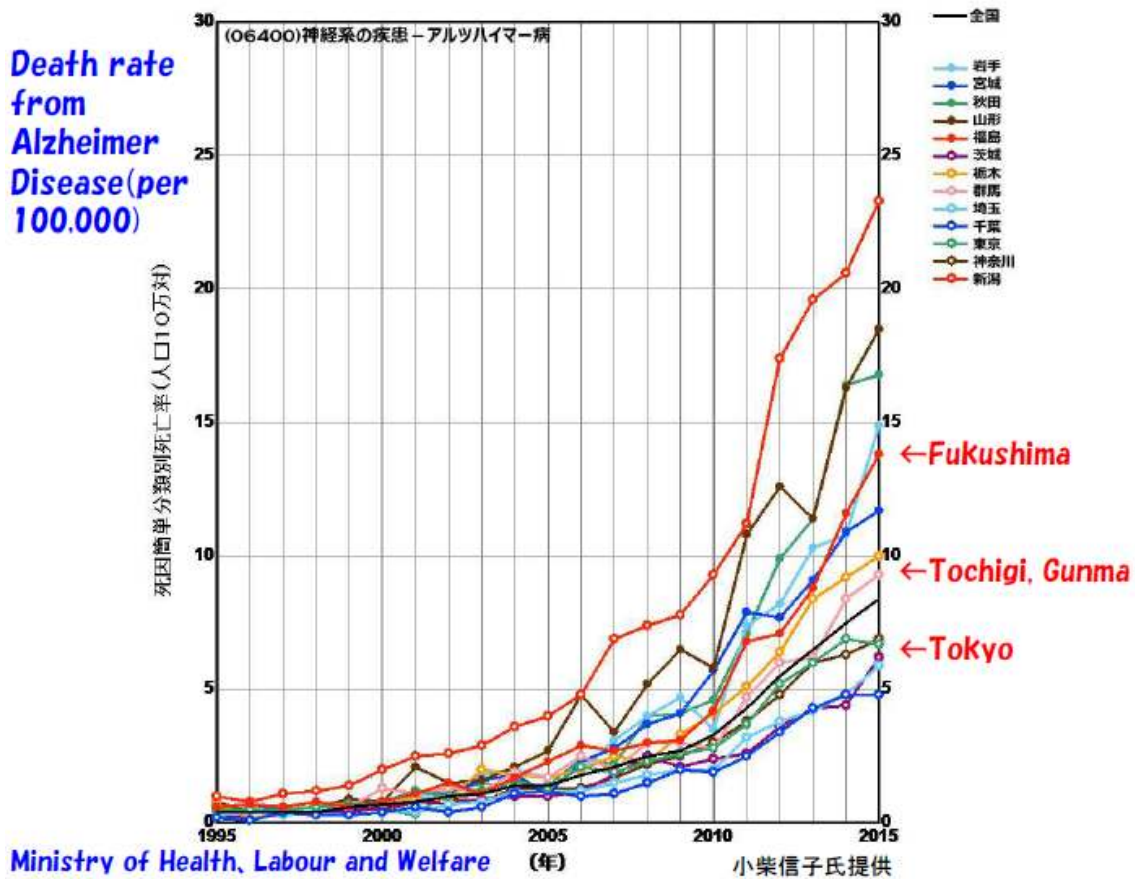
One example is the outbreak of child thyroid cancer, but the Japanese government has been denying the relationship with irradiation from radioactive iodine released from the Fukushima disaster.

Japan's population statistics reflect the health effects from the Fukushima disaster radioactivity. The following data clearly show that diseases increasing in Fukushima are highly likely to have been radiation-induced.

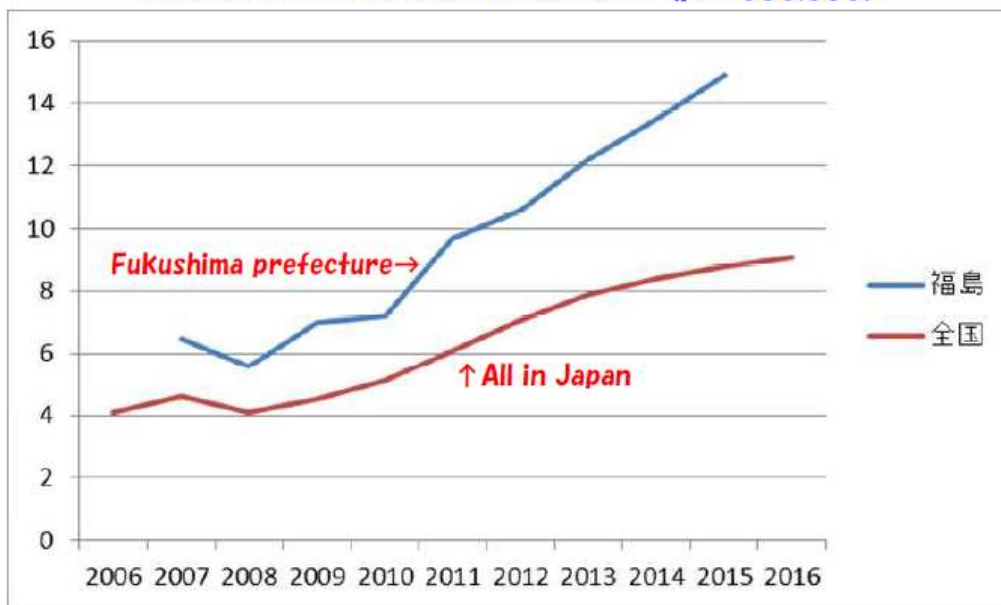
Death rate from Acute Myocardial Infarction (per 100,000)



Ministry of Health, Labour and Welfare

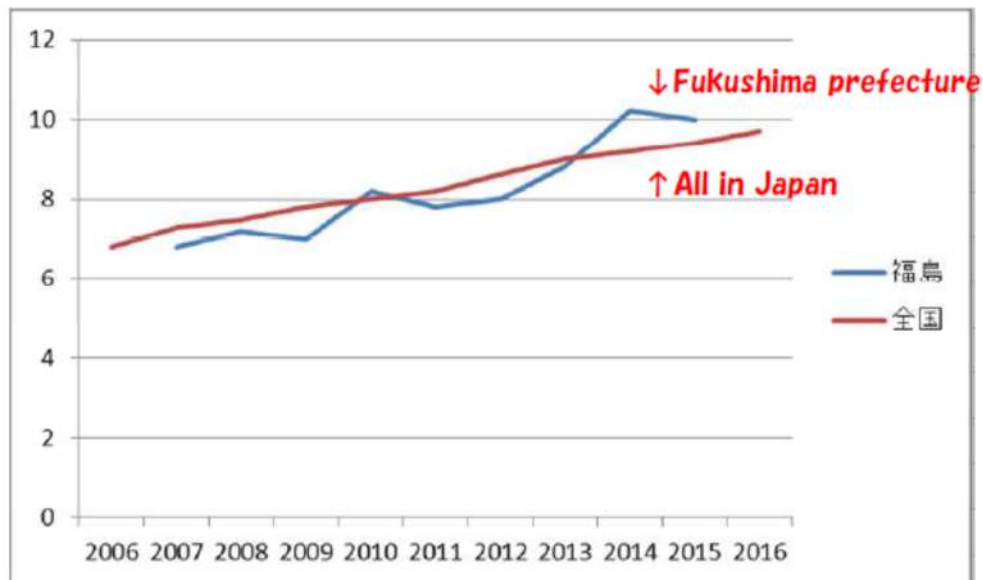


Death rate from Dementia (per 100,000)



遠坂俊一氏提供 Ministry of Health, Labour and Welfare

Death rate from Malignant Lymphoma (per 100,000)



遠坂俊一氏提供 Ministry of Health, Labour and Welfare

[Question 7]

The Fukushima prefecture website says, “After the Fukushima accident, the Japanese government has introduced the provisional standards for radioactive iodine and cesium. The Fukushima prefectural government subsequently strictly regulated distribution and consumption of food with levels of radioactivity exceeding the provisional standards. Now we have had this new much stricter standard. The distribution and consumption of food exceeding this new standard has been continuously regulated; therefore any food on the market is safe to consume.” Is it true?

[Answer]

As for food contamination, the Japanese government has also tried to cover up the real picture. First, the current government standard for radioactivity in food, 100Bq/kg, is dangerously high for human health, especially for fetuses, infants, children and pregnant women. Even six and a half years after the accident, the Agriculture Ministry of Japan as well as many civic radioactivity measurement stations all over the country have reported many food contamination cases, although the frequency is evidently

reduced. See the website below.

<http://en.minnanods.net/>

The Japanese government has underestimated the danger presented by internal irradiation. But, we must consider two important factors. (1) The wide range of difference in personal radio-sensitivity. According to Professor Tadashi Hongyo (Osaka University Medical Faculty), the maximum difference is as wide as 100 times in terms of biological half-life of Cs137. (2) Recent studies denying that the so-called biological half-life decrease curve actually exists. According to the new model, daily food contamination can cause concentrations to accumulate as time passes. Even a daily 1Bq internal radiation dose from food cannot be safe for human health (details below).

Our recommendation is to be cautious of food or produce from Fukushima and the surrounding areas, and, even if contamination levels are said to have now generally decreased, to avoid jumping to the conclusion that all the food is fit to eat.

[Question 8]

We would like to ask about the situations in prefectures surrounding Fukushima. A television program once reported, “As for the safety of Tochigi and Gunma prefectures, few people are raising concern about health effects of radiation.” Is it true that the prefectures somewhat distant from the Fukushima Daiichi plant are now safe with no human risk?

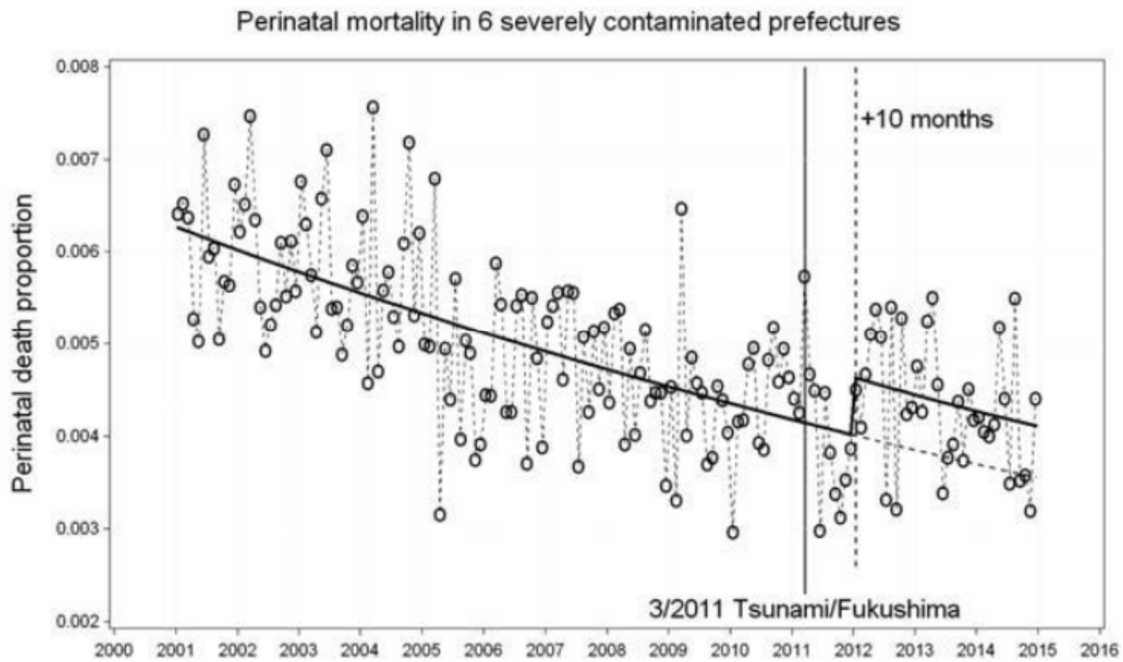
[Answer]

Regarding the radioactive contamination in prefectures surrounding Fukushima, you can refer to the following website.

<http://www.gowest-comewest.net/statement/20170825english.html>

This article examines the contamination in the Tokyo metropolitan area, but conditions are the same or more serious in Tochigi or other prefectures north of Tokyo, nearer to the defunct Fukushima Daiichi plant.

Another example is the statistics of stillbirth and neonatal mortality in Fukushima and the surrounding five prefectures (Tochigi, Gunma, Ibaragi, Miyagi, Iwate) shown below.



<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5044925/>

Perinatal mortality in not only Fukushima prefecture but also neighboring prefectures rose 15.6% just 10 months after the accidents. This clearly indicates the existence of some kind of human health damage from radiation.

[Question 9]

We would like to ask about the decontamination efforts by famers living in Fukushima and neighboring prefectures. Should we think highly of the farmers measuring the amount of radiation deposited on the surface of soil to create radiation maps for farms, or washing the radiation from the surface of every single tree off the radiation with high-pressure washers? The farmers said that while these methods have been shown to be radiologically effective, their produce did not sell well, because consumers are still feeling anxious about health risks. Does the problem of radioactive food contamination in Japan just end up in whether each consumer personally believes it safe or not?

[Answer]

We must raise a question that, despite the government's decontamination efforts, a huge amount of radioactive materials deposited in mountainous areas remain untouched. Now they are re-dispersing and re-depositing over wide areas of Fukushima and surrounding prefectures via winds, cars, trains, river water, pollen, spores,

emissions from incinerators, in the form of radioactive dusts and particulates, among many others. For an example, see the following website.

http://www2.jpgu.org/meeting/2015/PDF2015/M-AG38_all_e.pdf

So I regret to say that, although these farmers' endeavors you mentioned are very precious and respectable, they are not sufficient to completely eliminate the risk of radiation exposure from food. The problem exists objectively in the nuclear materials deposited on and in soil, algae, plants, houses, buildings, forests, animal and human bodies, not subjectively in the consumers' sentiment or psychology.

[Question 10]

Japanese experts have recently pitched a cultivation method that can remove cesium by intensive use of potassium fertilizer. Is this method effective at all? Do you have any doubt about their claims?

[Answer]

They seem to be among those experts who have been criticizing the general public's tendency to demand "zero irradiation risk" as an obstacle to Fukushima reconstruction.

As you know, cesium (Cs) has chemically similar characteristics to potassium (K). So it is true that higher levels of application of potassium fertilizer lowers the plant's absorption, and therefore concentration, of radioactive Cs, decreasing Cs137/134 concentrations in produce, often to below the government standard of 100Bq/kg. But the following problems remain: (1) This procedure can prevent Cs transfer from the soil to produce only partly, not completely; (2) This process raises the potassium concentration in the produce and therefore heightens the burdens on certain human organs such as kidneys, the heart and the nervous system, causing new health risks; (3) Heightened concentration of potassium also leads to the heightened concentration of radioactive K40, so the reduced risk of radioactive Cs lead to an increased risk of internal irradiation by K40.

[Question 11]

Even if cesium concentration was reduced by applying more potassium fertilizer than usual, strontium contamination would remain. In Japanese government's international press campaign as to the Fukushima accident, almost nothing has been said about

strontium. If you have any information on strontium contamination, let us know.

[Answer]

We regret that the information about strontium that you are asking for is very limited and searching for it is also a challenge for us. The Japanese government and research institutes under the government have reported very limited data regarding strontium contamination. But it is important that the Japanese government admits the fact of strontium contamination within 80km from the defunct Fukushima plant. See the website below.

http://radioactivity.nsr.go.jp/ja/contents/6000/5048/24/5600_110930_rev130701.pdf

Did you know that the US Department of Energy data on the strontium contamination of soil in Japan and its visualization (in Japanese) can be seen on the websites below?

<https://energy.gov/downloads/us-doennsa-response-2011-fukushima-incident-data-and-documentation>

<https://news.whitefood.co.jp/%E6%94%BE%E5%B0%84%E8%83%BD%E3%81%A8%E3%81%9F%E3%81%9F%E3%81%8B%E3%81%86%E3%83%96%E3%83%AD%E3%82%B0/1861/>

[Question 12]

Some Japanese experts say, “the Japanese government has declared that no health effects from irradiation below 100mSv (or 100mSv/year) have been confirmed.” Some farmers have established a private food standard of 20Bq/kg, much lower than the Japanese government standard of 100Bq/kg. Do you think that doses under 100mSv or under 20Bq/kg are safe and secure?

[Answer]

As you mentioned, the Japanese government claims that no scientific studies verify that irradiation of 100mSv or less poses a threat to human health, suggesting that irradiation under 100mSv has no risk. This, however, is false. The government is fabricating this information. In fact, very many scientific studies have already confirmed and proven health effects induced by irradiation under 100mSv. For example, see the websites below.

<https://ehp.niehs.nih.gov/1408548/>

<https://www.ncbi.nlm.nih.gov/pubmed/24198200>

<http://www.bmj.com/content/346/bmj.f2360>

<https://www.ncbi.nlm.nih.gov/pubmed/22766784>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3050947/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2696975/>

The Japanese government is using the term “100mSv” in a deliberately ambiguous and confusing manner. The expression 100mSv can have three meanings: (1) a one-time irradiation dose, (2) cumulative irradiation doses, or (3) annual irradiation doses. So 100mSv is not the same as, nor equal to the 100mSv/year that you mentioned in parenthesis. The latter amounts to a 1Sv in cumulative dose over 10 years (which is an up to 10% lethal dose), and 5Sv over 50 years (which is a 50% lethal dose). The present government standard for evacuees to return, 20mSv/year, means that living there for 5 years leads to a cumulative dose of 100mSv, at which the Japanese government admits clear health risks.

Regarding 20Bq/kg as some farmers’ private food standard, it is critical to pay serious attention to the extraction process of Cs from tissues. Japanese-Canadian non-organic biochemist Eiichiro Ochiai points out in his book “*Hiroshima to Fukushima, Biohazards of Radiation*” (2014) that, based on the Leggett model, the Cs concentration injected in tissues at one time diminishes relatively quickly for about 10 days in most tissues. After that, processes slow down, tending to become steady. He writes: the decrease of the overall Cs level in the body does not follow an exponential decay curve (p.83). This means that consecutive intake of Cs, even in very low levels, results in the accumulation of Cs in the body. (Incidentally, Ochiai’s book can be downloaded for free from the website below.)

<https://archive.org/details/HiroshimaToFukushima>

Regarding the Leggett model, see the website below.

<https://www.ncbi.nlm.nih.gov/pubmed/14630424>

Yuri Bandazhevsky considers over 10Bq/kg of radioactive Cs concentrations in the body to be unsafe because even this low level can possibly cause abnormal electrocardiographic pattern in babies, metabolic disorders, high blood pressure, cataracts, and so on.

Therefore, we can conclude unequivocally that neither the irradiation under 100mSv nor the privately set 20Bq/kg food standard are safe and secure.