

The Current State of Food Regulations in Fukushima: Environmental Consequences of the Nuclear Accident

Wednesday, 25 May 2016 15:25 (25 minutes)

The Fukushima Daiichi nuclear disaster caused radioactive contamination in a wide range of Fukushima Prefecture. Because 70% of the land in Fukushima is forest, analyzing the situation in the forests will provide us with an estimation of the conditions of the environment in Fukushima as a whole. Decontamination of the forests is not being carried out, and only 1% of cesium in the forests is estimated to be washed out by rain annually, which gives us a reason to believe that most of the cesium still remains in the forests. In fact, cesium has been detected in animals inhabiting the forests since they have stayed in the contaminated circumstances. Right after the disaster, the Fukushima government started monitoring radioactive substances in the muscles of wild animals in the forests which were used for food. This effort was made to provide information to secure the safety of hunters as well as to remove the anxieties of the citizens. Additionally, the Fukushima Prefectural Centre for Environmental Creation has been examining the change in the amount of cesium in the muscles of wild animals.

A paper published in Germany reports the time series variation of Cs137 concentration in the muscle of roe deer that were living in the forest in Bodenmais for 20 years after the Chernobyl accident. We compared their results with the annual changes in the amount of cesium found in Japanese deer living in the Aizu mountain area (in western Fukushima Prefecture). We believe the comparison is meaningful in that it provides a criterion to compare the environmental contamination of the two regions. The forest in Bodenmais is about 1500 km away from the Chernobyl Nuclear Power Plant, but right after the accident, roe deer muscle had a concentration of over 10,000 Bq/kg. 20 years later, however, the concentration had decreased to 1,000 Bq/kg. The Aizu region, on the other hand, is 100 km away from the Fukushima Daiichi Nuclear Power Plant. Right after the accident, there were some Japanese deer that had a concentration of about 300 Bq/kg in their muscle, but now (4 years later) no Japanese deer has been found with a cesium concentration over 100 Bq/kg. Based on these data, it is conceivable that the radioactive contamination level in Fukushima is much lower than that in Europe.

Four years have passed since the nuclear accident. Currently, the state of food regulations in Fukushima is as follows. Fukushima Prefecture produces various kinds of agricultural crops, including rice, and fruit such as peaches. Immediately after the accident, since rice is a staple of the Japanese diet, the prefecture decided that all rice should be examined for radioactivity. Every year, ten million bags of rice (each bag containing 30 kg) are harvested and sold on the market. According to the results of the examination, only 71 out of the ten million bags were found to be contaminated with 100 Bq/kg of cesium or more in 2012, 28 bags in 2013, and two bags in 2014. We believe that we decreased the amount of cesium in food on the market to a great degree by such measures as spreading potassium during the growing period of rice to inhibit it from absorbing cesium.

For the first time after the disaster in November, 2015, the EU revised the regulations of food imports from the North-Eastern region of Japan. However, the import of some agricultural products, such as rice, is still prohibited.

Fukushima Prefecture has been actively conceiving ways to improve the safety of agricultural crops on the market and has been observing the situation. As a result, the food sold on the market adequately meets international safety standards. In the presentation, the current state will be reported based on the data.

**Type "YES" to confirm submission of required
 Forms A and B via the official channels**

yes

Primary author: Mr TSUNOYAMA, Shigeaki (Director)

Presenter: Mr TSUNOYAMA, Shigeaki (Director)

Session Classification: Session 4B - 3

Track Classification: Technical and Technological Aspects of Implementing Environmental Remediation Programmes