

Messages from FUKUSHIMA for the CBD/COP 11

Venue: R.1.05 Level 1

Date: 18:15-19:45, 11 October

Hiroshi HASEGAWA “What is going on with organic agriculture and biodiversity in Fukushima? ”

After the great earthquake in 11 March, 2011, Tokyo Electricity Power Company's Fukushima Daiichi Nuclear Power Plants (FDNPP) caused the worst radioactivity contaminations to Fukushima prefecture. One hundred sixty thousand people are still evacuated. The concentrations of total cesium (Cs-134+Cs-137) in soils range from below 10 K becquerel (Bq) m⁻² to 3 M Bq m⁻². The areas of Cs-137 concentration below 300 K Bq m⁻² correspond to 1-5 m Sievert (Sv) per year in radiation and people are allowed to live. More than 1.9 M peoples still live in Fukushima. Vegetables grown in March, 2011 were contaminated with I-131, Cs-134 and Cs-137 that deposited directly on the leaves. After summer of 2011, I-131 disappeared due to a half life of 8 days, and little Cs-134 and Cs-137 were taken up by plant roots. According to the data of Citizens' Radioactivity Measuring Station, the concentrations of total Cs in vegetables are mostly below 20 Bq/kg, and those of potato, sweet potato and taro are below 100 Bq/kg with one exception. Eighty % of rice samples is below 20 Bq/kg in the concentrations of total Cs. Why are total Cs concentrations of the produce so low? Possible mechanisms include sufficient K concentrations in soils and the fact that most of farmers cultivated in spring of 2011, resulted in the adsorption and fixation of Cs in soils. Scientists are testing these hypotheses this year, but this is a miracle for famers in Fukushima. If the produce of Fukushima had been heavily contaminated with Cs, farmers could not have stayed faming and would have been evacuated outside Fukushima. Human bodies are proven hardly contaminated with Cs with a whole body counter. However, deciduous forests and cedar forests are heavily contaminated, wild bores and earthworms, too. Direct effects of radioactivity on wild life are uncertain, and need to be investigated more in detail. However, an indirect effect of uncultivated rice paddy on aquatic life such as dragonflies, frogs, and Japanese rice fish are evident. Rice paddy is artificial wetland and without efforts of farmers aquatic life cannot survive. Swallows and sparrows also rely on rice paddy.

The fact that the electricity generated by FDNPP goes to Tokyo, but is not used in Fukushima reflects a highly centralized nation. That is, not only electricity but also water, food and manpower go to Tokyo, while the number of farmers in national population is only 2.5 % and keeps reducing. More than 85 % of farmers are 50' s and older. Japan imports more than half of food, less than half produced domestically. Given that food security in the 21st century is quite uncertain and biodiversity in rural landscape must be conserved, I recommend that much more citizens should engage in agriculture from profession to allotment. To do so, more than half of people need to live rural areas and the highly centralized nation needs to be reformed into decentralized one: rebuilding local economy. We should notice we cannot live without the land and agricultural landscape and are inseparable from them. (身土不二)

Akihiro ASAMI “ Why I stay organic farming in Fukushima?”

I am an organic farmer. My farm is located in a mountainous region of the Aizu district, Fukushima prefecture, 110 km from the Fukushima Daiichi Nuclear Power Plants (FDNPP). The contaminations of radioactive Cs in the soils range 20,000–30,000 Bq m⁻². We believed the convenience made us happy and wealthy, but forgot to imagine risks and costs of convenience and were indifferent to nuclear power plants. No preparations were made against a nuclear disaster. The government also gave us insufficient and incorrect information. At the beginning of the accident, the inhabitants within 20 km from FDNPP were ordered to evacuate immediately, but no reason was explained to them. Despite of hydrogen explosions and melt-downs of nuclear fuels, the government repeatedly told us still safe. On the contrary, the government hid the early contamination mapping such as SPEEDY from us. Gradually, we could not trust information from the government. Radioactivity has no smell, no taste and no color. I wanted to know the contamination data of my farmland strongly, because the seeding time of rice was coming soon (spring, 2011). But it was difficult because few GM-counter and survey meter were available. My job is to keep the soil, water, family and my customers safe through organic farming. I was proud of being an organic farmer. However, the terrible radioactivity contamination in the history occurred on my farm too. I did not know if I was forgiven to continue agriculture on this land like before the accident. The government allowed us farming except for the evacuation zones. Most of farmers stayed farming in 2011. However, perceptions and fears to radioactivity differ greatly among family members, friends and farmers and

consumers. For example, grandparents and grandchildren living together ate different meals. Grandparents ate local produce whereas grand children ate non-local one because their parents feared radioactivity contaminations. Markets made the produce of Fukushima cheaper than the others. Within my family, my wife evacuated our two elementary-school daughters to Nagano prefecture that is 300 km from FDNPP while I stayed farming in Fukushima. The radioactivity contaminations destroyed not only the land and agricultural landscape but also our pride and relationships.

Our mountainous region produced mushrooms, firewood, woodchip, but they will cease. Even before the nuclear accident, farmers were aging and the local community was shrinking. The nuclear accident deteriorates the trends. Japan has a humid and hot summer. Maintaining irrigation ditches and weeding and cleaning community, for example, cannot be maintained. I was a new farmer who started organic farming 16 years ago. Since 12 years ago, I helped volunteers involved in maintaining an old irrigation ditch that was built 260 years ago.

Farmers are a part of the land. Our agricultural landscape is rich in forests, and irrigation water was clean and drinkable. We were about to lose important properties from nature. Because of the nuclear accident, we should change the direction. I want to strongly tell that agriculture and nuclear power are incompatible. Once an accident occurs, many people will be victimized. Precious rice paddy will be uncultivated and biodiversity will be lost. Because of the nuclear accident, I will make a new relationship with consumers and rural landscape.