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A Lesson from the Fukushima Nuclear Accident□□福島原発事故の教訓

Yuki Tanaka

Between 2012 and 2014 we posted a number of articles on contemporary affairs without giving them volume and issue numbers or dates. Often the date can be determined from internal evidence in the article, but sometimes not. We have decided retrospectively to list all of them as Volume 10, Issue 54 with a date of 2012 with the understanding that all were published between 2012 and 2014.

Yuki Tanaka

At 3:36 pm on March 12, 2011, the day after the mega earthquake and tsunami hit northeast Honshu, Japan's main island, the No.1 reactor building of the Fukushima No.1 Power Plant exploded. Soon after, an order for 77,000 residents from 28,000 households within 20 km of the power plant was issued, instructing people to evacuate to areas outside a 20km zone around the plant. However, this official command was never received, as the electricity and all communication lines, including telephone and internet, had been cut by the earthquake. Nevertheless, rumor spread quickly that the radiation emitted by the explosion was so deadly that it would kill everyone in the vicinity unless they escaped immediately.

Many people from within the 20 km zone, as well as vast numbers of residents from outside the area, began to flee. Mothers with babies and small children were the first to leave. No one had anticipated a nuclear accident of this magnitude and no one was prepared for the ensuing crisis. People did not have enough drinking water, baby food, nappies, medicine and other essentials. They did not have enough petrol to travel long distances. Yet they grabbed what they could and tried to flee by car. Traffic jams soon created further chaos and in parts cars moved only 50 meters in an hour. Many cars queued to purchase petrol, further delaying the escape of those inside and increasing their exposure to the radiation.

Much later, elderly people, hospital patients and physically and mentally handicapped people were evacuated. A lack of suitable accommodation for these unfortunate souls meant that they were transferred from one place to another, sometimes spending long hours in cars. Some were moved to large cities hundreds of kilometers away. By March 15, 50 elderly people had died. On that day, the No 2 and No 3 reactor buildings also exploded, causing anxiety among people in other regions of Fukushima prefecture, as well as neighboring prefectures and even Tokyo. In addition, 1,800 people were missing as a result of the tsunami, but high levels of radiation prevented search and rescue work. The bodies of these people have never been retrieved. Many children were left orphaned by the disaster.

This Fukushima experience demonstrates that

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no evacuation plan could prepare a community for a major nuclear power accident like this or the one that occurred at Chernobyl. Evacuation drills will never ensure order when a nuclear accident causes mass panic, brought about in part because we cannot see, smell or touch radiation. Fear leads to confusion, disorientation and inevitably irrational behavior.

Between March 1 and December 31 last year, 21,000 people died in Fukushima Prefecture. This was 9,000 more than in the previous year. Official reports put the number of deaths due to the earthquake and tsunami at 3,400. The remaining 6,600 deaths resulted from the devastating effects of the aftermath of the earthquake and the nuclear power accident. Many people committed suicide, like the 64-year-old farmer, who had produced organic cabbages for more than 30 years in Sugagawa, 70 km away. He took his life on March 24.

Prior to the disaster, Fukushima Prefecture had 150,000 hectares of rice and vegetable fields and 80,000 farming households. As the seventh largest agricultural prefecture in Japan, 40 per cent of its production was rice, with fruits such as peaches, pears and cherries making up the remainder. The area was also known for good quality fish, like bonito and saury, as well as dairy farms and mushroom forests in the mountains. The nuclear explosion subjected the entire region, as well as areas far beyond, to radiation levels equivalent to 20 times that inflicted on Hiroshima by the atomic bomb. Radiation continues to permeate the surrounds. The damage to the agricultural and fishery industries is beyond speculation. In addition to the initial destruction, “hot spots” - places contaminated with high levels of radiation, such as the village of Iidate – outside the 20km zone continue to cause great concern. It is most unlikely that those who lived within the 20km zone or in these hot-spot areas will ever be able to return to their homes and resume their interrupted lives.

Among the “voluntary evacuees” from outside the 20km zone, only those whose homes were in hot spot areas were entitled to receive government assistance. All the others had to find their own temporary accommodation. Many drove long distances to cities like Saitama and Tokyo to seek refuge in the homes of relatives and friends. Some moved from one place to another before eventually returning home, when they felt they could no longer impose on other people.

For those who have relocated, there are often family problems, particularly for young couples with small children. In many cases the husband has remained in Fukushima because of his job, while the mother and children have moved away, for fear of the effects of radiation upon the children. This arrangement often necessitates the additional burden of paying for rent on the new accommodation. If the children attend new schools, they must be registered as residents and local council taxes must be paid. Weekend visits by the husband to see the family inevitably involve expensive fares among other things. The financial burden of this stressful arrangement, together with the psychological trauma, is causing friction between couples, and it appears that divorce rates are increasing. Scores of evacuees who moved into small, prefabricated houses provided by the government suffer isolation and depression, due to a completely changed life style and lack of communication among the new residents. In addition, many suffer the deep sorrow of losing kin and close friends in the earthquake and tsunami.

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The nuclear power accident, compounding the earthquake tsunami disaster which rocked the Tohoku region, is thus destroying many traditional farming and fishing communities as well as families. Large numbers of people, particularly children, are suffering deep psychological trauma resulting from the fear of radiation and separation from fathers and friends. Parents worry constantly about whether or not the food they feed their children is safe, how long they should allow the children to play outside, how often they should take them for medical checks and so on. For years to come, they will live with the fear that they or their children may develop leukemia, cancer or other illnesses suffered by many atomic bomb survivors of Hiroshima and Nagasaki. Thus, for the foreseeable future, psychological depression, associated with radiation problems will continue to be a serious problem for many victims of the Fukushima nuclear power accident.

People in Fukushima are also facing "social discrimination," in the same way that atomic bombing survivors in Hiroshima and Nagasaki have done for decades. In Japan it is widely believed that many children born to victims of the atomic bombings carry genetic defects, caused by their parents' exposure to high levels of radiation. As yet there is no clear medical or scientific evidence to prove such claims. However, many people still try to avoid marrying the descendants of atomic bomb survivors. Sadly, this same myth is now emerging with regard to Fukushima. Such discrimination is also happening in schools, where children from Fukushima are being bullied by their classmates, who think radiation is contaminating.

Today, radiation released from the Fukushima nuclear reactor accident is at the heart of myriad problems – physical, psychological, social and inter-personal - that would never have been contemplated before. There is no effective and immediate solution to the difficulties caused by this invisible, frightening and deadly substance. One thing seems certain. We must endeavor to avoid such a catastrophe in the future and spare our loved ones the immeasurable agony that has been caused. We must stop using nuclear power, either in the form of energy or weapons. The governments and people of Australia and Canada must also consider seriously the irreversible damage that has been caused by exporting uranium to many countries including Japan.

Eyewitness Fukushima Symposium

Yuki Tanaka was a guest at the Eye Witness Fukushima Symposium held at Manhattanville College on March 5, 2012. We are pleased to present video of the event in two parts below.

Details concerning symposium participants are as follows:

Welcoming Remarks by Andy Spano, former Westchester County Executive.

Japanese Guests: Eyewitness Report

- **Dr. Tetsunari Iida** has a Master's Degree

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in Nuclear Science Studies from Kyoto University, a PhD from Tokyo University, worked in Energy & Environmental Studies at the Japan Research Institute and spent many years in the nuclear industry. He is now Executive Director of the Institute for Sustainable Energy Policies in Japan, and serves on the Japanese Cabinet Secretariat Advisory Committee for Prevention of Nuclear Accidents.

- **Dr. Yuki Tanaka** is Research Professor of History at the Hiroshima Peace Institute, Hiroshima City University and author of many books on nuclear power and related topics.

- **Mr. Noriyuki Kitajima,** known as Saburo, is an organizer for the Precariat Union in Tokyo. He was involved in helping the victims of the earthquake and Tsunami after March 11, and currently works at Fukushima Daiichi and Daini nuclear power plants as a subcontract worker.

Panel of U.S. Experts: Moderated by Rick Ufford-Chase, Executive Director, Stony Point Conference
and Retreat Center. Former County Executive, Andy Spano will be invited to join this panel for Q & A.

- **Evacuation Issues:** How does what happened at Fukushima impact disaster planning and response in the United States. Specifically, what are the lessons learned and how can they be applied to emergency response in the event of a severe accident or incident at Indian Point Nuclear Power Plant. Invited speakers include: **Dr. Michio Kaku,** Professor of Theoretical Physics, City College of CUNY, **Gordon Wren**, Director of Emergency Services for Rockland County, and**Kenneth Mallette**, Vice President for the Northeast Regional Office of Witt Associates, who authored the Witt Report on Emergency Preparedness of Areas Adjacent to Indian Point.

This symposium is one of a series of post-Fukushima discussons and debates concerning America's nuclear plants. Indian Point in New York state is a focus of concern because of its proximity to America's largest city. New York Gov. Andrew Cuomo has called for the plant to be shuttered, arguing that after Fukushima, "the world has changed". The Columbia Law School Center for Climate Change Law has also held a symposium on the viability of Indian Point and legal issues surrounding its continued operation.

Yuki Tanaka is Research Professor, Hiroshima Peace Institute, and a coordinator of The Asia-Pacific Journal. He is the author most recently of Yuki Tanaka and Marilyn Young, eds., Bombing Civilians: A Twentieth Century History *and of Yuki Tanaka, Tim McCormack and Gerry Simpson, eds.,* Beyond Victor's Justice? The Tokyo War Crimes Trial Revisited*. His earlier works include* Japan's Comfort Women *and* Hidden Horrors: Japanese War Crimes in World War II*.*

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