Report on “Radiation Disaster Recovery Studies”

Course: Radioactivity Social Recovery Course

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Regarding “Radiation Disaster Recovery Studies”

Radiation is a difficult term to explain even though we are exposed to it from our surrounding in our natural environment. On the other hand, as technology advancement we also get benefits from radiological applications in medicine, industry, and agriculture. However, the chances of radiation accidents or potential terrorist related threats are also a concern in the recent years. So, the uncertainty and complexity of radiation disaster causing more public fear, potential human health risks and environmental effects. Hence our world needs future global leaders and experts who are adequately trained in radiation disaster recovery with high responsibility and commitment. After Fukushima radiation accident, Phoenix Leader Education Program, which aims to prepare future experts in post-radiation disaster recovery, was initiated by Hiroshima university in 2011 for renaissance from radiation disaster and supported by MEXT (Ministry of Education, Culture, Sports, Science and Technology of Japan). That gave me a chance to study in Radioactivity Social Recovery Course in Program.

After five-year enrolling in Phoenix Leader Education Program, I appreciate so much as I could learn based on real experiences from experts, who engaged in radiation disaster activities during the accident happened in Fukushima almost eleven years ago. More importantly, I learned not only in the field of social recovery and rehabilitation after radiation disaster but also in radiation disaster medicine and environmental protection. Besides many useful lectures in school from

global experts, I have had many opportunities to join short-term training courses and field trips in Tokyo, Ibaraki and Fukushima and many international conferences and symposiums in radiation protection and safety in Japan and USA and especially the long-term virtual internship in Nuclear Energy commission of Mongolia (NEC, 2021) with the opportunity to gain practical work experience at professional level in line with my studies and interests.

The Great East Japan Earthquake in 2011 was considered the first triple disaster (earthquake, tsunami and nuclear accident) that happened in history. The spread out of radioactive materials from the explosion of Fukushima Daiichi nuclear power plant has led to not only environmental contamination but also health and social problems. Aa a result of this radiation disaster, both domestic and foreign consumers were reluctant to purchase agricultural products made in Fukushima (Fukushima Prefecture, 2016). Therefore, fears of contamination have affected many of Fukushima`s local industries such as food and agricultural sectors.

For government authorities, the issue of assessing the level of radioactive contamination in the soil, even after decontamination, evaluating the level of radiation safety in local agricultural products has become urgent. So high cost and strict radiation monitoring tests were conducted on foods and agricultural products from Fukushima and only after safety is confirmed are the products shipped to the market (Fukushima Prefecture, 2013).

Although the safety of foods and products were supported by various kinds of data, such as radiation monitoring tests, Japanese consumers are still hesitant to purchase agricultural and aquatic products from Fukushima (Hangui, 2014; Fukushima Prefecture, 2016; Consumers Affairs Agency, 2017). It may have been advisable to refrain from consuming Fukushima products immediately after the disaster because of the widespread and unreliable, reputational damaging information regarding radioactive contamination. Thus, it is clear that the fears of radiation caused

by the accident at the nuclear power plant created an economic crisis for multiple industries and communities, especially those reliant on food industries.

Hence, through my doctoral thesis, we examined whether Japanese consumers have negative implicit attitudes towards agricultural and aquatic products from the Fukushima region after the Fukushima Daiichi nuclear power plant accident, which may help to facilitate in the recovery process after the radiation disaster.

Furthermore, the research was significant in enabling a review and understanding issues relating to radiation concerns and addressing public perceptions on risks and actual risks in reigniting social recovery and environmental remediation and the aftermath of radiation disaster. The research also illustrated the approach to engaging the public in recovery from radiation exposure concerns in day-to-day activities. Among the long-term initiatives in the management of radiation social recovery is adapting a cohesive and holistic approach in restoring sustainable livelihood and social re-integration. The research also illustrated a need to publicize evidence screened reports for radioactive contamination in cases of radiation disasters to avert social stigma resulting from consumers' overcautious behaviors and prevent reputational damage. Hence manufacturing companies and farmers can utilize this research to understand factors that may cause negative implicit attitudes on their product, such as human cognition, based on their PVD or germ aversion. For example majority of consumers today are adopting green consumerism; hence adopting such strategies may positively impact consumers' attitudes towards an company's product.

References:

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4. Hangui, S. (2014). Severe damage to the agricultural economy of Fukushima prefecture as a result of the Great East Japan Earthquake and nuclear disaster: consequences to the shipment and distribution stages of fruits and vegetables in the year 2011. Fukushima Agricul.Technology Centre Kenkyu Hokoku-sho, 126–129.

Title of Doctoral Thesis

Implicit Attitudes about Agricultural and Aquatic Products from Fukushima depend on where Consumers Reside

Summary of Doctoral Thesis

This thesis focuses on the assessment of Japanese consumers' implicit attitudes towards agricultural and aquatic products from the Fukushima region. Chapter 1 provides an overview of research as well as the research problems, purpose and hypotheses and reviews key theoretical approaches to implicit and explicit attitudes. Chapter 2 discusses methodological approaches to implicit and explicit attitudes assessments, with a focus on the Implicit Association Test (IAT) and

self-report survey methods (e.g, Likert-type scale) which were used in the empirical studies. Chapter 3 (study 1) assesses whether Japanese consumers have negative implicit attitudes towards products from the Fukushima region and whether these are independent of their explicit attitudes. While the results of the study suggested that consumers have relatively negative implicit attitudes towards products from Fukushima, although their explicit attitudes are positive. This divergence was predominantly observed in the region near to Fukushima (i.e., Tokyo). These findings supported our hypothesis that it is implicit negative attitudes rather than explicit negative attitudes that underlie the hesitancy to purchase products from Fukushima. Chapter 4 (Study 2) assessed similar questions to Study 1 and explored the individual differences in the formation of these implicit attitudes towards products from Fukushima in terms of the Perceived Vulnerability to Disease (PVD). The results suggested that the negative implicit attitudes towards Fukushima products were attenuated (but still persistent) in participants with relatively low germ aversion in PVD. However, there was a large effect size amongst participants with high aversion to germs. Chapter 5 is a general discussion which summarizes the findings and discusses the outcomes of this research.

Other thesis published in academic research journals

1. Tsegmed, O., Taoka, D., Qi, J. and Ariga, A. (2019), “Implicit attitudes about agricultural and aquatic products from Fukushima depend on where consumers reside”, Frontiers in Psychology, Vol. 10, p. 515, doi: 10.3389/fpsyg.2019.00515.