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Risk Communication: A Key for Fostering a More Resilient Safety Culture

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Synopsis

It is widely agreed that the accident of the Fukushima Daiichi nuclear power plant was not only triggered by natural events combined with technical failures, but was a human induced disaster (IAEA, 2014: p11; The National Diet of Japan, 2012). From the bitter lessons, we have learned that human and organizational factors associated with emergency planning, response and decision-making for nuclear safety need to be more carefully reviewed and enhanced. Elements of social sciences, especially, risk management and risk communication here play a key role.

Risk communication is an established concept within risk analysis framework. It is a vital tool to convey the meaning of scientific assessment and risk management, share safety-related information, exchange views and values amongst varying stakeholder groups. Risk communication aims to build trust through this process and human interactions.

However, it would not be an overstatement that the essence of risk communication is not fully understood. As a result, it is either partially integrated into risk management practice or remains unproductive. The marginalisation of risk communication is observed in a variety of risk communication practices, or more evidently, in perception gaps between laypersons and experts about risks.

In order to address the pressing issue and suggest how risk communication can help create shared awareness about the safety of nuclear energy, this talk will show the results of two empirical studies in Japan conducted after the Fukushima accident between 2011 and 2015. The presenter was directly involved in both studies.

The first study concerns a series of risk communication practices designed for the evacuees from a disaster-affected region, Iitate Village of Fukushima Prefecture between 2001 and 2012. Drawn from empirical data, it investigates why communication between professionals and laypersons often fails and can lead to mistrust, rather than building trust. It argues that common communication failures are identified not in scientific information itself, but in the ways science is conveyed to the laypersons. Scientists primarily try to explain science by the use of numbers and logics, whilst laypersons understand safety information by images and emotions. Attendees of communication practices in Fukushima felt frustrated as the safety information provided by the scientists was either too difficult to grasp, or not necessarily relevant to what they wanted to obtain.

This lay-expert gap needs to be more readily acknowledged, and in order to fill this discrepancy, experts need to deliver the information that the audience need, and attempt to tailor their languages to be more readily understood by non-experts.

The second study concerns a citizen panel, stakeholder dialogue on the safety of the Hamaoka nuclear plant conducted in Shizuoka in 2015. The presenter directed the process and acted as facilitator. The deliberation served as the first sort of large-scale deliberative practice in Japan after the Fukushima accident. The discourse helped both laypersons and experts acknowledge the need for active dialogues to share not only facts, but also improve mutual understanding and, more importantly, share responsibilities for a safe neighborhood and secured energy supply.

The talk will conclude that the creation of public “spheres” for science-lay encounters is to be more rigorously sought in non-crisis situation. But more fundamentally, risk communication needs more attention of the

side of science and technology to improve capacity-building and fostering a more resilient culture in nuclear safety.

References:

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Country or International Agency

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