

Let us humbly re-examine nature's power and science and technology

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On March 11, Japan was struck by a huge earthquake, now known as the Tohoku-Pacific Ocean Earthquake, followed by a massive tsunami and the accident at Fukushima No. 1 nuclear power plant. The number of people confirmed dead or missing as of March 27 is estimated to surpass 27,000, the number of citizens displaced from their homes and taking refuge has reached approximately 197,000, and fears over radioactive contamination of vegetables and water are spreading. This disaster, said to be the worst national crisis for Japan since World War II, compels us, who are engaged in science and technology, who communicate science and technology activities to the general public, and who are also citizens living in this society dependent on technology, to reassess our conventional way of thinking towards nature and science and technology from its foundations, and urges us to make a steady step-by-step recovery and reconstruction of society in collaboration with many people in future.

Driven by this sense of crisis, the Science Council of Japan (President Ichiro Kanazawa) held an emergency meeting a week after the quake. In the notice calling for the meeting, it was stated that this disaster made us fully realize the power of nature and consequently reminded us of the limits of the competence of science and technology. The notice also posed researchers with the question "What can we do now?," referring to the leakage of radioactive substances from the nuclear power plant that has left a major problem for scientists to solve.

What are the lessons to be learned from the disaster? Although we cannot draw hasty conclusions at a time when the nuclear accident is currently still being addressed and the focus is on support for evacuees, I would like to examine whether the unexpected scope and magnitude of the tsunami were really anticipated, and whether they were taken into consideration in designing the nuclear plant. I heard from Dr. Yoshinobu Tsuji of the University of Tokyo's Earthquake Research Institute, who had conducted a field survey at the time of the Great Indian Ocean Tsunami of 2004, that the 2004 tsunami reached as high as 34

meters in northern Sumatra, Indonesia. I remember being shocked by a natural phenomenon that people could not survive. This time, again, I rediscovered the power of nature that today's technology cannot prevent. Whether we accept this fact or not shall determine future measures to be taken and technological methods to be applied.

Many people showed dissatisfaction with the manner and content of the announcements made by the government and the Tokyo Electric Power Company, Inc. in relation to the leakage and spreading of radioactive substances, their contamination of water and effects on human health, and also the designation of areas to be evacuated. There seems to have been a gap in understanding of the terminology between the speakers and the public. Terms and expressions used will naturally differ according to whether an announcement is made to the media at a press conference or directly to the public. For the latter, easy-to-understand, plain language is required. To this end, the ability of journalists, commentators, and science communicators, who position themselves between scientific information providers and the public, is tested.

I have been editing and issuing *Science Window* in the hope that school teachers who are not comfortable in teaching science would become more interested in nature and science, by providing adults with background scientific knowledge to improve their scientific literacy beneficial to personal decision making in life. My motto is "opening up the window between science and society." I long to breathe the natural balmy air of the fragrant month of May unthreatened by pollen fall and invisible radiation precipitation. Similarly, I hope to ventilate the relationship between those involved in science and technology and the public.

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