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## Editorial

# Masayuki Murayama\* and Charles D. Weisselberg\* Introduction – The Problem of Law in Response to Disasters

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The papers included in this special issue originated from a series of conferences and presentations on law and disasters in Berkeley in 2011<sup>1</sup> and in Tokyo<sup>2</sup> and Honolulu<sup>3</sup> in 2012. When the East Japan Disaster occurred, we were overwhelmed by the huge, extensive and complex damage caused by the earthquakes, tsunamis, and nuclear accidents. One of us was in Tokyo when the earthquakes struck East Japan. Two days later, we both watched the explosions of the nuclear plant of the Tokyo Electric Power Company (TEPCO) on TV in Berkeley where, coincidentally, we were gathered for the Sho Sato Conference, “The Japanese Legal System: An Era of Transition.” There, the idea of organizing international meetings was born.

A huge disaster is not common. But it is not rare either, on this planet. The earthquakes near Sumatra in December 2004 and in Chile in February 2010 caused tremendous devastation in communities along the coastlines. The profound damage caused by Hurricane Katrina is still remembered. We see threats from violent storms increasing year by year.

However, the East Japan Disaster was unique in that a natural disaster triggered failures of safety measures expected to support complex high-tech facilities. Although which one – the earthquake or the tsunami – was fatal to the nuclear

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1 The 20<sup>th</sup> Sho Sato Workshop on the Problem of Law in Response to Disasters, University of California, Berkeley, School of Law, October 25–26, 2011.

2 International Symposium: Law and Disasters – What Can We Learn from Complex Disasters?, Meiji University, March 7, 2012; Workshop on Law and Disasters, Meiji University, March 8, 2012.

3 Four panels of paper presentation were organized for the international research group on law and disasters at the Law and Society Association Annual Meeting in Honolulu, June 5–8, 2012.

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plant has been disputed, it is clear that the natural phenomena started a failing process of the safety measures at the nuclear plant, leading to the meltdown of its nuclear reactors. We experienced nuclear plant accidents at Three Mile Island and in Chernobyl, but they were not triggered by a natural disaster. The events at the Tokyo Electric Power Company (TEPCO) nuclear power plant clearly show the possibility that a natural disaster may cause a breakdown of a highly complex, dangerous sophisticated facility, which may result in extraordinary and, perhaps, unprecedented damage.

A large-scale disaster can be caused either by a natural phenomenon or human error, or a mixture of the two. Occurrence of an earthquake or tsunami of any size is difficult to predict. Even if we know that an earthquake can occur in a certain interval of time in a certain region, it is difficult to predict even approximately when it may occur. Similarly, we know we cannot eliminate human errors, and they may take place anytime, but it is difficult to predict when. However, even if it is difficult to foresee the timing of a natural disaster or human error, it is not impossible to anticipate how much damage may result.

If we can assess the damage that can result, it is also possible to think about preventive measures we may take. Thus, even if we cannot stop the occurrence of an earthquake, we can prevent or at least reduce its damage by setting a higher standard for construction of houses, buildings and other facilities. We can also prevent damage from tsunamis by building houses in higher places or by setting up a system for prompting residents to escape quickly when a tsunami is expected.

If we think that we should be prepared for human error by setting up safeguards, there is no reason why we cannot do the same for natural disasters. Natural science tells us how much damage may occur, and technology helps us understand how we can prevent or mitigate damage. Still, we fail to take adequate precautions, as we saw vividly in the East Japan Disaster. There were signs that indicated up to which point tsunamis came after earthquakes in the past. Yet people failed to escape early enough or far enough to prevent being victimized.

In this sense, damage is caused by human behavior. We consider that there is no purely natural disaster. Insofar as we can take preventive measures, damage results from human errors. Therefore, how to prevent damage from a natural phenomenon is a question for the social sciences as well as natural sciences. This was our basic perspective when we discussed issues of law and disasters at the conferences. Expecting future natural disasters, how can we prepare to reduce damage caused by earthquakes, tsunamis, floods or volcanic eruptions? Expecting a possible accident at a nuclear plant, how can we facilitate the escape of residents and reduce possible exposure to nuclear radiation? If, unfortunately, a natural disaster inflicts damage, how can we help reconstruct communities and

establish further safety measures to prevent future damage? If, unfortunately, nuclear radiation affects residents and contaminated areas, how can we compensate for the damage and help victims to restore their lives? These are some of the questions we asked.

In discussing issues of law and disasters, we considered mainly what happened in Japan (the East Japan Disaster), Chile (tsunamis), Thailand (floods), Indonesia (volcanic eruptions) and the United States (Hurricane Katrina). Though natural disasters and related failures in facilities with advanced technologies can occur in different ways from these, the cases we studied included a wide range of natural disasters and various aspects of the nuclear accidents. The coverage is far from being perfect, but it is substantially wide. This issue contains the first set of papers presented at the conferences and a second set will be published later.

Daniel Farber's article "*Beyond Imagination*": *Government Blind Spots Regarding Catastrophic Risks*, asks how we can adopt safety measures against "unknown" risks. After pointing out our tendency to repress consideration of future risks for institutional and psychological reasons, the paper discusses the worst-case scenario rule and the precautionary principle as mechanisms to "change [agencies'] behavior without saddling agencies with unreasonable obligations or ignoring their essential dynamics." It argues that the worst-case scenario aims at reducing risks which we are aware that we do not know, while the precautionary principle best helps us address "unknown unknowns," risks that are outside of our imagination or that have been erroneously dismissed as inconsequential.

Geraldine Herrmann's contribution, *Regulation of Coastal Zones and Natural Disasters: Mitigating the Impact of Tsunamis in Chile through Urban and Regional Planning*, focuses on ways of reconstructing communities after the tsunami of February 27, 2010, and of mitigating impacts of tsunamis in future. The paper argues that, after the 2010 tsunami, more than 100 reconstruction plans were developed nationwide but, because of time constraints, both community participation and coordination between the national and local government were not adequately made. The article further discusses the reasons why Chile was not prepared for the 2010 tsunami and considers the policy responses of the national and local governments to the tsunami. While pointing out that Chile needs a clear regulatory framework and a better coordination between the national and local governments, the paper presents 13 policy proposals for mitigating the impact of tsunamis in the future.

Shunichiro Koyanagi's article, *Disaster and Protection of Tenants in Japanese Law: General Principles in Time of Emergencies*, looks at tenants' rights after disastrous situations brought by Great Kanto earthquake in 1923, the war disaster in Tokyo and other cities in 1945, the Kobe earthquake in 1995, and the

Great East Japan earthquake in 2011. According to a principle of land ownership, tenants rights are eliminated when a building is destroyed. However, as governmental rescue service was scarcely provided after the Great Kanto earthquake, the principle that did not give ex-tenants right to lease newly built buildings hampered reconstruction, and the government responded with legislation that afforded tenants these limited rights. The government went further in the Lease Act of 1946, affording ex-tenants the right to lease land and to remain in self-constructed shelters. However, the Lease Act functioned rather as an obstacle to rapid reconstruction after Kobe earthquake. After Great East Japan earthquake, a new Act was legislated in 2013 to go back to the principle of land ownership. The paper concludes that it is difficult to justify exceptions to general principles in a highly developed modern society.

Lawrence Repeta's contribution, *Japan's News Media, the Information Disclosure Law, and the Fukushima Nuclear Disaster*, discusses how the Information Disclosure Law helped investigative journalists to break through cover-ups by government agencies. Some of the central questions after the nuclear accident were why Tokyo Electric Power Company (TEPCO) failed to put safety measures in place against large earthquakes and tsunamis, and why the government did not require TEPCO to do so. The paper describes specific reports that the law enabled journalists to write on collusive relationships between TEPCO and government agencies, and TEPCO's payment to support the so-called nuclear village where TEPCO, regulatory agencies, local authorities and academic researchers developed symbiotic relationships.

Todd Emerson Hutchins' paper, *Is International Ocean Law Capable of Preventing or Mitigating the Impacts of Nuclear Disaster?*, assesses the ability of the international ocean law to control nuclear pollution of the sea. The paper asks whether the United Nations Convention on the Law of the Seas and other international conventions are effective in enforcing their provisions concerning nuclear issues and, if not, why not. It argues that characteristics of nuclear issues, such as non-incremental nature and remoteness of risk, and overriding self-interests of nations, make it difficult to establish a stable framework of cooperation and regulation.

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