

Dealing with Disasters in Japan

Instructor: Aya Okada

Tentative Syllabus

Mondays and Wednesdays, 1:10pm to 2:40pm

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● Course Overview

Japan is one of the countries around the world where natural disasters occur quite frequently. A small island nation located on the Pacific Rim, earthquakes, tsunamis, and volcano eruptions are serious everyday threats to those living in Japan. In fact, Japan was a home to 18.5 percent of the world's earthquakes larger than magnitude 6.0 between 1984 and 2013¹. Some of the devastating disasters in the recent years include: a magnitude 7.3 earthquake in Kobe in 1995 (known as the Great Hanshin-Awaji Earthquake), a magnitude 6.8 earthquake in Niigata (Niigata-Ken-Chuetsu Earthquake) in 2004, and a magnitude 9.0 earthquake and tsunami that struck Northeastern Japan on March 11, 2011. In 2014, Mt. Ontake in Nagano Prefecture erupted, and several more active volcanoes are under cautious observation. Furthermore, the Japanese society faces the risks of seasonal typhoons, floods, and heavy snow. Also present in Japan are risks of manmade disasters such as terrorist attacks and nuclear accidents.

From these experiences, Japan has developed policies, frameworks, and practices to prepare and respond to disasters. In action are the government - both national and local - as well as businesses, civil society organizations, and individuals. In this course, we will examine how the Japanese society has dealt with these risks of disasters. How do the involved actors prepare, respond, and recover from catastrophes? What were the lessons learned from the past experience, and what measures are being taken? How is Japan contributing to disaster management globally? The class will read studies and researches accumulated in the field of disaster management to examine how the Japanese society deals with disasters from historical, social, political, and economic perspectives.

¹Cabinet Office, Government of Japan. (2014). *Heisei 26 Nendo Bousai Hakusho (2014 White Paper on Disaster Management)*. Last Accessed September 10, 2014 at <http://www.bousai.go.jp/kaigirep/hakusho/h26/>

- Course Objectives

- 1) Students will be able to understand different types of disasters risks that Japan face.
- 2) Students will be able to understand the basic framework and dynamism of how the Japanese society deal with both natural and manmade disasters.

- Assignments and Evaluation

- 1) Attendance and class participation (30%)
- 2) Mid-term paper and presentation (30%)

Choose and analyze a particular risk that the Japanese society may face in the next ten years (any potential crisis situations). The paper should cover related history, past experience, current policies, and future challenges. Depending on a class size, we will do the mid-term project in groups.

- 3) Final paper and presentation (40%)

Based on readings and classes of this course, develop one's own research question, and discuss how Japan may deal with disasters.

*Attendance policy: Missing two lectures without an appropriate reason will automatically drop your attendance grade by one full letter grade. Egregious tardiness (three or more) will yield the same penalty. Four unexcused absences from lectures or recitations over the semester will result in the class participation grade turning to zero. I reserve the right to give pop quizzes or assign additional work if people are coming to class unprepared.

- Textbook

Students are advised to purchase the following three books:

Birmingham, L., and McNeill, D. (2012). *Strong in the Rain: Surviving Japan's Earthquake, Tsunami, and Fukushima Nuclear Disaster*. New York, NY: Palgrave Macmillan.

Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11*. New York, NY: Routledge.

Samuels, R.J. (2013). *3.11: Disaster and Change in Japan*. Ithaca, NY: Cornell University Press.

* Other book chapters, journal articles, and official reports will be distributed in PDF format.

* Upon request, the instructor will make recommendations on readings written in Japanese language.

- Schedule (subject to change depending on class size and students' interests)

Session 1 (September 7)

Introduction

The class will review major risks of disasters that the Japanese society face today. What unique geographic features and social climate contribute to emergence of such risks?

Required Reading:

Cabinet Office, Government of Japan (2015). *Disaster Management in Japan* (in English and in Japanese, pp.1-52). Available at http://www.bousai.go.jp/1info/pdf/saigaipamphlet_je.pdf

Recent newspaper articles (TBD)

Suggested Reading:

Samuels, R.J. (2013). Historical and Comparative Guidance (Chapter 3, pp.46-79). *3.11: Disaster and Change in Japan*. Ithaca, NY: Cornell University Press.

Session 2 (September 9)

Developing a Framework to Understand Disaster Management

Before delving into Japanese experience of disasters, the class will read an introductory chapter of disaster management textbook to build a common framework for the semester.

Required Reading:

Coppola, D.P. (2015). The Management of Disasters (Chapter 1, pp.1-39). In Coppola, D.P. (2015). *Introduction to International Disaster Management, Third Edition*. Burlington, MA: Butterworth-Heinemann.

Suggested Reading:

United Nations General Assembly. (2015). *Sendai Framework for Disaster Risk Reduction 2015-2030*. Available at <http://www.preventionweb.net/files/resolutions/N1514318.pdf>

Session 3 (September 14)

Recent Experience of Disasters in Japan (1) – The 2011 Tohoku Disasters

The triple disasters of earthquake, tsunami, and nuclear accident is one of the major catastrophes that Japan has experienced in the recent years. The class will watch a documentary on the 2011 Tohoku disasters to observe the impact of the incident to people's lives, and to analyze how the government and citizens dealt with the crisis.

Required Reading:

Birmingham, L., and McNeill, D. (2012). *Strong in the Rain: Surviving Japan's Earthquake, Tsunami, and Fukushima Nuclear Disaster*. New York, NY: Palgrave Macmillan.

Suggested Readings:

Curtis, G.L. (2012). Tohoku Diary: Reportage on the Tohoku Disaster (Chapter 1, pp.15-32). In Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11*. New York, NY: Routledge.

Okada, N., Ye, T., Kajitani, Y., Shi, P., and Tatano, H. (2011). The 2011 Eastern Japan Great Earthquake Disaster: Overview and Comments. *International Journal of Disaster Risk Science*, Vol. 2(1), pp.34-42.

Samuels, R.J. (2013). The Status Quo Ante and 3.11 (Chapter 1, pp.1-23). *3.11: Disaster and Change in Japan*. Ithaca, NY: Cornell University Press.

Session 4 (September 16)

Recent Experience of Disasters in Japan (2) – Fukushima Daiichi Nuclear Accident

The fourth largest earthquake recorded in history not only triggered three waves of large tsunamis, but also cause a nuclear reactor breach at Fukushima Daiichi Nuclear Power Plant in 2011. We will focus on this particular accident and examine how both the government and citizens dealt with the crisis situation.

Required Reading:

Kushida, K.E. (2012). Japan's Fukushima Nuclear Disaster: Narrative, Analysis, Recommendations. *Shorenstein APARC Working Paper*. Shorenstein Asia-Pacific Research Center.

Suggested Readings:

Dewit, A., Iida, T., and Kaneko, M. (2012). Fukushima and the Political Economy of Power Policy in Japan (Chapter 9, pp.156-171). In Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11*. New York, NY: Routledge.

Freiner, N. (2013). Mobilizing Mothers: The Fukushima Daiichi Nuclear Catastrophe and Environmental Activism in Japan. *ASIA Network Exchange*, Vol.21(1), pp. 1-15.

Ogawa, A. (2014). The Right to Evacuation: The Self-Determined Future of Post-Fukushima Japan. *Inter-Asia Cultural Studies*, Vol.15(4), pp.648-658.

Scalise, P.J. (2012). Hard Choices: Japan's Post-Fukushima Energy Policy in the Twenty-First Century (Chapter 8, pp.140-155). In Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11*. New York, NY: Routledge.

Session 5 (September 28)

Guest Speaker Session (TBD)

Session 6 and 7 (September 30 or Saturday TBD)

Experience of Disasters in Japan (4) – The Great Hanshin-Awaji Earthquake

Fieldtrip to Kobe City, Hyogo Prefecture

Disaster Reduction and Human Renovation Institution

(阪神・淡路大震災記念 人と防災未来センター／JICA 関西国際防災研修センター)

Session 8 (October 5)

Experience of Disasters in Japan (3) – Terrorist Attacks

The 1995 Tokyo Subway Sarin Incident by a religious group called Aum Shinrikyo is remembered today as one of the most serious terrorist attacks in the history of Japan. The class will review the incident and analyze how various actors dealt with the crisis.

Required Readings:

Metraux, D.A., (1995). Religious Terrorism in Japan: The Fatal Appeal of Aum Shinrikyo. *Asian Survey*, Vol.35(12), pp.1140-1154.

Olson, K.B. (1999). Aum Shinrikyo: Once and Future Threat? *Emerging Infectious Disease*, Vol.5(4), pp.513-516.

Suggested Reading:

Lifton, R.J. (1999). *Destroying the World to Save It: Aum Shinrikyo, Apocalyptic Violence, and the New Global Terrorism*. New York, NY: Henry Hold and Company.

Session 9 (October 7)

General Disaster Management Framework in Japan

The current Japanese disaster management policies perceive public agencies – national and local governments – as the primary actors in dealing with disaster preparation and situations. The class will review the framework and identify its significance and challenges.

Required Readings:

Comfort, L.K., Okada, A., and Ertan, G. (2013). Networks of Action in Catastrophic Events: The 11 March 2011 Tohoku Disasters. *Earthquake Spectra*, Vol. 29(S1), S387-S402. (focus on pp.S389-S393)

Cabinet Office, Government of Japan (2015). *Disaster Management in Japan* (in English and in Japanese). Available at http://www.bousai.go.jp/1info/pdf/saigaipamphlet_je.pdf (also assigned in Session 1, focus on pp.8-52)

Suggested Reading:

OECD (2009). The General Policy Framework (Chapter 8, pp.197-211). In *Japan: Large-Scale Floods and Earthquakes* (OECD Reviews of Risk Management Policies). Paris: OECD Publishing.

Session 10 (October 14)

Student Presentations (Mid-Term)

Students will make 15 minutes presentation of their mid-term paper.

Session 11 (October 19)

Student Presentations (Mid-Term)

Students will make 15 minutes presentation of their mid-term paper.

Session 12 (October 21)

Disaster Prevention (1) – Risk Perception and Education

The first step in disaster management is to develop people's perception towards potential risks and encourage preparation. We will learn the conceptual framework of risk perception and study an example of educational efforts made for disaster prevention.

Required Readings:

Wachinger,G., Renn,O., Begg,C., and Kuhlicke, C. (2012). The Risk Perception Paradox—Implications for Governance and Communication of Natural Hazards. *Risk Analysis*, Vol.33(6), pp.1049-1065.

Shaw, R., Takeuchi, Y. and Shiwaku, K. (2014). Disaster Education in Schools (pp.82-96). In Lopez-Carresi, A., Fordham, M., Wisner, B., Kelman,I., and Gaillard, J.C. (2014). *Disaster Management: International Lessons in Risk Reduction, Response, and Recovery*. New York, NY: Routledge.

Suggested Reading:

Yamori, K. (2014). Revisiting the Concept of Tsunami Tendenko: Tsunami Evacuation Behavior in the Great East Japan Earthquake. In Disaster Prevention Research Institute, Kyoto University (Ed.). *Studies on the 2011 Off the Pacific Coast of Tohoku Earthquake*. Springer Verlag.

Session 13 (October 26)

Disaster Prevention (2) – Jishu Bosai Soshiki

In addition to governmental initiatives, voluntary neighborhood groups called “Jishu Bosai Soshiki” play a huge role in preparing citizens for potential disasters in Japan. The class will review the significance and challenges of these voluntary groups.

Required Reading:

Bajek, R., Matsuda, Y., and Okada, N. (2008). Japan's Jishu-bosai-soshiki Community Activities: Analysis of its Role in Participatory Community Disaster Risk Management. *Natural Hazards*, Vol.44(2), pp.163-168.

Suggested Reading:

Okada, A. (forthcoming in 2015). Civil Society Organizations and Risk Management: The Case of Japan. In Svedin, L. (Ed.). *Risks and Crisis Management*. Charlotte, NC: Information Age Publishing.

Session 14 (October 28)

Guest Speaker Session (TBD)

Session 15 (November 9)

Disaster Response (1) – Early Warning System

Based on the lessons learned from past disasters, Japan has developed sophisticated early warning system. The class will review the current system and discuss its effectiveness.

Required Readings:

Hoshiya, M., Kamigaichi, O., Saito, M., Tsukada, S., Hamada, N. (2011). Earthquake Early Warning Starts Nationwide in Japan. *Eos, Transactions American Geophysical Union*, Vol. 89(8), pp. 73-74.
Fujinawa, Y., Rokugo, Y., Noda, Y., Mizui, Y., Kobayashi, M. and Mizutani, E. (2008). Efforts of Earthquake Disaster Mitigation Using Earthquake Early Warning in Japan. *The 14th World Conference on Earthquake Engineering*, S05-05-014.

Suggested Reading:

Villagran de Leon, J.C. (2014). People-Centered Early Warning (Chapter 5, pp.64-81). In Lopez-Caressi, Fordham, M., Wisner, B., Kelman, I., and Gaillard, J.C. (Eds.). *Disaster Management: International Lessons in Risk Reduction, Response and Recovery*. New York, NY: Routledge.

Session 16 (November 11)

Disaster Response (2) – Problem of Coordination

Because multiple types of actors are involved in the process of disaster response, coordination is considered a key for effective disaster response. We will take the case of the 2011 Tohoku Disasters to examine the issue of coordination and communication.

*The class may have the opportunity to join a guest lecture organized by Dr. Saya Kiba for a course in the Faculty of Policy Studies, Doshisha University for session 16 or 17. The lecture will be on coordination among multiple actors in disaster response. Aya will provide language help. TBD.

Required Reading:

Comfort, L.K., Okada, A., and Ertan, G. (2013). Networks of Action in Catastrophic Events: The 11 March 2011 Tohoku Disasters. *Earthquake Spectra*, Vol. 29(S1), S387-S402. (also assigned in Session 9, focus on S393-S401)

Suggested Reading: TBD

Session 17 (November 16)

Disaster Response (3) –Working with International Partners

When a disaster strikes, international organizations, governments, and civil society organizations outside the country often offer help. We will examine how Japan dealt with international partners in the 2011 Tohoku Disasters.

Required Reading:

Ames, C. and Koguchi-Ames, Y. (2012). Friends in Need: ‘Operation Tomodachi’ and the Politics of US Military Disaster Relief in Japan (Chapter 12, pp.207-219). In Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan’s 3/11*. New York, NY: Routledge.

Suggested Reading:

Feickert, A. and Chanlett-Avery, E. (2011). *Japan 2011 Earthquake: U.S. Department of Defense (DOD) Response*. CRS Report for Congress. Congressional Research Service.

Session 18 (November 18)

Class will not meet (Aya on a conference trip)

Work on developing a research question and a tentative reference list for the final paper. Submit the output via email to Aya by 5pm.

Session 19 (November 25)

Recovery and Reconstruction (1) – Reviving the Communities

The most important, yet difficult process in recovering from disasters is in reviving the affected communities. The class will examine how communities are being rebuilt in the case of 2011 Tohoku Disasters.

Required Readings:

Tossani, R. (2012). Thousand-Year Event: Towards Reconstructing Communities (Chapter 15, pp.255-276). In Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan’s 3/11*. New York, NY: Routledge.

Suggested Readings:

Ito, A. (2007). Earthquake Reconstruction Machizukuri and Citizen Participation. In Sorensen, A. and Funck, C. (Eds.). *Living Cities in Japan: Citizens' Movements, Machizukuri and Local Environments*. New York: Routledge.

Session 20 (November 30)

Recovery and Reconstruction (2) – Role of Social Capital

Some people argue that the more social capital in the affected community, the better and faster recovery from the catastrophe. Is that true? The class will briefly review the notion of “social capital” and analyze the cases of the 1995 Kobe Earthquake and the 2011 Tohoku Disasters.

Required Readings:

Aldrich, D. P. (2011). The Power of People: Social Capital's role in Recovery from the 1995 Kobe Earthquake. *Natural Hazards*, Vol.56(3), pp.595-611.

Aldrich, D. P., (2012). Networks of Power: Institutions and Local Residents in Post-Tohoku Japan (Chapter 7). In Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11*. New York, NY: Routledge.

Suggested Reading:

Aldrich, D.P. (2012). *Building Resilience: Social Capital in Post-Disaster Recovery*. Chicago, IL: The University of Chicago Press.

Session 21 (December 2)

Disaster Giving and Volunteers

Disasters often stimulate the willingness of the people to help those in need. The class will review the situations of disaster giving and volunteering, focusing on the change observed from the 1995 Kobe Earthquake to the 2011 Tohoku Disasters.

Required Readings:

Kawato, Y., Pekkanen, R., and Tsujinaka, Y. (2012). Civil Society and the Triple Disasters: Revealed Strengths and Weaknesses (Chapter 4). In Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11*. New York, NY: Routledge.

Giving Japan (2013). The Great East Japan Earthquake and Disaster Giving and Volunteering. *Giving Japan 2012: The Annual Report on Giving and Volunteering for the Year 2011*.

Suggested Reading:

Solnit, R. (2009). *A Paradise Built in Hell: The Extraordinary Communities That Arise in Disaster*. New York, NY: Penguin Books.

Session 22 (December 7)

Student Presentations

Each student will make a 15-20 minute presentation on their final paper.

Session 23 (Tuesday, December 8, 4th Period)

Student Presentations

Each student will make a 15-20 minute presentation on their final paper.

Session 24 (December 9)

Future Disasters in Japan

To wrap up the course, the class will examine risks of disasters that the Japanese society may face in the upcoming years.

Required Reading:

Togo, K. (2012). Can Post-3/11 Japan Overcome Twenty Years of Drift? (Chapter 16, pp.277-288). In Kingston, J. (Ed.). (2012). *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan's 3/11*. New York, NY: Routledge.

Suggested Reading:

Up-to-date newspaper and magazine articles (TBD)