



# Adaptive governance for resilience in the wake of the 2011 Great East Japan Earthquake and Tsunami



Naomi Aoki

Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore

## ARTICLE INFO

### Article history:

Received 11 August 2015

Accepted 14 August 2015

Available online 3 September 2015

### Keywords:

Collaborative governance

Disasters

Tohoku

Fukushima

Decentralized disaster governance

Resilience

## ABSTRACT

This study shows how the framework of adaptive governance, originally from the fields of environmental management and climate change, can be used to understand governance dynamics in the area of disaster management. By investigating the case of the 2011 Great East Japan Earthquake and Tsunami, the study argues that Japan's semi-decentralized disaster governance could have been paralyzed at the municipal level due to manpower shortages at municipal government offices and their third-sector organizations. A variety of institutional arrangements were invented to muster manpower from various corners of Japan to help disaster-hit municipalities. This awakened Japan's polycentric governance systems, enabling adaptive disaster governance and thereby boosting governance capability. This experience suggests that decentralized disaster governance, prepared to mobilize its polycentric governance systems, is the key to effectively managing disasters, small and large.

© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

Borrowing terminology from the fields of natural resource management and climate change, this paper applies the concept of *adaptive governance* to the context of disaster management and examines the ways in which ex-post (after-disaster) governance—namely, the rules that govern emergency response, recovery and reconstruction—can adapt to unforeseen shocks. When great disasters surprise us with their magnitude, everyday governance is unable to meet their demands. However, if governance is capable of adapting to fill this gap, it can better mitigate the scale of damage. Hence, ex-post adaptive governance is essential for communities to survive and recover, and to remain resilient.

Based on key informant interviews and government documents, this study investigates the case of manpower-support governance in the wake of the 2011 Great East Japan Earthquake and Tsunami (hereafter referred to as the 3.11 disasters). When these events occurred, manpower in disaster-hit municipal government offices and their third sector —i.e. public-private partnerships and nonprofit organizations—was in severe shortage because many municipal officials were killed by the tsunami—a scenario unaccounted for by governance at the time the disasters hit Japan. Various institutional arrangements were invented in order to

dispatch manpower to Tohoku from various sources. This development unveiled key features of adaptive governance, to be explained below.

One might think that manpower support is not a new consideration, given the large number of people flowing into disaster-hit areas in the wake of large-scale disasters. However, such manpower is often intended for emergency and humanitarian response and is not sent to take on the work of civil servants to help communities function during the stage of recovery and reconstruction—which, in the case of the 3.11 disasters, is expected to take a decade (Reconstruction Agency, 2011). Having lost a large number of municipal officials, Japan's semi-decentralized disaster governance could have been almost paralyzed at the municipal level without ex-post adaptive governance.

The following section reviews concepts of adaptive governance and then defines the term in the context of disaster management. The third section explains what has happened to post-3.11 manpower-support governance. Although this single-N study is narrow, it aims to draw implications for the broad policy area of disaster governance. Hence, the fourth section discusses suggestive lessons from the 3.11 disasters, voicing some cautions, and the final section concludes with an agenda for future research.

## 2. Adaptive governance: conceptual origin and application

As noted earlier, the term *adaptive governance* has been used in

E-mail address: [sppnma@nus.edu.sg](mailto:sppnma@nus.edu.sg).

the field of environmental management and climate change (see, for example, Dietz, Ostrom, & Stern, 2003; Folke, Hahn, Olsson, & Norberg, 2005; Kiparsky, Milman, & Vicuña, 2012; Olsson et al., 2006; Young & Lipton, 2006). Dietz et al. (2003), for instance, used the term to describe the ideal institutional setting within which the complex social-ecological system responds to environmental change. To them, adaptation is the long-term evolution of rules that govern human activities, from local to global levels, which are needed to sustain the global commons. Adaptation can be either proactive or reactive in order to mitigate the harms associated with often-undesirable external change (Kiparsky et al., 2012), and it is essential for a system's resilience (Biggs et al., 2012; Folke et al., 2004, 2005; Nelson, Adger, & Brown, 2007).

There seems to be a general consensus that the structure of adaptive governance features both multiple layers and polycentricity. A system is multi-layered in the sense that its governance is composed of global, national, and subnational governmental authorities, as well as non-governmental actors. Hence, unlike what Termeer, Dewulf, and van Lieshout (2010) called *monocentric governance*, whereby a single authority (e.g. a national government or global institution) exerts control over the polity, adaptive governance “generally involves polycentric institutional arrangements, which are nested quasi-autonomous decision-making units operating at multiple scales” (Folke et al., 2005, 449). Adaptive governance is thus not the same as mere multi-layered governance, either, which focuses on “cross-level interactions” or coordination between tiers of government (Termeer et al., 2010, 33).

The idea of adaptive governance is normative and based on the premise that quasi-autonomous, loosely-coupled entities can accommodate institutional variety, allowing a mix of governance arrangements to spontaneously emerge in anticipation of, or in reaction to, often undesirable changes. Olsson et al. (2006) presented a case of the Kristianstads Vattenrike in Sweden, where a self-organized network of individuals and environmental and farmers' organizations emerged and successfully achieved trust building, information and knowledge sharing, and conflict management to solve environmental problems in the lower Helgeå River area. Similar examples abound (see, for example, Young & Lipton, 2006). The adaptive governance literature stresses that local initiatives, which are often neglected in top-down governance, are important for holistically dealing with climate change.

Djalante, Holley, and Thomalla (2011) conceptually apply this framework to the area of disaster risk reduction (DRR). Although the authors' attention to natural hazards does not significantly deviate from the areas of environmental management and climate adaptation, their views are more human-centric and focus more on managing natural disasters to mitigate harm to humans, rather than to manage an overall ecosystem. The authors argue that the elements of adaptive governance important for DRR are: (i) polycentric and multi-layered institutions, (ii) participation and collaboration, (iii) self-organization and networks, and (iv) learning and innovation. The authors lament that the field of DRR has not learned enough from the literature on adaptive governance.

If adaptive governance is a promising construct from which the field of DRR should learn, much remains to be done. In the past, disaster studies identified factors that affect the effectiveness and/or promptness of disaster response and recovery, such as economic factors (e.g. Carter, Little, Mogues, & Negatu, 2007; Fothergill & Peek, 2004; Robinson & Jarvie, 2008) and social capital (Buckland & Rahman, 1999; George, 2008; Miyamoto, 2010; Nakagawa & Shaw, 2004). A number of studies also shed light on the importance of governance (Aoki, 2015; Birkland & Waterman, 2008; Caruson & MacManus, 2011; Congleton, 2006; McGuire & Silvia, 2010; Menzel, 2006; Mycoff, 2007; Waugh & Streib, 2006). Nevertheless, disaster management studies from the adaptive

governance perspective remain limited.

This study specifically concerns *adaptive disaster governance*, wherein *disaster governance* refers to institutions and rules concerning the stages of disaster management, namely mitigation, preparedness, emergency response, and recovery and reconstruction. The former two stages take place ex-ante (before a disaster), while the latter two are ex-post (after a disaster). Although adaptation can be seen in both ex-ante and ex-post stages, this study focuses on the latter. As illustrated in Fig. 1, no matter how prepared ex-ante disaster governance is, disasters can surprise us with their magnitude, and hence create a capability gap between ex-ante governance and ideal ex-post governance. Filling this gap through ex-post adaptation is deemed particularly important for *resilience*, defined here as the degree to which communities are able to survive, recover, and even grow, after a disaster.

Situations in which stakeholders change the way they work, according to different foreseeable scenarios and pre-determined informal and formal rules, do not involve institutional innovation, and hence are not examples of adaptive governance. Instead, adaptive governance allows the rules themselves to change and new arrangements to come into being, in order to respond to unprecedented, unforeseen shocks that cannot be dealt with through existing rules or pre-determined ways of doing things. Of course, such a phenomenon may not be entirely new to Japan; however, it was new to the area of mobilizing and hiring manpower for municipal governments and their third sectors.

### 3. The case of manpower support in the wake of the 3.11 disasters

Japan is a multi-layered unitary state whose disaster management is the shared responsibility of the national government, 47 prefectural governments, and 1718 municipalities (cities, towns, and villages) (MIC, 2014). The 3.11 disasters affected 227 of these municipalities, stretching over nine prefectures. As a result, 19,074 people died, 2633 went missing, and 6219 were wounded (FDMA, 2014, as of September 2014). Municipal officials were among the victims as well. Some of the most severe casualties occurred in Otsuchi Town; the town office was completely destroyed, and 24 percent of its employees (according to data provided by the Iwate Prefectural Government, 2014) and its mayor died (Otsuchi Town, 2013). Rikuzentakata City lost about 23 percent of its regular staff (Rikuzentakata City, 2014).

Of course, there was manpower flowing into disaster-affected areas through ex-ante arrangements, including the Emergency Fire Response Team, composed of 3961 firefighting teams from 789 firefighter headquarters nationwide (FDMA, n.d.), and through mutual-aid agreements municipalities had made to insure against future risks associated with disasters. However, these arrangements were intended mainly for emergency responses and not for recovery and reconstruction, and the amount of manpower aid was not enough to cover the shortage. Over 1.4 million individual volunteers traveled to help the Tohoku communities (Japan National Council of Social Welfare, 2015; data as of October 31, 2014), but they were not tasked to assist municipal government offices as civil servants. In short, Japan was devoid of governance to boost manpower for disaster-hit municipal civil services and the third sector in the face of such extraordinary devastation and shortages.

In response to the manpower crisis, and to narrow the governance capability gap, the Ministry of Internal Affairs and Communications (MIC) launched a manpower support project in collaboration with the Japan Association of City Mayors (JACM), the National Association of Towns and Villages (NATV), and the disaster-affected governments of the Iwate, Miyagi, Fukushima, Ibaragi and Chiba prefectures. This MIC Scheme was designed to

Download English Version:

<https://daneshyari.com/en/article/1047722>

Download Persian Version:

<https://daneshyari.com/article/1047722>

[Daneshyari.com](https://daneshyari.com)