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Governance in Shaky Societies: Experiences and lessons from Christchurch after the earthquakes

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ABSTRACT

Disasters have the potential to shake societies and their governance systems not only temporarily, but often for years afterwards as well. Studying disaster governance through lenses of social–ecological systems can provide essential insights in disaster contexts, as disasters occur through the interactions between nature and societies. Drawing upon debates on environmental governance, we examine the interactions between different spatial and temporal levels of governance in the face of disasters. Our analysis is based on an in-depth case study of Christchurch, New Zealand, in the aftermath of the 2010 and 2011 earthquakes. International experts usually regard Christchurch as an exemplary recovery process. However, frustration is widespread among people in the city as they call for a more socially inclusive process. These diverging views can be explained by the variety of challenges that the earthquakes pose on the society and the consequent different needs and wishes related to different temporal stages and geographical areas. Homogenous governance approaches for post-disaster recovery for all stages and areas are therefore inadequate, calling for hybrid, more flexible and sustainable governance constellations. A social–ecological approach highlights the dynamic and complex interactions between nature and society, and the hybrid, multi-level character of governance, which both shapes and is shaped by the behaviour and responses of citizens. Regarding hybrid governance as a social–ecological system can therefore help to better understand post-disaster realities and support the design of tailored, time- and place-specific governance systems aiming for enhanced resilience and sustainability. Copyright © 2017 John Wiley & Sons, Ltd and ERP Environment

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Introduction

DISASTERS OCCUR AT THE INTERSECTIONS BETWEEN NATURE AND SOCIETIES AND HAVE AN IMPACT ON BOTH. WHEREAS HAZARDS ARE naturally occurring potential threats that can unexpectedly happen and cause physical and mental damage, events that result in collective and widespread disruptions of the functioning of a social system are described as disasters (Perry, 2007). Social–ecological systems approaches highlight the interrelatedness of humans and the natural environment (Parra and Moulaert, 2016). In this article, we aim to provide further understanding of disaster governance (Melo Zurita *et al.*, 2015) by looking at hybrid post-disaster governance as a social–ecological system. This analytical approach calls attention to the dynamic and complex interactions between nature and society; it also highlights the hybrid, multi-level and multi-actor character of the governance of social–ecological systems in general (Brondizio *et al.*, 2009; Parra and Walsh, 2016), and of those affected by disasters, in particular. As we will see in the Christchurch case, the form and development of a hybrid governance system shapes the behaviours and responses of citizens, and the governance system is also shaped by these behaviours and responses, making governance an iterative process. Investigating the roles, responsibilities and behaviours of state and non-state actors in the Christchurch case study, we examine the actors and institutions in post-disaster multi-level governance settings that aid in capturing the diversity of needs, wishes and perceptions of the different groups involved. We contribute to broader debates on governance as the extreme reality of disasters challenges even the best functioning governance systems.

Building on social–ecological systems principles and academic contributions to the social construction of disasters (Beck, 2006; Pelling, 2011), disasters are the result of natural and ecological factors entangled with social, economic and political ones (Whatmore, 2013). As a consequence, disasters impact societies in non-uniform ways and might hit some societal groups harder than others. This strongly influences the socio-political realities of people across temporal and spatial scales. These relational aspects make the development of an understanding of the social side of recovery processes very important, yet deep analyses of dynamic post-disaster contexts and their governance that take into account the interrelationships between natural and societal processes are very few in number (Newig and Fritsch, 2009). Instead, there is a persisting tendency to regard disasters as purely natural events that humans can eliminate or control, and the result of this is that the practice of disaster management is typically dominated by technical approaches (Aragón-Durand, 2009). Nevertheless, despite extensive technological innovations that improve our ability to forecast and prepare for natural hazards, every year thousands of people are overwhelmed by disasters.

We examine the concepts of hybrid multi-level governance and social–ecological systems in the post-disaster context of Christchurch, New Zealand. In 2010 and 2011, the city of Christchurch was hit by two very major earthquakes and more than 17 000 aftershocks that devastated large parts of the city and surrounding areas.¹ Six years after the most devastating earthquake of February 2011, the recovery process of the city is, in many aspects, internationally regarded as a best practice of post-disaster recovery (e.g. Crowley and Elliott, 2012). Indeed, one of the public participation projects in Christchurch to inform redevelopment plans won an international prize² and the city is listed in the top places to visit of the *Lonely Planet*³ and *The New York Times*.⁴ There is, however, also another side to the picture. In contrast to the view of Christchurch as an exemplary recovery process, many people in the city reveal a more nuanced standpoint arguing that the recovery is not going as successfully as suggested by international media. Based on in-depth interviews that we conducted for this research, people argued that their voices have insufficiently been incorporated in the recovery process. In this article, we analyse this mismatch by unpacking the chain of interrelated social and ecological factors that led to the diverging views.

Acknowledging that societal change is constantly affected by natural issues (i.e. climate change), the use of a social–ecological systems perspective for examining the case of Christchurch enriches our understanding of the post-disaster situation in several ways. First, although New Zealand has good disaster management systems in general, the scale and timing of the series of earthquakes in the Canterbury region were unprecedented. Second, the specific location of the earthquakes was unexpected, in that earthquakes were – and are – predicted to occur

¹Accessible at: <http://www.canterburyquakelive.co.nz/>

²Accessible at: <http://www.iap2.org.au/awards/2012-core-values-awards/new-zealand-regional-winner-2012>

³Accessible at: <http://www.lonelyplanet.com/themes/best-in-travel/top-10-cities/>

⁴Accessible at: http://www.nytimes.com/interactive/2014/01/10/travel/2014-places-to-go.html?_r=0

in other parts of the country. Moreover, the proximity of the epicentre of the earthquakes to the city centre increased the scope of the impact. The nature of the earthquakes, with magnitudes of around 6 and 7 on the Richter scale and at a shallow depth of 5 km, caused very strong ground acceleration. Finally, the composition of the soil in Christchurch – clay, sand and peat instead of a rock soil – led to widespread liquefaction, a process in which solid ground liquefies in a fluid mass, which accounted for a lot of damage. The combination of these features, whereby the location and depth of the earthquakes and the physical response of the land was unprecedented, meant that the societal and governance setup could not have been well-enough prepared for this particular event at this particular location. In this paper, we therefore argue that the natural factors combined with socio-political dynamics continuously changed people's understanding and expectations of both the natural and the governance system, and enhanced their wish to participate in the recovery process. However, when the government in place did not sufficiently enable this participation, people's frustration and mistrust in state institutions grew. Evidence from our research with participants from the local and central government, private sector, civil society and Lincoln University in 2012 and 2014 suggests that local society was shaken by both the physical and the social shocks.

With this article, we therefore aim to contribute to debates on environmental governance by digging deeper into the governance dynamics that are constantly shaped and challenged by nature. After presenting a theoretical exploration of social–ecological systems, disaster governance, and related public engagement and resilience debates, we introduce the methodology used in this research. As our findings on Christchurch show, the needs and wishes of the population affected by disasters are diverse in different areas of the city and among social groups, and they also evolve over time. To conclude, we reflect on how regarding hybrid governance systems as social–ecological systems helps to further grasp the social underpinnings of disasters. The governance system in the case of Christchurch can be regarded as hybrid in four ways: (1) a whole new institution was bolted-on a pre-existing governance system; (2) the intention of grafting the new institution was not meant to be permanent, but for a certain period; (3) not all pre-existing institutions, nor the new ones, were entirely certain of their roles and the legal basis in the post-earthquake governance system; and (4) the addition of the new institutions was bolted-on suddenly rather than being gradually grafted-on, and this provided a second major shock to the social–ecological system on top of the natural shocks.

Theoretical Debates: Governance of Social-Ecological Systems in the Face of Disasters

Social-Ecological Systems and Disasters

Until roughly the 1970s, academia categorized disasters into natural and man-made. However, an increasing number of scholars regarded this distinction as problematic, since the impacts of a disaster are devastating precisely because of human interventions in, and transformations of, nature (Wisner *et al.*, 2004; Perry, 2007). Instead, disasters are today increasingly regarded as the outcomes of the coincidence of hazard, vulnerability and insufficient coping capacity in time and space (Ahrens and Rudolph, 2006).

An analytically more complete approach to define disasters can therefore be found in one that regards disasters from combined social–ecological perspectives (Cote and Nightingale, 2012). These perspectives view the governance of societies as integral to the functioning of social–ecological systems. Emphasizing the dynamic and relational nature of systems (Brondizio *et al.*, 2009), a social–ecological systems perspective argues that changes in natural circumstances and societal responses are interdependent and subject to complex contexts and uncertain futures. Social–ecological systems approaches can describe either gradual change because of interrelated socio-natural processes, or deal with abrupt change when applying them to sudden disasters.

The dynamic characteristic of social–ecological systems is highlighted also by debates on resilience, a concept that originally emerged from ecology (Folke *et al.*, 2010). Since Holling (1973) brought the term to social–ecological systems studies, debate on resilience has flourished in various disciplines. Generally, it concerns 'the ability of complex social–ecological systems to change, adapt, and, crucially, transform in response to stresses and strains' (Davoudi *et al.*, 2012: 302). Resilience reflects the adaptive and transformative capacity of societies to either get back to pre-disturbance pathways or to shift to new development pathways (van der Vaart *et al.*, 2015). When resilience is applied from a social–ecological perspective to post-disaster contexts, it has been used to describe the capacity of

societies to cope with disasters and as a lens through which governance systems can be improved (Pendall *et al.*, 2010; Manyena *et al.*, 2011; Hayward, 2013). So, by applying lenses of social–ecological systems to disaster studies, we acknowledge, first, that a disaster occurs when a natural phenomenon strikes a society that is not resilient enough to adapt to and transform in response to the threat, and, second, that the impact of a disaster can be exacerbated by human intervention.

Governance in Times of Disaster

Recently, an increasing number of studies have focused on disaster risk reduction (Jones *et al.*, 2015), disaster governance (Tierney, 2012), and risk and vulnerability (Ingram *et al.*, 2006). Inappropriate or unfit governance systems can exacerbate the movement from a hazard to a disaster, which can in turn lead to further changes in prevalent structures, norms and values in societies (Folke *et al.*, 2005). There are various ways in which governance discussions are positioned. Central is the general shift within environmental policy and related studies from government to governance (Renn and Klinke, 2015), which means a shift away from the paramount role of a top-down government logic to the importance of multi-actor and multi-level governance systems (Adger *et al.*, 2003). In particular, for the purposes of this paper we distinguish government decentralization from governance devolution in a multi-level setting. Bulkeley and Betsill (2005) explain governance as sharing governing roles within governments and equate it to state rescaling from higher levels to lower levels of authority. An important risk of (incomplete) decentralization of the role of central states is, however, an insufficient degree of financial and political devolution to lower levels of government and non-state actors. As a consequence, these lower levels face the risk of not having the political capacity, power or financial resources to perform their assigned roles. Additionally, the shift to governance triggers discussions about the hollowing out of state responsibilities (Jones *et al.*, 2015). Questions about who actually governs reflect Swyngedouw's (2005) concept of the Janus face of governance, which hides the risk of people being left by themselves without a government that governs and facilitates, and forms a serious risk in disaster contexts.

Building on these debates, we follow the approach of Parra and Moulaert (2016) and define governance more inclusively, by referring to it as shared decision-making roles and responsibilities between a plurality of state and non-state actors on multiple levels, as well as their hybrid configurations. When focusing on the actors, conflicts, collaborations and negotiation processes of which governance systems exist, we look at institutions in societies and their entanglements. With institutions, we refer to 'systems of established and embedded social rules that structure social interactions' (Hodgson, 2006: 18). If institutions are unable to take on hybrid forms – i.e. to take on flexible and dynamic forms according to the specific circumstances – they might not be well suited to deal with a hazard.

The Multi-Level Nature of Hybrid Disaster Governance

When a disaster occurs in a society, institutions are shocked, may 'shake' and in these circumstances they have to be able to cope with the 'trembling'. In some cases, hybrid governance systems may allow for flexibility in the balances of roles and responsibilities between different state and non-state actors in society, and according to specific characteristics of a geographical area and time phase. Yet, there may be cases where they do not provide the requisite flexibility. Viewing hybrid disaster governance in terms of a social–ecological system allows for the possibility that the transformation of societal systems can be fast or slow, that the direction of change is neither necessarily good nor bad, and that the endpoint is not necessarily pre-determined. Indeed, disasters and their recovery processes have been studied in terms of transitions – or disaster cycles – with multiple stages. A transition contains subsequent stages and is fostered through interactions between the multiple governance levels (Kemp *et al.*, 2007). With regard to the multi-actor nature of governance, public engagement is one of the ways in which shared governance roles are manifested and examined. Public engagement refers to the ability of citizens to participate in decision-making processes and the informal and formal channels through which they can influence policy-making (Ahrens and Rudolph, 2006). From a social–ecological systems perspective, this is important because it stimulates collaboration and trust building, and allows for epistemic participation. Epistemic participation refers to the sharing of information to prepare all actors, social groups and their constituents with knowledge about the nature of a disaster, and to provide the opportunity for interested actors to influence policies and processes (Chilvers, 2008). Moreover, because

disasters impact people differently, there is a plurality of perceptions, experiences and diverse realities of the affected people. All voices, including different forms of local and expert knowledge, are valuable for recovery processes to strengthen social capital and sustain attachment to post-disaster places under transformation (Brondizio *et al.*, 2009). Policies and state institutions that allow for public participation of all actors and the integration of their experiences are very important enablers of sustainable and resilient development (Boyd and Folke, 2012).

However, in the context of disasters, and in particular in the immediate aftermath of a disaster, it is typically the central state which is primarily the responsible actor for disaster management. The early stages of post-disaster recovery processes are mainly central-state driven and emphasize emergency management, short-term solutions and ad hoc decision-making (Ingram *et al.*, 2006). This mainly top-down governance may proceed in the longer term recovery process. The subsequent risk here is that it does not allow for the emergence of a more optimal, hybrid balance between central and local governments' roles, which can address the place-specific needs and challenges that arise after the emergency stage (Melo Zurita *et al.*, 2015). As a result, multi-level and multi-actor collaboration aimed at longer-term sustainable recovery processes and resilience building is often obstructed (OECD, 2013). In the following sections, we explore multi-level governance dynamics in the aftermath of the earthquakes that struck Christchurch and aim to grasp the interrelationships between different actors and the natural environment.

Methodology

The in-depth case study of governance in the recovery process of Christchurch is based on extensive fieldwork in the wider Christchurch area in late 2012 and early 2014. In preparation for conducting interviews, we carried out a detailed document analysis of the recovery plans⁵ and observed public engagement activities organized by, for instance, the Christchurch City Council (CCC). In our position as both foreign and local researchers in Christchurch, we had privileged access to key stakeholders in the recovery process and conducted 40 in-depth interviews with respondents from a variety of roles and backgrounds (see Table 1 for a list of interviewees). We group the stakeholders in the recovery process of Christchurch in different kinds of institutions. When referring to public and private institutions, we mean, respectively, state actors and private sector businesses operating within, and interdependent of, legal institutional frameworks (Hodgson, 2006). With civil society institutions we refer to (groups of) actors which are outside state or private sector institutions, but still mutually influenced by them, including civil society organizations, non-governmental organizations, lobbying groups or coalitions with the private sector (Hodgson, 2006).

It was essential to take the sensitivity of the topic into consideration when interviewing people about the aftermath of the disaster, especially because the first interviews were conducted just 18 months after the earthquakes. We aimed to strengthen the validity of the information by transcribing and coding all interviews. Moreover, the interviews were based on written prior informed consent stating both our and the respondents' rights and obligations. This proved to be very valuable, since the participants could fully share their experiences without being afraid of misuse of their information.

Findings

Setting the Scene: 'Shaky' Christchurch

Christchurch is located on the South Island of New Zealand and is the second biggest city of the country with 436 056 residents (Statistics New Zealand, 2015). The first earthquake in the Canterbury region, in which Christchurch

⁵The plans consulted for the document analysis were: Central City Plan (CCC, 2011a); Christchurch Central Recovery Plan (CERA, 2012a); Draft Recovery Strategy for Greater Christchurch (CERA, 2011); Recovery Strategy for Greater Christchurch (CERA, 2012b); Stronger Christchurch Infrastructure Rebuild Plan (CCC, 2011b); Community Engagement Strategy (CERA, 2012d); Community Engagement Framework (CERA, 2012e). See also: Dalziel and Saunders (2012).

Stakeholder group	Organization
Government	Members of Parliament (MP), Canterbury Earthquake Recovery Authority (CERA), Christchurch City Council (CCC), Waimakariri District Council, Stronger Christchurch Infrastructure Rebuild Team (SCIRT), Environment Canterbury
Community	Gap Filler, Greening the Rubble, Life in Vacant Spaces, CanCERN, WeCan, Canterbury Business Leaders Group, Sumner community organization, Mount Pleasant community organization, ReNew Brighton, ReBuild Christchurch, Avon-Otakaro Network, Aranui community organization, Lyttleton community organization
Research	Lincoln University, University of Canterbury, Landcare Research
Other	Independent journalist, company Boffa Miskell, architecture company, Enterprise North Canterbury

Table 1. Participant organizations of the research project

is located, occurred on 4 September 2010. It was of magnitude 7.1 on the Richter scale, which was the most severe registered earthquake in the history of Christchurch. A second large earthquake occurred on 22 February 2011. This earthquake was smaller in magnitude but far more devastating in terms of casualties, physical damage costs, and disruption to normal life, mainly due to the proximity of the epicentre to the city. The events were worsened by ongoing tectonic activity that lasted for around 2 years.

New Zealand is a hazard-prone country where earthquakes and other tectonic hazards are not rare, yet the earthquakes in Christchurch were unexpected. Linked to the low levels of knowledge and experience of governments and citizens with earthquakes in Christchurch, a member from the Canterbury Business Leaders Group (2012) stated that he thought that it was in fact a very bad earthquake in the northern capital city of Wellington – where seismologists are predicting a big earthquake – when the first earthquake hit. The unexpected earthquakes and the local low level of preparedness were particular for the case of Christchurch. The interwoven social and ecological processes, along with the scale and nature of the Canterbury earthquake sequences, overwhelmed both national and local public, private and civil society institutions (Saunders and Becker, 2015).

New Zealand is a parliamentary democracy and planning processes in the country are mainly dependent on the Resource and Management Act (RMA) 1991. This flexible planning tradition aims to promote sustainable development through a three-tier government structure with a big role for local government, and a small role for the central government (Saunders and Becker, 2015). Furthermore, public participation has to be integrated in key stages of planning processes (Ericksen *et al.*, 2004). Figure 1 shows a diagram of disaster governance arrangements relevant for our analysis. In case of a hazard or risk of national significance, Civil Defence is enacted by, and as part of, the central government to coordinate, implement and evaluate emergency management actions. After an emergency, these responsibilities are transferred to the local government and local emergency management groups (Civil Defence, 2016). The local institutions in Christchurch were able to cope with the first earthquake of September 2010, which mainly hit the wider Christchurch area and to a lesser extent the city centre. The city council of Christchurch and the district councils of the surrounding districts Waimakariri and Selwyn were the local governments responsible for the recovery of the wider area. Additionally, the central government appointed a commission to support the recovery, consisting of mayors of the three local districts and four government appointees (CERA, 2012b, 2012c).

However, when the more devastating earthquake occurred in February 2011 – because of its proximity to the city, shallow depth and the physical response of the soil (liquefaction) – the local institutions in place were pushed beyond their capacity to deal with the event. The central government declared a national state of emergency in which the national Civil Defence played a major role. Moreover, resulting from the Canterbury Earthquake Recovery (CER) Act 2011, the central government set up the Canterbury Earthquake Recovery Authority (CERA) as a central government ministry. CERA had a bigger mandate than a normal Civil Defence response and was meant to support the local institutions, take overall responsibility and lead the recovery of greater Christchurch, focusing on the reconstruction and improvement of the social and physical infrastructure. Since CERA was officially set up for the recovery of the whole affected Canterbury region, the Christchurch Central Development Unit (CCDU) was the local branch of CERA responsible for planning the rebuilding of the city centre. The CER Act expired 5 years after its commencement, which meant that CERA transferred responsibility for the recovery of the greater Christchurch area to the local governments in April 2016 (CERA, 2012b, 2012c).

Figure 1. Selected disaster governance arrangements for the Christchurch earthquakes. (source: Authors)

Governance among Governments: Public Institutions in the Recovery Process

For the recovery process of Christchurch, CERA designed a recovery model containing four main stages: emergency, restoration, reconstruction and improvement. This model refers to the leadership role of CERA, on the one hand, and to the collaborative relationships between CERA and other agencies, on the other (CERA, 2012a). We observed tensions between multiple actors with different needs and wishes in different stages of the recovery process that were constantly challenged by the nature of the earthquakes.

According to the research participants from various government, private and community organizations, the roles and responsibilities of the various state levels involved in the post-disaster recovery were insufficiently clear. Also, their relationships with private and civil society actors caused confusion (Member of Parliament and respondents from the CCC, WeCan and Lincoln University, 2012 and 2014). When we analyse according to theory the activities that are best suited to each actor's level in the multi-level governance system (Kemp *et al.*, 2007), CERA could best be devoted to longer-term goals and envisioning processes and be responsible for strategic processes regarding the rebuilding of the greater Christchurch area. Local governments, such as the CCC, would be better suited to shorter-term implementation of projects in the city itself on a more operational level. However, a reversed relationship with regard to the role of higher and lower governments can be observed, as further explored below [respondents from the CCC, Stronger Christchurch Infrastructure Rebuild Team (SCIRT) and the Canterbury Business Leaders Group, 2012 and 2014].

The intervening of CERA in the local context altered the balance and relationship between the multiple levels of governance in several intertwined ways. First, the new 5-year time frame of the CER Act and CERA was superposed with the existing 10-year time frame of the local district plans. Second, the establishment of CERA altered the flows and allocation of resources between central and local governments (Ericksen *et al.*, 2004). Third, in geographical terms, whereas the CCC was the local authority responsible in 'normal' times, CERA took a leading role in the city after the February earthquake. A local Member of Parliament (2012) argued in this respect that CERA made the recovery process political: 'the initial earthquake commission was independent but had no power and CERA is powerful, but has no independence'. So, the central level suddenly became a political entity physically present at the local level and also became directly involved in, for instance, local land-use planning. After the emergency management stage, the recovery process remained officially partly the responsibility of CERA and partly of the local

governments (CERA, 2012b). However, according to a participant from Lincoln University (2014), in reality CERA was mainly dominant in the recovery of the central city, because the authority of the central government was needed to make decisions about, for instance, land-use rights. In this regard, an interviewee from the CCC (2014) argues that many councillors at the local government felt marginalized by the role of the central government, because CERA 'stepped-in and took over'. The local governments had to adjust to the new institutional situation, which caused confusion and an ambiguous division of responsibilities between various state and non-state institutions (respondents from Sumner Community Organization and Lincoln University, 2012 and 2014).

In contrast to the literature on disaster governance that emphasizes the importance of sharing governance responsibilities in the recovery after disasters, here we see that along the entire process most of the power and resources were concentrated in the central government ministry. New Zealand's institutions were, on a national level, prepared for a disaster (Dalziel and Saunders, 2003), but were not sufficiently well suited to deal with the aftermath of the Christchurch earthquakes. The inadequate governance response for the specific situations of people potentially exacerbated the movement from a hazard to a disaster.

Governance beyond Governments: The Role of Private Institutions and Civil Society

Research participants from CERA and the CCC (2012 and 2014) explained that their organizations organized several public engagement activities as part of the city's recovery, aiming to integrate the views of the people in the recovery plans and keeping people attached to their city under transformation. In May 2011, people could share their ideas for the future of the city in the 'Share an Idea' event. As part of the project there was an expo in the city stadium where people engaged and collaborated with others in the form of various games – i.e. the game 'Magnetic South'⁶ – and listened to international and local architects and planners. The 104 000 ideas that resulted from this project led to the draft of the Christchurch Central Recovery Plan. Another engagement project called 'Tell us What you Think', organized in August 2011, gave people room to give their opinion about this draft. The government then opened other more conventional public participation channels to provide feedback on the recovery plans, such as the opportunity to send in critiques on certain decisions (respondents from the CCC, CERA and Landcare Research, 2012). The first 'Share an Idea' event made people positive about the inclusive recovery process and set the 'standard' for later stages.

However, as the recovery proceeded, tensions arose mainly due to dissatisfaction about the public engagement organized by CERA and the CCC. According to research participants from Canterbury Communities' Earthquake Recovery Network (CanCERN), Canterbury Business Leaders Group, Gap Filler and Lincoln University (2012 and 2014), people's expectations raised by 'Share an Idea' were not met and there were no follow-up activities after this event. They argued that participatory activities were not sufficiently integrated and ideas from the public were not satisfactorily reflected in the final recovery plans. In the words of a local Member of Parliament (2012): 'They have probably taken those words, but they have made it something else', referring to the integration of the ideas obtained from 'Share an Idea' in the final Christchurch Central Recovery Plan. Besides the criticism on public participation organized by the government, it appears that they did not acknowledge the value of the bottom-up initiatives organized by civil society. A member of the civil society organization Gap Filler (2012), a group that initiates cultural activities on locations where destroyed and removed buildings left empty spaces in the city, argues: 'My honest opinion is that [...] the pop-up stuff, the temporary architecture, the creative solutions, is seen as very nice and great, but it's not taken seriously, because the real stuff is the infrastructure and the convention centre, and that's given.' Instead, CERA was more focused on attracting investors for the city centre, which overshadowed the most urgent needs of the citizens of the region, as these words by the member of Gap Filler (2012) illustrate: 'The recovery process of Christchurch is very top-down, government-led, results-focused and private investment-driven'. This argument is shared by a representative from the community organization WeCan (2012): 'The general feeling is that there is an ideology that the national government is promoting in Christchurch, and that is a top-down, corporate, dictatorial approach without consultation [...] People are not part of the recovery process in Christchurch, so we feel

⁶The online game 'Magnetic South' was an initiative of the Research Institute Landcare Research and lasted 24 h. It was aimed to generate ideas and explore the future of post-earthquake Christchurch together. Around 850 people from New Zealand and abroad joined the online discussion game, generating 9000 ideas (researcher from Landcare Research, 2012).

quite disempowered.’ These various perceptions reflect how the process turned to be mainly top-down driven and discouraging for public engagement.

From their part, CERA states in its plans that public engagement is central in the recovery of the city. In the words of our interviewees from CERA (2012), they engage a lot with its strategic partners: ‘CERA engages in every step of the process with (a) the local government, because we are in their space, (b) “Iwi”,⁷ because we are in their space, and (c) the central government, because they have policies and directions that we need to nest within.’ By contrast, they declare that: ‘We do have a community engagement strategy and a community engagement framework, [but] we haven’t got clear guidelines about what it means to talk to everyone [...] And so, what does engagement mean and how can we engage with them?’ Despite the engagement that was indeed organized by the central government, there is criticism that CERA stayed on a too high level instead of really engaging and collaborating with communities, as a member from the Canterbury Business Leaders Group (2012) illustrates: ‘There is a belief that “mother knows best, therefore will do and tell you”. [...] When you are seven floors in the air, you cannot hear what we breathe downstairs.’ Moreover, public engagement was not open to everyone, thereby hindering epistemic participation. A respondent from the neighbourhood organization of Sumner (2012) criticized the selective way in which the engagement was organized: ‘You had to get an invitation to participate and actors were chosen very randomly’. So, for many people public engagement in the recovery process of Christchurch appears to have been mainly token and conducted as a ‘tick-the-box-exercise’ rather than as real participation (respondents from CanCERN, Gap Filler and Lincoln University, 2012 and 2014).

What causes this gap between adequate participatory recovery processes on paper and dissatisfaction among many citizens in the real-life post-earthquake city? Confidence of people in the public institutions was undermined because the existing governance system and technical construction standards were not sufficiently prepared to deal with the (post-)disaster context. Moreover, the government did not fully share their knowledge with the people, which hindered the co-building of resilience. A member of WeCan (2012) argues in this respect that: ‘You weaken community resilience when you tell the community what to do and impose on a community. So, on the whole, it is felt certainly for us most affected, it is felt like we are not listened to, you just have to wear it. You hear a decision in the media, you have no idea what is going to happen next. And that crushes people.’ A direct consequence of how the decisions were finally taken and the recovery plans created is that many people felt disempowered by the government because of not being truly able to participate. Although a local Member of Parliament (2012) argued that participation enables people to stay attached to their place in the transition from the disaster event towards the future and to gain ownership of their destiny, the increasing demand for engagement was not answered by public participation activities organized by the government. This caused frustration among people and a growing distrust in the government.

Time pressure is another factor that hindered recovery towards a more resilient city. According to a public official from Waimakariri District Council (2012): ‘Recovery is a marathon, not a sprint. It’s a journey, the process of recovery is as determining of the success of the recovery as the physical rebuild, in terms of people’s heads. And how to function as a community.’ People wanted to be encouraged to reconnect with their city instead of passively waiting for the government’s response. A member of Gap Filler (2014) tells us in the light of the importance of engagement for creating resilient societies that:

‘The plans reflect what the people want, but also what fits with what the government wants. [...] I think there’re a lot of people that are anti-council or anti-CERA, but I think the vision for the city [...] of being people-friendly, green, safe for cycles and vibrant, that’s quite an honest expression of what people want. [...] I do think that’s come through from all this process, but then there’s all these other things that you need in a city that are coming from the government. [...] It’s more like deciding: ‘Well these are the things that you need for a city, and these are the things that you need to attract people here for the economy, for the future of Christchurch.’ [...] I don’t mean to suggest that those things are irrelevant, they’re not, they are needed. But you also need to balance that against the community, what do they want?’

⁷Iwi’ refers to a tribe of the original Maori population of New Zealand (researcher from Lincoln University, 2014).

These insights reveal the importance of participation in multi-level governance – i.e. the different values embraced by private and civil society actors – in the creation of more resilient places in the face of disasters.

Discussion: A Critical Reflection on Post-Disaster Governance in Christchurch

A major finding of this research concerns the role of time and space in hybrid and dynamic disaster governance. Since disaster-prone areas are not affected homogeneously by disasters and might constantly be challenged by nature (Beck, 2006; Pelling, 2011), there is a diversity of needs, expectations and urgencies spread out across the different geographical areas. This leads to different transition stages with distinctive spatial challenges, as is evident from the case study of Christchurch, but also, for instance, from post-earthquake L'Aquila in Italy, Bangladesh after numerous typhoons, and New Orleans after Hurricane Katrina.

Differences between post-disaster areas regarding the scale of devastation and the speed of the recovery processes are a major contributor to discrepancies in the articulation between the different levels of government and the citizens. In the case of Christchurch, this is illustrated by our finding that some people felt forced to think about the future of the city centre while they still lived in emergency conditions in badly affected suburbs mainly in the eastern parts of the city. Citizens who lived predominantly in the south and west of the city, however, had already started reconstruction activities and worked on plans for the future of the city centre (respondents from Waimakariri District Council and CanCERN, 2012 and 2014). This caused mismatches regarding the focus of the government on the future of the central city, and the help that some people in the suburbs needed for the situations in which they were living. Citizens wanted to have a voice in the recovery process, but the participation activities did not match their living conditions, which were not stable because of the physical and social damage from ongoing seismic activity. Therefore, the public engagement activities as part of the recovery process are regarded as very successful by some citizens and as insufficient and inaccurate by people who were not yet ready to think about the reconstruction of the city centre. The need to incorporate the realities of all people (Chilvers, 2008) calls for different – or hybrid – forms of engagement in different stages of the post-disaster transition. These different forms of engagement should be based on the characteristics of a particular stage, geographical area and concrete needs of citizens given the specific post-disaster situation, leading hopefully to hybrid governance forms favouring resilience and sustainability. This is underlined by a research participant from Waimakariri District Council (2012): 'And so we move from mass to much more customized, individual stuff'. Also, two members from the community group CanCERN (2012) argue: 'The content would change of course. I mean in the rescue phase, you're saving lives, immediate lives and getting lives back on track. So the content that you're working with is gonna be focused around those things. When you move in the recovery phase, the content would change to a longer term.'

The Christchurch case therefore shows that hybrid constellations of governance between public, private and civil society institutions would aid most in capturing the diversity of needs and wishes of people before and after a disaster. Our case study points to four major features that make the post-earthquake governance system in Christchurch hybrid: (1) a new institution, CERA, was superimposed on a pre-existing and very different governance system; (2) the intention of grafting the new institution was not meant to be permanent, and despite the formally definite period, in reality it was somewhat undefined; (3) not all pre-existing institutions, nor even the new ones, were entirely certain of their roles and legal basis in the post-earthquake governance system; and (4) the addition of the new institutions was bolted-on suddenly rather than being gradually grafted-on, and this provided a second major shock to the social–ecological system on top of the natural shocks. However, the governance response that followed from this hybrid governance set-up was not as hybrid as was needed, because the city was approached as homogenous by the external actors, despite the need for tailored and flexible governance constellations in the different areas and phases. This added additional layers of complexity, which also possibly hindered potentially constructive initiatives and responses. Whereas many social–ecological systems display gradually adjusting and shifting development trajectories, the actors and institutions in this particular hybrid governance case were shifted and shocked by both the natural and the institutional shocks.

Conclusion: The way Towards Resilience and Sustainability for Christchurch

In this article, we discussed how the interactions between environment and society disrupt societies, and how these disruptions unfold. We observed that the international recognition of ‘good practices’ of disaster governance does not necessarily or accurately reflect the multiple social realities, arrangements and processes that are taking place at different levels. A social–ecological systems perspective acknowledges that the type of shock event influences the various ways in which societies are affected, and consequently calls for specific governance responses. The case of Christchurch highlights the value of this perspective for governance, as the societal side of the recovery process is constantly shaped by natural processes: the nature, scale and location of the earthquakes were all different from what was planned for. This triggered changes in expectations and trust of people in the public institutions, and led to the shaking of the society on top of the shaking of the earth. The uncertainty and complexity inherent to the disaster context resulted in a situation in which neither the government, nor the private sector and civil society knew precisely the direction in which the transition was going. The continuous changes in people’s daily context meant that they had to construct new development paths and wanted to contribute to finding the direction for the future of their city.

Nevertheless, the degree to which people were able and enabled to play these democratic roles differed along the recovery process and within the different areas affected by the disaster. This caused considerable tensions during the post-disaster stage. The actors leading the governance response after the disaster were not suited to capture the plurality of post-disaster needs of those affected. Disagreements on both the process through which to become a more resilient city and on what it means to be resilient further worsened the post-disaster situation. Moreover, ongoing challenges and impact of the earthquakes caused a situation in which neither the government nor people had sufficient knowledge or experience. This only disempowered and frustrated people, increased their wish to be engaged with the processes, and called for a full and mutual sharing of expert and local knowledge in governance.

How can these empirical insights on governance in challenging environments inform the design of governance systems to allow societies to become more resilient, and can we go a step further in both the theory and the practice of disaster governance? The design of multi-level governance systems with the ability to take on hybrid forms could provide a valuable contribution to answering these questions and would aid most in capturing the needs and expectations of people. As such, these systems could allow a better grasp of multiple and hybrid realities that exist in different phases and geographical areas after a disaster. For instance, in the early response stages after a disaster, there is generally a consensus among people as they request the government to take a leadership role. Nevertheless, when recovery processes transition to later stages, the situation within the city becomes more varied and people want to become more engaged. So, demands for participation in later stages of the recovery, in which civil society institutions are taken seriously and invited to collaborate with the different state institutions and private sector, do not exclude the need for a bigger role of the (central) government in early stages. This points to a need for hybrid forms of governance that allow for an adequate balance between the involved actors in different stages, and that in particular contribute to avoiding the situation in which short-term decisions constrain longer-term sustainability aspirations. Both the ways to better understand governance and the creation of governance responses in challenging contexts should lie in the hybrid character of governance. The window of opportunity that a post-disaster recovery setting offers for moving forward calls for realistic management of the expectations of people to strengthen their resilience. A move towards hybrid, tailored, place-specific and multi-hazard approaches, rather than to ‘one-size-fits-all’ top-down solutions, can therefore form the basis for improved disaster governance.

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