PAPER NAME AUTHOR

Collaboration and disaster critical responses after tsunami events in Indonesia.pd f

WORD COUNT CHARACTER COUNT

9015 Words 51370 Characters

PAGE COUNT FILE SIZE

19 Pages 2.1MB

SUBMISSION DATE REPORT DATE

Jan 20, 2023 10:04 AM GMT+7 Jan 20, 2023 10:04 AM GMT+7

Arizka

11% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

- 10% Internet database
- Crossref database

- 6% Publications database
- Crossref Posted Content database

Excluded from Similarity Report

- Submitted Works database
- · Quoted material
- · Manually excluded sources

- Bibliographic material
- Cited material



Environmental Hazards



ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/tenh20

Collaboration and disaster: critical responses after tsunami events in Indonesia

Arizka Warganegara & Maxim G. M. Samson

To cite this article: Arizka Warganegara & Maxim G. M. Samson (2021) Collaboration and disaster; stical responses after tsunami events in Indonesia, Environmental Hazards, 20:4, 345-362, DOI: 10.1080/17477891.2020.1813680

To link to this article: https://doi.org/10.1080/17477891.2020.1813680

	Published online: 02 Sep 2020.
	Submit your article to this journal $oldsymbol{G}$
lılıl	Article views: 487
Q	View related articles ☑
CrossMark	View Crossmark data 🗹
4	Citing articles: 1 View citing articles ☑





Collaboration and disaster: critical responses after tsunami events in Indonesia

Arizka Warganegara [©] and Maxim G. M. Samson [©]

^aDepartment of Government Studies, Lampung University, Bandar Lampung, Indonesia; ^bDepartment Geography, DePaul University, Chicago, IL, USA

BSTRACT

ampung, located in the southern part of Sumatra, is an example of a disaster-prone province in Indonesia. South Lampung regency in particular is at potential risk of three natural disasters: tsunamis, earthquakes and volcanic eruptions. Through drawing upon interviews with authority figures from two districts of the regency (Kalianda and Rajabasa) and applying the collaborative governance theory of Ansell and Gash, this article contributes in two important ways to the literature on post-tsunami response. First, we identify the role played by three groups - local government, adat and religious institutions - in negotiating the post-tsunami response process, alongside the socio-technical issues encountered. Second, through applying and refining the ideas of Ansell and Gash, we create a model that may be used to stimulate collaboration between the three groups to better deal with tsunami events. It is evident that when local government lacks the capability to coordinate post-tsunami response, disaster management may easily descend into chaos. By identifying the resources each group brings to the table, we believe that our model can help encourage different actors to collaborate when responding to such disasters.

25 RTICLE HISTORY
Received 25 March 2020
Accepted 14 August 2020

KEYWORDS

Local government; custom community; collaborative governance; post-tsunami response; tsunami

Introduction

On 22 December 2018, the eruption of the Anak Krakatau volcano, situated the Sunda Strait between the islands of Java and Sumatra, triggered a tsunami that devastated several areas of Indonesia's Banten and Lampung provinces. The head of South Lampung's district disaster management agency, Badan Penanggulangan (BPBD), informed the media of the four areas hit by the tsunami: Kalianda, Rajabasa, Sidomulyo and Katibung (DetikNews, 2018). According to the local government's official record, 108 people were killed, 279 were injured, nine were reported missing and 1,373 were displaced (Widiastuti, 2019). Given these severe impacts, the disaster accentuated the need for a coordinated government strategy, one that seemed to be absent in this particular case.

Certainly, too often preparation for and response to hazards such as tsunamis appear inchoate or even non-existent. In the last two decades, major tsunamis

have tested the resolve of governmental and non-governmental actors in countries including Indonesia, Thailand, Sri Lanka and Japan. According to the Centre for Research on the Epidemiology of Disasters, between 1994 and 2013, '[e]arthquakes (including tsunamis) killed more people than all other types of disaster put together, claiming nearly 750,000 lives'; moreover, '[t]sunamis were the most deadly sub-type of earthquake, with an average of 79 deaths for every 1,000 people affected, compared to four deaths per 1,000 for ground movements', rendering them 'almost twenty times more deadly than ground movements' (CRED, 2015, p. 7). Considering such destructive potential, it is essential that disaster response be coordinated and that stakeholders draw from existing knowledge and experience in order to react in a clearly targeted manner.

With regard to the 2018 Sunda Strait tsunami, we argue that the lack of coordination among the three key groups involved in the disaster response phase – specifically local government, customary community or adat leaders and religious institutions – resulted in a slow and inadequate process. To this end, the create a model that can be used to facilitate collaboration between these three groups in order to improve post-tsunami disaster response in South Lampung and other at-risk areas. Thi 14 ticle is structured as follows. The subsequent section reviews some of the literature on post-tsunami disaster response and further explains the rationale behind this study. After providing an overview of our investigation's methods, we share the results attained regarding the tsunami response, divided into two subsections. The role of local government and adat communities first; the role of religious institutions second. Thereafter, we present a new collaborative model by which to respond to tsunami events in the discussion, before concluding.

Tsunami response

Lampung is located in the southern part of Sumatra and represents a clear example of a disaster-prone area. Most famously, the eruption of Krakatau in 1883, which resulted in casualties as far as 120 km away (Latter, 1981), exemplifies Lampung's vulnerability to various seismic events. In addition, its regional autonomy, a result of the decentralisation policy initiated in 2000 through Law No. 22/1999, enables the local authority to govern based on local needs and interests. Consequently, formal governmen deaders such as the head of the regency (regent), local members of parliament and other officials assume a key role in dealing with disaster problems. However, a further aspect that the local government must consider is the community's adat system (Henley & Davidson, 2008 Pricle 18b, section 2 of the 1945 Constitution of the Republic of Indonesia declares that the state recognises adat systems as long as their existence and values rely on and are embedded within the state's principles. In this sense, the adat system is an integral part of local government. According to Elmhirst, '[a]da eself is quite a complex notion: it is defined in different ways in different places and among different groups. In some instances, it has no territorial bearing, whilst in others it is associated with particular geographically bounded areas' (2001, p. 292). For the purpose of this investigation, we utilise Tyson's definition of adat as intedated systems of governance [that are] based on oral traditions and customary law, provide a ceremonial protocol for marriages and funerals, or determine patterns of land usage and entitlement, among other things' (2008, p. 1).

In addition to these groups, and despite constitutionally being a secular country, 95.5% of Indonesia's population identifies as Muslim, including 95.7% in South Lampung (Central Statistical Bureau of Indonesia, 2010), and Islamic values are central to understanding how social, political and religious affairs interact in the context of daily life here. The country does not sit outside the influence of its religious leaders and organisations, hence one cannot consider secular state mechanisms alone when investigating disaster response. Thus, in this paper we discuss how althree groups – local government, adat and religious institutions – negotiate tsunami events in South Lampung.

An emphasis on collaboration in post-tsunami response is essential for several reasons. First, although there is abundant literature on post-tsunami disaster response (see e.g. Hutanuwatr et al., 2013; Moshtari & Gonçalves, 2017), few studies have sought to construct a model of collaboration that might be used to identify its dynamics with a view to increasing its efficacy. One valuable exception is Martin et al.'s (2016) classification of the 'Four Cs' of disaster partnering: communication, cooperation, coordination and collaboration. Martin et al. arque that these activities are distinct, constituting a 'continuum of interorganisational embeddedness', with individual organisations demonstrating differing levels of ability in each, necessitating partnership (2016, p. 638). Significantly, the authors present collaboration as the most challenging of the Four Cs, requiring that each participating organisation align its efforts with its counterparts, a time-consuming and resource-intensive task, but one that has received less attention than coordination in particular (Martin et al., 2016). In response, our paper is centred on collaboration, and in contrast to Martin et al.'s broader focus on international organisations' engagement in disaster partnering, we accentuate the important role played by domestic actors, groups that these authors recognise are often regarded as difficult to integrate into the overall response. Indeed, collaboration may be constrained by a range of contextual, interorganisational and innerorganisational factors (Moshtari & Gonçalves, 2017), complicated further by the diversity of organisations that suddenly appear in the field (Parmar et al., 2007). Any model of collaboration must therefore be adaptable and consider the assets each actor can offer.

Second and relatedly, collaboration appears to represent an especially important issue with regard to religious groups. Certainly, in countries such as Indonesia that are seeing rapid economic development, many agencies affiliated with religious traditions are playing a growing role in disaster response (Joakim & White, 2015), in contradistinction to the traditional (although in many cases erroneous) positioning of religion as external to development (McGregor, 2010). Although evangelisation (Ensor, 2003; Nurdin, 2015) and religious perspectives that present disasters as a form of divine retribution (Adiyoso & Kanegae, 2013; Gianisa & Le De, 2017) are not welcomed by all, it is important to acknowledge that religious actors are highly diverse and accordingly engage with and are received in varied ways by local communities and other disaster response organisations (Bush et al., 2015; McGregor, 2010). In particular, local religious groups are likely to be intimately familiar with local needs and capable of mobilising communities, building their resilience and solidarity and increasing public awareness that a disaster may occur at any time (Gianisa & Le De, 2017; Joakim & White, 2015; McGeehan & Baker, 2017). Mosques and other religious structures can play a number of vital functions, such as providing refuge and psychological and emotional support, storing supplies, raising and distributing donations (often from places that share the same religion) and sharing information via their loudspeakers (Gianisa & Le De, 2017; Joakim & White, 2015). In Indonesia, three of Indonesia.

the most significant religious organisations engaged in disaster response are Muhammadiyah, a reformist Islamic civil society organisation (CSO) founded in 1912, the Muhammadiyah Disaster Management Center (MDMC), which was established by the previous as its professional disaster response organisation following the 2004 Yogyakarta earthquake, and Nahdlatul Ulama (NU), a traditionalist Sunni Islam movement, established in 1926. These actors must be considered in any analysis of collaboration in disaster response in

The 2018 Sunda Strait tsunami is used here to explain and demonstrate the value of a new model of collaboration among different organisations, both secular and religious, involved in post-tsunami response. Part of the importance of this event to our investigation is its recentness, in contrast to more internationally known but now relatively old disasters with a religious dimension, most notably Aceh following 2004 Indian Ocean tsunami (e.g. Feener & Daly, 2016; McGregor, 2010; Nurdin, 2015). Furthermore, unlike Aceh, which represents a rather unusual case as the sole Indonesian province with the official autonomy to enact sharia law (Nurdin, 2015), Lampung may be regarded as more typical of the balance between religious and secular values that characterises much of Indonesian society more broadly. Moreover, Indonesia as a whole shares certain important commonalities with other Southeast Asian countries like Malaysia, the Philippines and Thailand, from the varied social and environmental impacts of rapid economic development and industrialisation, including the growth of commercial tourism (Resurreccion et al., 2008), to the continued importance of religion in society (Liow, 2016) as well as the vulnerability of much of its population to tsunami hazards (Global Facility for Disaster Reduction and Recovery, 2017). Consequently, Lampung offers an appropriate case study for the development of a collaborative model of post-tsunami response that can be applied in other parts of the region that are similarly prone to tsunami events and whose economies and societies have analogous characteristics. This aim is supported by the following research questions:

- 1. What roles delcal government, adat and religious institutions play in post-tsunami response?
- 2. What are the most significant social and technical issues they face?
- 3. How might these findings facilitate the development of a model of collaboration when responding to tsunami events?
 - The following section presents the methods used for this purpose.

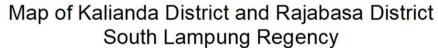
Methods

This study is partly inspired by Ansell and Gash's collaborative theory, which defines collaborative overnance as

a governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets. (2008, p. 544)

This theory offers the potential for a deeper understanding of the case study, through which we will analyse the responses and collaboration of officials from the groups (local government, adat and religious institutions) in dealing with the Sunda Strait tsunami's impacts in South Lampung. Specifically, we examine collaborative governance by using Ansell and Gash's six2-iteria: (1) the forum is initiated by public agencies or institutions; (2) participants in the forum include non-state actors; (3) participants engage directly in decision making and are not merely 'consulted' by public agencies; (4) the forum is formally organised and meets collectively; (5) the forum aims to make decisions by consensus (even if consensus is not achieved in practice); and (6) the focus of collaboration is on public policy or public management (2008, pp. 544–545). We use these concepts to scrutinise the existing conditions faced by the three groups when responding to tsunami events and ultimately propose a new model of collaborative work that can be used in future.

The research was undertaken between September 2019 and February 2020 in two districts of South Lampung: Kalianda, the capital of the South Lampung regency; and Rajabasa, the location nearest to and most severely affected by the tsunami in 2018 (see map in Figure 1). Elite interviews, whose purpose is 'to provide an insight into the mind of that particular political actor' (Harrison, 2001, p. 94), were conducted in order to explore particular topics related to authority and thereby attain substantial information regarding the role of these local elites in dealing with tsunami events. Participants were selected via purposive sampling, based on criteria such as role, knowledge and experience



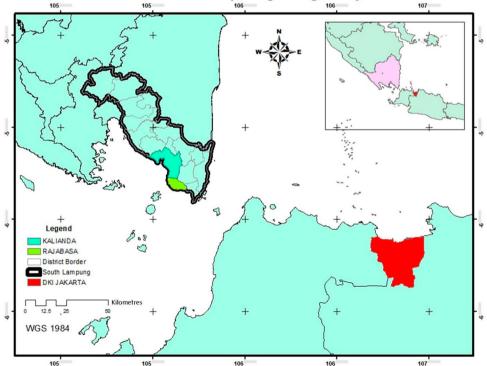


Figure 1. Map of Districts of Kalianda and Rajabasa, South Lampung.

Source: Badan Informasi Geospatial (2020), adapted by the authors.



related to the tsunami. Our eight anonymous interviewees comprised two local government officials figure from a relevant independent statutory authority, key stakeholders from two of South Lampung's adat communities² and three representatives from the religious groups NU, Muhammadiyah and MDMC. All interviews were conducted by the first author in Indonesian and took 60 min on average. The interviews were audio-recorded with the respondents' permission, transcribed, translated into English and coded using thematic narrative analysis.

The investigation received ethical approval from DePaul University's Institutional Research Board (Research Protocol #MS120319GEO) the following section we present the results, specifically focusing on the role and the socio-technical issues faced by the three groups when responding to tsunami disasters.

Results

This section elaborates on the role played by the three different groups in responding to the 2018 Sunda Strait tsunami, first with reference to local government and adat communities, second as regards religious institutions.

Local government and adat communities

Local government is central to the political process in the democratic era, especially since Indonesia's political reforms of 1998. However, instead of merely relying on formal political institutions when dealing with natural disasters, adat communities also play a significant role in tending to people's needs, especially since the central government replaced Village aw No. 5/1979 on village government with Law No. 22/1999 and Law No. 6/ 2014.4 In Indonesian local politics today, these groups, which are widely perceived as holders of local traditions (Bubandt, 2004), are thus often mobilised by local government officials to garner political support and legitimacy for their candidacy.

The dynamics of local politics in South Lampung reached their peak on 26 July 2019, when South Lampung's regent, Zainuddin Hasan, was arrested following a sting operation by the Indonesian Corruption Eradication Committee (KPK) related to a corruption case connected to an infrastructure project in the regency.⁵ Hasan's brother, Zulkifli Hassan – the national deader of the National Mandate Party (PAN) and former chairman of the People's Consultative Assembly - then requested a public pardon, which appeared in The Jakarta Post on 27 July 2018:

 $\frac{12}{8}$ a brother, I apologize to the residents of South Lampung as well as all residents of Lampung for the incident.

The central government subsequently appointed Nanang Ermanto as regent of South Lampung. Ermanto had officially been leading the local government of South Lampung since August 2018 and his promotion to regent following the sting operation had two key political impacts. First, the local government no longer worked efficiently in managing daily activities and servicing the people. Second, as the representative from MDMC informed us, people st ... trust in the local government'. According to the respondents from one of the adat communities and from MDMC, the two impacts reduced the capacity of South Lampung's officials to coordinate the post-tsunami response:

This corruption case meant that the local government of South Lampung is not working so well. This internal problem also influences its performance when solving the problems of the post-tsunami disaster. I personally believe that there is no well-prepared coordination among local institutions, including a lack of coordination with us. (*Adat* 1)

I think the sting operation by the KPK has influenced the local government's performance and its ability to respond to the tsunami event. (MDMC)

Coupled with the government's general 'lack of human resources and heavy equipment' (Local government 1), the scandal thus compromised the response from the beginning.

Despite such issues, one official defendection local government's response by identifying the ambiguity of central government regulations as well as the excessive zeal of various organisations to prioritise their own members as greater factors:

I think we have done enough, although it was not to the tsunami victims' satisfaction, you know that the lack of [central government] regulations made this problem happen ... every institution wanted to distribute goods, clothes etcetera individually and we cannot deny that they probably wanted to give them directly to their members. (Local government official 2)

Decentralisation since early 2000 has affected relations between the central and local government, with governance now characterised by 'varying degrees of development, including local egoism and institutional fragmentation' (Holzhacker et al., 2016, p. 6) and political partisanship often resulting in conflicting interests. For instance, when responding to tsunami events, the central government disaster agency Badan Nasional Penanggulangan Bencana⁶ (BNPB) is supposed to work closely with the district disaster management agency (BPBD), but their coordination can easily be undermined by the incompatible political goals of local and central government leaders. Although the local government official above was right to highlight the lack of central government regulations to deal with disasters, our assessment also indicated that the local government's response was overly bureaucratic. Certainly, we believe that it would have coordinated the response more effectively had it clearly and systematically delegated responsibilities to each actor involved and thereby earned greater trust. Instead, the local government was perceived as lacking the skills or experience required to lead, stimulating individual organisations such as *adat* communities to fill the gap:

There was no collaboration between institutions internally and externally to handle the tsunami. There was no proper standard operating procedure. I think the aid provided by the public was not distributed effectively to the victims due to a lack of coordination and speed, so most of them [organisations] preferred to distribute it individually. (Independent statutory authority)

Most of the volunteer organisations gave the aid directly to the tsunami victims because they did not believe in the local government's capacity. (Adat 1)

I think the local government was too bureaucratic in handling the victims at that time, so we were in dispute with them. The victims needed our immediate assistance, we had to help the victims as quickly as possible. (*Adat* 2)

For instance, the second *adat* representative described being prevented from distributing aid directly to victims due to the regent's instructions that all items must be administered by the local government. The result was a conflictual and fragmented disaster

response process, with the adat communities feeling unable to contribute as extensively as desired:

In my opinion, there are three factors that resulted in the adat communities' inability to help the victims of the tsunami: those reasons are due to financial and structural barriers as well as ²⁹le lack of coordination between the local government and *adat* community. The [applicable adat council] is supposed to be our 'big home', but the reality is beyond our expectations. We are going nowhere without financial support from the local government. (Adat 1)

Indeed, even though the adat communities in this area are officially recognised by the local government, this does not extend to affording them a significant political role in local governance and as a result, their potential culturally specific contributions to the overall disaster management process risk being overlooked. Adding to the challenge here was the fact that some of the victims would bring their issues to their adat leader, not the local government, recognising that the former system has existed for much longer than the latter. Most of the victims' families have been living in this area for over one hundred years – some are even descendants of the victims of the 1883 Krakatau eruption – and so bringing issues to one's adat leader rather than one's government remains customary. Thus, despite their intimate knowledge of their communities' needs, values and contexts, groups such as adat were compelled to play an informal rather than genuinely active role in the relief process, being restricted in the decision-making process and lacking financial assistance, their work being largely limited to personal initiatives taken by some of their leaders in Kalianda and Rajabasa. Consequently, by failing to function as desired as well as to empower local adat leaders, the government officials were deemed unable to provide proper assistance.

Ansell and Gash explain that he 'focus on public issues distinguishes collaborative governance from other forms of consensus decision making, such as alternative dispute resolution or transformative mediation' (2008, p. 547). Adat communities are expected to play a more active role in the era of decentralisation (Tyson, 2010). Although Sangaji argues that this may engender certain disadvantages, as donesia's transition to democracy remains incomplete, and adat is increasingly abused by regional politicians and economic actors in their attempts to build new oligarchies in the post-New Order era' (2007, p. 334), we believe that there is the potential for adat communities to act as anchor institutions, connecting local government with people's interests. Nevertheless, given the lack of consensus and deliberation (vital components of Ansell and Gash's model) evident between local government and adat in this case, work still needs to be done to facilitate effective collaboration. Religious institutions should also be involved in this process, the following section illustrating the social and technical issues they encountered here as well the resources they can offer to post-tsunami response more generally.

Religious institutions

Unsurprisingly, the respondents from the religious institutions highlighted the importance of their Islamic missions in guiding their responses to disasters. Most notably, all three emphasised the role of da'wah,⁷ which was not only said to enable local populations suffering from trauma to 'increase their survival spirit' (MDMC), but also to learn how one might negotiate tsunamis in the future, such as by discussing whether people

should relocate to higher locations further from the sea, or familiarising themselves with indicators of an imminent tsunami such as a rapidly receding tide (Muhammadiyah). In the case of Muhammadiyah, this perspective can be related to an important aspect of the organisation's modernist outlook, specifically its understanding of disasters as musibah: 'calamities' that are unpreventable but that can be managed and mitigated through religion (Baidhawy, 2015). Such an interpretation balances fatalism (in the sense that disasters will always occur according to Allah's command) with practical action, encouraging vulnerable communities to take responsibility for their safety in future (Baidhawy, 2015; Joakim & White, 2015). Similarly, for NU, da'wah was portrayed as a means of teaching the community about 'bad or good deeds' as well as making a 'social contribution'. Philosophically the religious organisations sought to balance emotional and practical support with religious and scientific knowledge, simultaneously accentuating 'God's destiny' and the need 'to do something to deal with this' (Muhammadiyah), or a realisation both 'that we cannot reject the natural disaster [as a believer]' and 'that Indonesia is a place that is geographically fragile due to natural disasters' (MDMC). Through additionally refusing to discriminate based on faith - with all three stressing in interview that they would respond to the needs of any victims and not just their members or Muslims – these organisations made important contributions to the disaster relief effort, operationalising their religious values to approach distressed communities almost instantaneously.

Indeed, although the religious organisations were directed by their religious values – and accordingly were buttressed by their members' desire to help through offering clothes and food donations according to the Islamic principle of zakat⁸ (see also McGregor, 2010) – their contributions to the post-tsunami response were far broader. For example, the representative from Muhammadiyah noted that his organisation had responded to the tsunami by building over twenty non-permanent shelters through the engagement of its numerous task force units (including the Youth of Muhammadiyah, the Muhammadiyah College Union, the Muhammadiyah Student Union and Muhammadiyah Youth Preparedness Command), drawing in part on its branches in other parts of Indonesia. Accompanying Muhammadiyah's significance as a local actor with office the provincial. regency and sub-district levels, the respondent from MDMC viewed his organisation as a potential 'command centre', directing both an 'internal and external network' of disaster management agencies from its central office. For instance, even though its presence in South Lampung is relatively limited, through Muhammadiyah, MDMC was able to call on and train volunteers from local schools, colleges and hospitals across the larger province of Lampung. The organisation thus played a fairly holistic role in its post-tsunami response:

First we built the emergency response command centre. After that we established the public kitchen and first aid centre, including dispatching and moving victims from the affected area. We also built tents for the victims and developed a non-permanent shelter, located in Kunjir village in the sub-district of Rajabasa [...] We trained the volunteers who worked for free in the kitchen, dealing with social psychology, giving first aid, etcetera. (MDMC)

Moreover, in contrast to claims that Islamic teaching in Indonesia generally downplays the importance of disaster preparedness lest it challenge the prevalent belief that disasters represent *Allah*'s judgement and so pre-planning is irrelevant (Adiyoso & Kanegae, 2013), MDMC's mandate is increasingly incorporating this issue. Certainly, the organisation



is cognisant of its national-level responsibility and associated capacity to engage with relevant actors in a broad range of fields, including education through establishing the Satuan Pendidikan Aman Bencana (SPAB) in 2019⁹ and by implementing Mastana (community preparedness) and Destana (villager preparedness) (MDMC). By contrast, NU operated somewhat independently in its post-tsunami response, in part because it arrived early on the scene and assumed responsibility for various urgent issues, especially given that the local government had thus far failed to administer necessary services such as shelter, food, drinking water and clothes. Reflecting how religious institutions may constitute 'the first port of call in practical terms', acting as the nucleus around which other organisations can offer support to people in need (Islam, 2012, p. 214), NU provided a number of amenities, including non-permanent shelters in two locations as well as a small mosque and five public toilets:

We did it [provided these services] before the local government, we moved quickly to respond to the tsunami event. First, we provided many tents for a week, then we built the non-permanent shelter ... Our non-permanent shelter was equipped with toilets and a prayer room [...] we gave them [the victims] vitamins and checked their health. (NU)

Furthermore, the organisation continued to operate in South Lampung for a year after the tsunami, exemplifying its long-term response.

Thus, the degree of collaboration between the religious institutions was mixed. Being largely based in coastal locations, Muhammadiyah was deemed most familiar with the affected areas, leaving it de facto in charge, with MDMC able to draw on its human resources. Although the respondent from Muhammadiyah admitted to being slightly uncertain of the NU's activity -

I think they were doing similar activities to us. They also built a non-permanent shelter for the victims of the tsunami [... but] I did not know and was unaware because they [NU] were not formally coordinating with us ... to be honest, we worked individually due to the workload

- MDMC worked fairly closely with NU's Aksi Cepat Tanggap¹⁰ (ACT) department given their shared role in disaster response. Nevertheless, Muhammadiyah and NU are essentially rivals at the local scale, with alternative disaster management departments and educational institutions, ¹¹ precluding their engagement to some extent.

However, a lack of collaboration was far more acute with reference to the local government. All three of the respondents from the religious institutions were dissatisfied with the government's post-tsunami response, believing that it had failed to take responsibility, despite its resources and theoretical ability to act in both a broad and deep manner:

I was so disappointed with the local government, and they have everything, they need to do more than us. (NU)

Most of the institutions were working individually ... and the local government was not competent to coordinate us. For example, there were many second-hand clothes that were not distributed properly to the victims due to the lack of coordination among us. (Muhammadiyah)

The lack of coordination was due to the low capacity of the local government to respond to the tsunami event. For example, there was no coordination among the institutions in distributing the items required by the victims. (MDMC)

The representative from NU in particular believed that his organisation had been compelled to assume responsibilities that should fall under the local government's remit, such as constructing shelters, distributing food aid, offering health assistance and administering two boats for tasks such as fishing and evacuation. The interviewee was also concerned about how the local government's general failure to act would implicate victims being sheltered in rented locations, whose future at the time of our fieldwork was uncertain:

We made sure the victims could live there for one year and they could stay safe from the rain and hot weather. You know, instead of just being equipped with a toilet and a prayer room and a bedroom we have also provided them with a small kitchen so that they can cook. We rent the land from the landowner for one year and now it is already more than one year, it is supposed to be continued by the local government, and we are a bit worried because the rent duration has already finished, and they [the victims] might be kicked out by the landowner. (NU)

In these ways, there appeared to be a shortage of two-way communication between organisations, impeding collaboration based on the collective principles advocated by Ansell and Gash (2008).

Consequently, the respondent from NU sought 'more collaborative work with local government' in the future, far beyond the nightly meetings organised on the personal initiative of the regent to which his and other organisations were invited at the height of the response process. Indeed, a major limitation of these meetings was that rather than constituting part of a formal disaster management system, they represented mere informal discussions between representatives of the local government and non-state actors like NU and Muhammadiyah, operationalised by the former to gain the latter's support. The fact that 'no significant decision was made' despite there being a meeting 'almost every night ... after Isha prayer' (NU) reflected the lack of genuine attempt made by the local government to elicit alternative views. Although such governance is fairly typical in Indonesia, where democracy is rooted in patronage and informal politics is important (Aspinall & Berenschot, 2019), it risks rendering organisations like the religious actors here largely powerless as potential collaborators. The interviewee from Muhammadiyah similarly noted that 'we still need to work collaboratively with local government', not least given the organisation's 'lack of human resources in dealing with disaster', as 'most of the task force unit has no experience or technical skill in dealing with the process of recovery'. While Muhammadiyah's reach in the province enables it to enjoy a degree of independence – reflected in its extensive educational and health care networks – the organisation regards governments as central to disaster response due to their responsibility for caring for their citizens (Baidhawy, 2015), necessitating greater collaboration in the future. Strategies might include the creation of a database of tsunami victims (with accurate registration at this time limited by the fact that many people were living in isolated locations that Muhammadiyah found difficult to access, or had alternatively moved to relatives' homes in other parts of Lampung) and the development of a proper standard operating procedure (SOP) and regulations, as the lack of both was identified by Muhammadiyah as a factor behind the insufficient post-tsunami response. Collaboration between religious and adat communities was far less clearly articulated, with the latter ultimately perceived as 'part of the victims' in need of assistance (MDMC). This does not seem



to reflect a sufficient use of adat resources and so future collaboration should recognise their potential to contribute to disaster response in a meaningful way, as agents rather than victims. The following section presents our idea for a model of collaboration in post-tsunami response.

Discussion: the need for collaboration

Fukuvama characterise vernance as 'a government's ability to make and enforce rules, and to deliver services' (2013, p. 350), while building on previous research from disaster contexts, Martin et al. describe collaboration as 'a long-term relationship between organisations, characterised by high levels of interdependency and high risk, which requires significant power symmetry' (2016, p. 625). Synthesising these definitions with the various governance systems or modes identified by Duit and Galaz (2008) and Bednar and Henstra (2018) as well as the findings presented above, we believe that the key traits that need to be incorporated within a collaborative model of post-tsunami response are the following:

- Flexibility, enabling actors to react and adapt to rapidly changing and sometimes unpredictable circumstances, potentially for an extended period, without being constrained by institutional bureaucracy; and
- Egalitarianism, recognising that local communities are most familiar with their environments and their associated risks and should thus be intimately involved in decisionmaking processes that profoundly affect their lives.

We emphasise these attributes because our research has shown that the lack of collaboration among the three types of institutions (local government, adat and religious institutions) largely owed to the local government's inability to act as a catalyst, overlooking the potential of the other actors to contribute even though the religious groups in particular responded rapidly to the disaster situation. Only the first two of Ansell and Gash's (2008, pp. 544-545) six criteria of collaborative governance were readily apparent: the government's creation of a forum and the involvement of non-state actors. By contrast, the other criteria were extremely limited: little formal dialogue occurred among the different actors involved and the local government was criticised for failing to engage the other stakeholders and to initiate and coordinate the necessary actions (3, 4). As a result, the disaster response was much less characterised by consensus (5) than by an overlapping or duplication of actions, with each group working largely individually, rendering it likely that some victims were neglected while others received disproportionate attention depending on their centrality within each group's networks. Given the general shortage of human resources and pre-emptive disaster management policies, chaos ensued as each group separately attempted to manage and provide proper assistance to victims, hardly conducive to effective public policy or management (6). Table 1 presents a qualitative analysis of the practice of collaborative governance among the groups involved.

We believe that successful disaster response relies on all six criteria, as non-state actors must be empowered to contribute to the formulation of a strategy. Even if the government remains in control of realising it, the procedure will enjoy greater legitimacy and buy-in from various groups, which can play a more active role in advancing disaster management

19 able 1. Analysis of collaborative governance following the tsunami disaster, 19 ased on Ansell and Gash's (2008) six criteria of collaborative governance.

Forum is initiated by public agencies or institutions	Participants in the forum include non- state actors	Participants engage directly in decision making and are not merely 'consulted' by public agencies	Forum is formally organised and meets collectively	Forum aims to make decisions by consensus (even if consensus is not achieved in practice)	Focus of collaboration is on public policy or public management
Yes	Yes: one adat leader claimed to have worked alongside NU and Muhammadiyah on several local government forums and the latter groups both acted to provide assistance to victims	No: both adat and religious stakeholders were limited to mere consultation for legitimisation purposes, rather than playing an active role in the decision-making process. This was dominated by local government, even though it lacked an understanding of how to implement regulations related to post-tsunami response. MDMC then created a separate forum and provided training for its members to negotiate natural disaster events in Lampung	No: the forum was not formally organised and occurred only coincidentally. Government and nongovernment stakeholders worked individually due to historic lack of coordination	No evidence of consensus concerning how to handle the tsunami disaster among the involved institutions. Local government dominated the forum and decisions were not made or consensus created in a deliberative manner	No evidence so far: there is no proper standard operating procedure and there has been a lack of coordination among the groups involved

Note: Table compiled by the authors.

from response to recovery as a result. To this end and through refining the original model conceptualised by Ansell and Gash (2008, p. 550), in Figure 2 we propose a new model of collaboration that highlights the assets that each of the three groups can offer in order to negotiate the post-tsunami disaster process in the future.

We contend that the model is helpful because it can encourage the three groups to collaborate when responding to future tsunami events in contexts not limited to South Lampung. By considering all three types of actors together, our model draws on a wide network of resources and clearly identifies what each party brings to the table in order to increase community preparedness and accelerate post-disaster response (see McGeehan & Baker, 2017). Indeed, while local government possesses assets such as material resources and official political authority, *adat* and religious organisations can help through mediating with their communities and ensuring that plans are tailored to local needs, the latter potentially also attracting aid from abroad as well as from other parts of the same country through their networks (Joakim & White, 2015).

In addition, our model enables the groups to compensate for the potential limitations of their counterparts. For instance, *adat* and religious actors are often trusted more than local government and thus possess considerable social capital (Joakim & White, 2015; McGeehan & Baker, 2017), whereas local governments may be able to intervene should

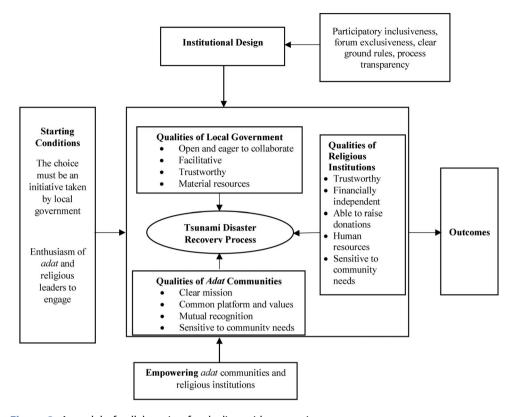


Figure 2. A model of collaboration for dealing with tsunami events.

Note: Figure compiled and created by the authors based on Ansell and Gash (2008).

certain (e.g. religious, ethnic, sexual) minorities become marginalised due to divisions within their collaborators (Balgos et al., 2012; Bush et al., 2015). Therefore, the model maximises the likelihood that as many members of society as possible are recognised.

At the same time, it is essential to recognise that the model is not intended as a onesize-fits-all approach, as all disaster response strategies should be contextually specific (Bush et al., 2015). For the purposes of clarity, it is inevitably a simplification of a complex issue. Moreover, adat communities are specific to Indonesia and the country's political system – including the place of religious actors within it – is necessarily unique, constraining the immediate generalisability of our model and indeed any other. Nevertheless, our model is flexible enough to be adapted, for example through recognising that religious actors (among others) are often involved but somewhat marginalised in humanitarian work (Ager & Ager, 2015; Bush et al., 2015; Tomalin, 2020) and that governments may be unwilling or even unable to establish the conditions for meaningful collaboration (Hutanuwatr et al., 2013; Martin et al., 2016). Indeed, rather than dictating what disaster response should comprise - as this is clearly impossible - we hope that our model will provide a useful frame for collaboration that identifies the main roles played by key actors in disaster response and that can be refashioned to different disaster contexts as necessary. Crucially, given its rooting in Ansell and Gash's model, which these authors developed through an international, meta-analytical study eviewing '137 studies of collaborative governance across a range of policy sectors' (2008, p. 561), our model draws on a strong body of evidence and recommendations for effective collaboration and good governance from across the globe. Considering the significant threat posed by tsunamis in many (especially low- and middle-income) countries and the resultant need to engage as many communal resources as possible, such a model that facilitates the participation and collaboration of different non-state as well as state actors in a succinct manner is essential (see Martin et al., 2016). Studies by researcher different parts of the world are now necessary to ascertain the effectiveness of our model in its current form, its consideration of the key areas where collaboration may not be realised and its potential to activate the resources of formerly overlooked actors to support those in need.

Conclusion

It is indisputable that disaster response is a difficult task. Different actors bring varied expectations of how any response should proceed and under such pressured conditions, it is perhaps inevitable that at least one party will be dissatisfied. Nevertheless, we believe that collaboration provides the key to ensuring that following the onset of a disaster, as few people as possible will ultimately suffer.

Through combining Ansell and Gash's (2008) theoretical model of collaborative governance with our own empirical results from the 2018 Sunda Strait tsunami, we have created a model that can be used to inspire collaboration between three of the most important types of domestic actors in Indonesia: local government, adat and religious institutions. Through investigating the role played by each in responding to this disaster, alongside the social and technical issues encountered, we have identified the assets that the three groups can offer. It is crucial that local governments familiarise themselves with their non-government counterparts' resources – and enthusiasm for engagement – when preparing their post-tsunami response. Indeed, these groups can offset local governments' potential limitations such as community trust and de facto authority through their sensitivity to local needs and, especially in the case of major religious institutions, intra- and international partnerships and networks, bringing material as well as human resources. By contrast, local governments are expected to take the lead given their official authority and can intervene where minority groups in particular are overlooked by their associates.

Researchers interested in applying this model to other contexts should be particularly attentive to instances of actors being constrained from collaborating, especially in cases where the government is nominally secular but non-state organisations have a religious affiliation, as this appears to be a fairly common concern in humanitarianism (see Ager & Ager, 2015; Tomalin, 2020), as attested to in this article. Furthermore, discerning meaningful collaboration from tokenist consultation is necessary to ensure that different groups are empowered to contribute to disaster response and to prevent government agents from operationalising a disaster for self-serving goals, especially where the political system in question is susceptible to partisanship. By sharing further empirical insights to the nexus between potential or real collaborators in other tsunami-prone contexts, there is scope to refine our model and to determine which of its components are specific to our context and which are more generalisable. Most importantly, we hope that by doing so, more community actors will feel empowered to support post-tsunami response and that as many lives and livelihoods can be protected as possible.



Notes

- 1. Islamic law.
- In Lampung, two adat systems exist: the Pesisir or coastal community (as relevant here) and the Pepadun or inland adat system (Ahmad & Syukur, 2016). There are more than 80 adat communities across Lampung, with Kalianda sub-district comprising three groups and Rajabasa one.
- 3. These have facilitated shifts toward democratisation and decentralisation, characterised by direct elections of local leaders such as the regent and governor, rather than these being appointed by the central government as in the past.
- 4. Law No. 22/1999 accords villages greater autonomy and has been enhanced by Law No. 6/2014, which additionally provides more money to fund development.
- 5. In addition, four other regents in Lampung were arrested by the KPK.
- 6. National Disaster Management Agency.
- 7. Teaching others about Islamic values and knowledge for the purpose of proselytisation.
- 8. Annual charitable donations.
- 9. Educational Agency for Disaster Prevention.
- 10. Quick Action and Response.
- 11. For NU, these include 2 embaga Penanggulangan Bencana dan Perubahan Iklim, Nahdlatul Ulama (LPBI NU; Climate Change and Disaster Management Institution of Nahdlatul Ulama) as well as pesantren (Islamic schools), Ma'arif schools and colleges and a university; for Muhammadiyah, these include MDMC, Muhammadiyah Junior and Senior High School and Muhammadiyah University in almost every province of Indonesia.

13 isclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Arizka Warganegara http://orcid.org/0000-0003-0184-7396 axim G. M. Samson http://orcid.org/0000-0001-7862-8226

References

Adiyoso, W., & Kanegae, H. (2013). The preliminary study of the role of Islamic teaching in the disaster risk reduction (a qualitative case study of Banda Aceh, Indonesia). *Procedia Environmental Sciences*, 17, 918–927. https://doi.org/10.1016/j.proenv.2013.02.110

Ager, A., & Ager, J. (2015). Faith, secularism, and humanitarian engagement: Finding the place of religion in the support of displaced communities. Palgrave Macmillan.

Ahmad, N. S. Y., & Syukur, I. (2016). A study of village regulation making process in the village of Adat Saibatin community in Cukuh Balak sub-district, Tanggamus district, Lampung province, Indonesia. *African and Asian Studies*, 15(2–3), 215–241. https://doi.org/10.1163/15692108-12341000.

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543–571. https://doi.org/10.1093/jopart/mum032

Aspinall, E., & Berenschot, W. (2019). *Democracy for sale: Elections, clientelism, and the state in Indonesia*. Cornell University Press.

Badan Informasi Geospasial. (2020). Peta Kecamatan Kalianda dan Rajabasa Kabupaten Lampung Selatan.

Baidhawy, Z. (2015). The role of faith-based organization in coping with disaster management and mitigation: Muhammadiyah's experience. *Journal of Indonesian Islam*, *9*(2), 167–194. https://doi.org/10.15642/JIIS.2015.9.2.167-194



- Balgos, B., Gaillard, J. C., & Sanz, K. (2012). The *warias* of Indonesia in disaster risk reduction: The case of the 2010 Mt Merapi eruption in Indonesia. *Gender & Development*, 20(2), 337–348. https://doi.org/10.1080/13552074.2012.687218
- Bednar, D., & Henstra, D. (2018). Applying a typology of governance modes to climate change adaptation. *Politics and Governance*, 6(3), 147–158. https://doi.org/10.17645/pag.v6i3.1432
- Bubandt, N. (2004). Towards a new politics of tradition? Decentralisation, conflict, and adat in Eastern Indonesia. *Antropologi Indonesia*, 74, 11–30.
- Bush, R., Fountain, P., & Feener, R. M. (2015). Religious actors in disaster relief: An introduction. *International Journal of Mass Emergencies and Disasters*, 33(1), 1–16.
- Center for Research on the Epidemiology of Disasters (CRED). (2015). *The human cost of natural disasters: A global perspective*. Centre for Research on the Epidemiology of Disasters (CRED). https://www.preventionweb.net/files/42895_cerdthehumancostofdisastersglobalpe.pdf
- Central Statistical Bureau of Indonesia. (2010). *Penduduk menurut wilayah dan agama yang dianut*. DetikNews. (2018, December 23). *4 Kecamatan di Lampung Selatan terdampak parah akibat tsunami*. http://news.detik.com/berita/d-4355810/4-kecamatan-di-lampung-selatan-terdampak-parah-akibat-tsunami
- Duit, A., & Galaz, V. (2008). Governance and complexity: Emerging issues for governance theory. *Governance*, 21(3), 311–335. https://doi.org/10.1111/j.1468-0491.2008.00402.x
- Elmhirst, R. (2001). Resource struggles and the politics of place in North Lampung, Indonesia. Singapore Journal of Tropical Geography, 22(3), 284–306. https://doi.org/10.1111/1467-9493.00111
- Ensor, M. O. (2003). Disaster evangelism: Religion as a catalyst for change in post-Mitch Honduras. *International Journal of Mass Emergencies and Disasters*, 21(2), 31–49.
- Feener, R. M., & Daly, P. (2016). Religion and reconstruction in the wake of disaster. *Asian Ethnology*, 75(1), 191–202. https://doi.org/10.18874/ae.75.1.08
- Fukuyama, F. (2013). What is governance? *Governance*, 26(3), 347–368. https://doi.org/10.1111/gove.12035 Gianisa, A., & Le De, L. (2017). The role of religious beliefs and practices in disaster: The case study of 2009 earthquake in Padang city, Indonesia. *Disaster Prevention and Management*, 27(1), 74–86. https://doi.org/10.1108/DPM-10-2017-0238
- Global Facility for Disaster Reduction and Recovery (GFDRR). (2017). http://thinkhazard.org/en/report/116-indonesia/TS
- Harrison, L. (2001). Political research: An introduction. Routledge.
- Henley, D., & Davidson, J. S. (2008). In the name of adat: Regional perspectives on reform, tradition, and democracy in Indonesia. *Modern Asian Studies*, 42(4), 815–852. https://doi.org/10.1017/S0026749X07003083
- Holzhacker, R. L., Wittek, R., & Woltjer, J. (2016). Decentralization and governance for sustainable society in Indonesia. In R. L. Holzhacker, R. Wittek, & J. Woltjer (Eds.), *Decentralization and governance in Indonesia* (pp. 3–29). Springer.
- Hutanuwatr, K., Bolin, B., & Pikawka, D. (2013). Vulnerability and disaster in Thailand: Scale, power, and collaboration in post-tsunami recovery. In K. Pfeifer & N. Pfeifer (Eds.), *Forces of nature and cultural responses* (pp. 69–92). Springer.
- Islam, R. R. (2012). Believing to recover: The role of religion in the recovery phase of natural disasters. *Anthropos*, 107(1), 209–217. https://doi.org/10.5771/0257-9774-2012-1-200-1.
- The Jakarta Post. (2018, July 27). *PAN chairman apologizes for brother's alleged bribery*. https://www.thejakartapost.com/news/2018/07/27/pan-chairman-apologizes-for-brothers-alleged-bribery.html
- Joakim, E. P., & White, R. S. (2015). Exploring the impact of religious beliefs, leadership, and networks on response and recovery of disaster-affected populations: A case study from Indonesia. *Journal of Contemporary Religion*, 30(2), 193–212. https://doi.org/10.1080/13537903. 2015.1025538
- Latter, J. H. (1981). Tsunamis of volcanic origin: Summary of causes, with particular reference to Krakatoa, 1883. *Bulletin Volcanologique*, 44(4), 467–490. https://doi.org/10.1007/BF02600578
- Liow, J. C. (2016). Religion and nationalism in Southeast Asia. Cambridge University Press.
- Martin, E., Nolte, I., & Vitolo, E. (2016). The four Cs of disaster partnering: Communication, cooperation, coordination and collaboration. *Disasters*, 40(4), 621–643. https://doi.org/10.1111/disa.12173



- McGeehan, K., & Baker, C. K. (2017). Religious narratives and their implications for disaster risk reduction. Disasters, 41(2), 258–281. https://doi.org/10.1111/disa.12200
- McGregor, A. (2010). Geographies of religion and development: Rebuilding sacred spaces in Aceh, Indonesia, after the tsunami. Environment and Planning A: Economy and Space, 42(3), 729-746. https://doi.org/10.1068/a4273
- Moshtari, M., & Gonçalves, P. (2017). Factors influencing interorganizational collaboration within a disaster relief context. VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, 28(4), 1673–1694. https://doi.org/10.1007/s11266-016-9767-3
- Nurdin, M. R. (2015). Disaster 'caliphatization': Hizbut Tahrir Indonesia, Islamic Aceh, and the Indian Ocean tsunami. International Journal of Mass Emergencies and Disasters, 33(1), 75–95.
- Parmar, S., Lobb, A., Purdin, S., & McDonnell, S. (2007). Enhancing collaboration during humanitarian response: An interim report from stakeholders survey. Prehospital and Disaster Medicine, 22(5), 414-417. https://doi.org/10.1017/S1049023X00005136
- Resurreccion, B. P., Sajor, E. E., & Fajber, E. (2008). Climate adaptation in Asia: Knowledge gaps and research issues in South East Asia; full report of the South East Asia team. Institute for Social and Environmental Transition (ISET).
- Sangaji, A. (2007). The masyarakat adat movement in Indonesia: A critical insider's view. In J. S. Davidson, & D. Henley (Eds.), The revival of tradition in Indonesian politics: The deployment of adat from colonialism to indigenism (pp. 339-356). Routledge.
- Tomalin, E. (2020). Global aid and faith actors: The case for an actor-orientated approach to the 'turn to religion'. International Affairs, 96(2), 323-342. https://doi.org/10.1093/ia/iiaa006
- Tyson, A. D. (2008). The politics of decentralisation and indigenous revivalism in Sulawesi, Indonesia (PhD thesis). University of Leeds.
- Tyson, A. D. (2010). Decentralization and adat revivalism in Indonesia: The politics of becoming indigenous. Routledge.
- Widiastuti, R. (2019, December 25). BNPB merilis korban tsunami Selat Sunda sementara 429 https://nasional.tempo.co/read/1158699/bnpb-merilis-korban-tsunami-selatsunda-sementara-429-jiwa

11% Overall Similarity

Top sources found in the following databases:

- 10% Internet database
- Crossref database

- 6% Publications database
- Crossref Posted Content database

TOP SOURCES

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	researchgate.net Internet	2%
2	mro.massey.ac.nz Internet	<1%
3	drmims.sadc.int Internet	<1%
4	Jonathan S. Davies. "The limits of post-traditional public administratio Crossref	<1%
5	blackwellpublishing.com Internet	<1%
6	academic.oup.com Internet	<1%
7	semanticscholar.org Internet	<1%
8	silo.pub Internet	<1%
9	etheses.whiterose.ac.uk Internet	<1%

Maxim G.M. Samson. "Off-white, on-stage: Jewish self-representation Crossref	· <1
tandfonline.com Internet	<1
thejakartapost.com Internet	<
9pdf.net Internet	<
media.isdrs.org Internet	<
onlinelibrary.wiley.com Internet	<'
"The Palgrave Handbook of Local Governance in Contemporary China", Crossref	. <,
Samuel Brazys. "Aid and Governance: Negative Returns?", The Europea. Crossref	<,
jurnal.ut.ac.id Internet	<'
Lara Sibbing, Jeroen Candel, Katrien Termeer. "The potential of trans-l Crossref	' <'
pure.iiasa.ac.at Internet	<
ejournal.warmadewa.ac.id	<

22	Maxim G. M. Samson. "Competition or cooperation? Jewish day school Crossref	·<1%
23	education.msu.edu Internet	<1%
24	wikimili.com Internet	<1%
25	crossmark.crossref.org	<1%
26	link.springer.com Internet	<1%
27	unsworks.unsw.edu.au Internet	<1%
28	ebin.pub Internet	<1%
29	atlantis-press.com Internet	<1%
30	Christine Gibb. "Seeing like a church: Reconstruction after Typhoon Se Crossref	<1%
31	etheses.bham.ac.uk Internet	<1%

Excluded from Similarity Report

- Submitted Works database
- Quoted material
- Manually excluded sources

- Bibliographic material
- Cited material

EXCLUDED SOURCES

Arizka Warganegara, Maxim G. M. Samson. "Collaboration and disaster: critic Crossref	[;] 70%
repository.lppm.unila.ac.id Internet	69%
Maxim G.M. Samson, Arizka Warganegara. "A post-tsunami sea change? Tow	/ 6%
Maxim G.M. Samson, Arizka Warganegara. "A Post-Tsunami Sea Change? To	···· 5%