Selecting an institutional mechanism for Building Back Better: Lessons from Victorian bushfires recovery

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Article info

Article history:
Received 31 March 2016
Received in revised form 30 August 2016
Accepted 30 August 2016
Available online 31 August 2016

Keywords:
Build Back Better
Reconstruction
Recovery
Institutional mechanism
Victorian bushfires

Abstract

Building Back Better (BBB) is a prominent concept in post-disaster reconstruction and recovery aimed at creating safe and resilient communities following disaster events. The institutional mechanism adopted for reconstruction and recovery influences the ability to BBB. It was the objective of this paper to understand what can be considered a good institutional mechanism to assist BBB. A longitudinal case study of the 2009 Victorian bushfires was conducted to examine the institutional mechanism adopted for recovery and extract lessons. Data was collected from semi-structured open-ended interviews with key stakeholders over four years. The institutional mechanism adopted for bushfire recovery involved creating a separate recovery authority with a decentralized mandate to manage, coordinate and facilitate the recovery process. Faster decision-making and implementation, expedited legislative procedures and easier access to funding were experienced as a result. However partnership, transparency, and involvement at the grass-roots level needed further improvement. The lessons learnt from the Victorian bushfires case study are presented as recommendations to assist with the selection of an appropriate post-disaster institutional mechanism to assist future recovery efforts and Build Back Better.

1. Introduction

Building Back Better (BBB) has become a prominent concept for post-disaster reconstruction and recovery since it was identified as one of the Priorities for Action for Disaster Risk Reduction in the United Nations Sendai Framework [1]. BBB signifies inducing resilience into communities, allowing it to adapt and transform, to build communities back better than they were before [2]. Authors such as Clinton, Kennedy and Monday describe BBB as a set of actions that can be taken following disasters to improve the physical, social, economic and environmental conditions of a community using the reconstruction process as an opportunity [3,4]. Mannakkara and Wilkinson [5] developed the concept of BBB further through international case study research and created a BBB Framework to represent the key areas in which action needs to be taken to Build Back Better (Fig. 1). The BBB Framework identifies the areas for action as: Disaster Risk Reduction, Community Recovery and Effective Implementation. Disaster Risk Reduction (DRR) directs the actions that need to be taken to reduce disaster risks in communities through improving structural resilience, multi-hazard based land-use planning and DRR education and preparedness [6,7]. Community Recovery refers to initiatives that support the psychological and social recovery of affected people and initiatives to rejuvenate and revitalise the local economy [8,9]. Effective Implementation advocates for reconstruction and recovery to be efficient and effective as part of Building Back Better through the use of appropriate an institutional mechanism, legislation and regulation and monitoring and evaluation [10,11].

A driver of reconstruction and recovery programmes that can encourage the adoption of BBB concepts is the post-disaster institutional mechanism put in place to design and implement recovery. The objective of this paper is to understand the role of institutional mechanisms in post-disaster recovery and identify what features can enhance recovery and enable BBB. The 2009 Victorian bushfires recovery in Australia was used as a case study to evaluate the post-disaster institutional mechanism used. The paper concludes by establishing recommendations based on literature and case study findings for a post-disaster institutional mechanism that can assist BBB.

2. Post-disaster institutional mechanism for reconstruction

Post-disaster environments are unique and often require large-scale rebuilding and development work in a short period of time involving a large number of stakeholders both locally and internationally. Post-disaster institutional mechanisms need to ensure speed and quality in the rebuilding effort whilst facilitating cooperation and collaboration between stakeholders to produce a
The institutional mechanism adopted also needs to allow for appropriate consultation with stakeholders and the community to identify needs, fast and intelligent decision-making, effective mobilization and management of recovery funds, and transparency and accountability [13].

Many reconstruction efforts have failed to successfully incorporate BBB concepts for risk reduction and social and economic recovery that can benefit the local community because of the lack of grass-roots level involvement, poor coordination, lack of expertise, conflicting interests, poor budget controls and corruption [14,15]. Haas et al. [16] stated that the success of recovery programmes is attributed to the quality of leadership, planning and organisation. Rubin et al. [17] reiterated that leadership is a key contributor to effective recovery, along with the ability to act, knowledge of available resources, and the capacity of local officials.

Samaratunge et al. [18] stated that the interrelationships between various actors in post-disaster environments influence the recovery outcomes. When centralization or the level of internal control is too dominant, communities become less adaptive to change thus stifling change and innovation. On the other hand if there is too much decentralization, it can result in a chaotic ad-hoc environment.

Therefore, choosing an appropriate institutional mechanism and an appropriate level of centralization/decentralization important for effective post-disaster recovery. The World Bank’s Handbook for Reconstructing after Natural Disasters [19] introduces two options for post-disaster institutional mechanisms: (1) Create a new/dedicated recovery authority; or (2) Manage recovery through existing government organisations.

2.1. Types of post-disaster institutional mechanisms

The institutional mechanisms introduced in Section 2 each have their advantages and disadvantages.

2.1.1. Using existing government organisations

Using existing government organisations can be useful as they already have the processes, relationships with other departments, resources, and local knowledge and expertise well established. However the success of existing organisations in a post-disaster context is dependent on how well those arrangements were performing prior to the disaster. If the government organisations have been directly impacted by a disaster they may suffer losses in capacity which would hinder their operations [20]. Existing organisations also tend to have rigid time-consuming procedures which are not suitable for high-pressure post-disaster environments that require flexibility and fast results that are ideally required for BBB [10,13,19]. The 2008 Wenchuan Earthquake reconstruction process in China provided an example where existing government structures were utilised for recovery [21]. Central Government provided leadership and determined the policies, rules and regulations for rebuilding. Departments responsible for disaster reduction, relief and recovery in the State Council carried out these duties. Local Governments set up coordination offices locally to handle disaster reduction, relief and recovery at the local level. As a result of this governance structure the recovery process paid little attention to collaboration with NGOs and was unable to benefit from their services and the social recovery of affected communities suffered.

2.1.2. Creating a new recovery authority

Creating a new or dedicated organisation is a common approach to reconstruction and recovery as portrayed by the examples in Table 1. Japan, which experiences frequent earthquakes switched from its traditional government-led recovery structure to having a separate institution for the recovery process following the earthquake and tsunami in 2011. Authors such as Jha et al. [19], Olshansky [22] and Thiruppugazh [14] stated that having a separate institutional arrangement is more appropriate to handle the challenges present in post-disaster environments and supports BBB by improving efficiency and effectiveness. Thiruppugazh [14] pointed out that having an entity solely responsible for reconstruction and recovery also sends a message to the community that there is a strong commitment to rebuild and recover. However, on the other hand creating a new institution with the necessary resources, legislative and regulatory powers and authority may be time-consuming and difficult [23].
2.2 Level of centralization

Once an institutional mechanism is selected, the next factor which needs consideration is the level of centralization the Government or recovery authority possesses over the recovery process.

2.2.1 Centralized recovery programmes

Highly centralized recovery programmes display top-down control by the governing body (i.e., Government or recovery authority). Recovery plans and programmes are developed and implemented with little or no participation and consultation at the grass-roots level and do not sufficiently focus on social recovery for BBB [34]. However, this type of recovery programme is often efficient, cost-effective, and completed on time [21,35]. Despite having better efficiency, centralized recovery efforts are often problematic as the lack of participation at the grass-roots level leads to unsuitable and unsustainable recovery solutions for local communities [3,36–38]. Highly centralized approaches are also known to create high levels of dependency in communities, thus does not improve their resilience [34,39].

2.2.2 Decentralized recovery programmes

Decentralized recovery programmes include the community and local-level organisations in decision-making, planning and implementation of recovery projects [3,4,34]. The access to local knowledge and indigenous resources lead to innovative solutions to recovery problems [40,41] and the use of existing local networks and organisational structures facilitate knowledge sharing and implementation in-line with BBB principles [15,42]. Community involvement also aids psychological recovery of disaster victims [43]. However, too much control given to communities can lead to delays in recovery planning, disputes among opposing groups within the community and a lack of emphasis given to technical aspects such as resilient building design [8,44].

3. Research methodology

A case study approach using the 2009 Victorian Bushfires has been used to conduct this study. Case study research is suitable for exploring the nature of processes and allows for a deep understanding to be obtained [45,46]. Since the objective of this study was to understand the choice and implementation of a governance process in a post-disaster setting, adopting a case study approach was deemed most appropriate.

3.1 The 2009 Victorian bushfires case study background

The Victorian bushfires took place on the 7th of February 2009, where 78 communities in the state of Victoria were devastated due to wide-spread fires [47]. One hundred and seventy three lives were lost and more than 430,000 ha of land was destroyed. The towns affected by the fires included towns like Marysville and Kingslake, which consisted of mountainous high country lands with forests and pastures. The key industries in the affected areas included agriculture, forestry and tourism [47].

3.2 Data collection and analysis

In order to gain a comprehensive understanding of the recovery process and post-disaster institutional mechanism adopted for the rebuild, two qualitative research methods were employed: semi-structured in-depth interviews and document analysis from 2010 to 2014. The interview questions were designed to collect information about the research questions: what institutional mechanisms and implementation structure were employed for the reconstruction and recovery process; what was the yearly progress; what were the successes and failures; and what were the lessons based on their experiences. Each subsequent year the questions were modified to reflect the findings from previous data collection efforts to ensure that up-to-date and relevant information was captured.

The participants for the study were selected to represent all the major stakeholder groups who directly participated in the rebuild and therefore can be considered to be widely representative (see Table 2 for list of participants). Officials from the government-appointed recovery authorities that were established to coordinate and oversee Victoria’s reconstruction and recovery effort (VBRRA and FRU) were interviewed. Government officials from the Department of Human Services (DHS) who worked on funding, arrangement of temporary accommodation and community support services were also interviewed. Interviewees from the Building Commission who were involved with revision and publication of the Australian Building Code for bushfire-related building were included in the study. Interviewees from the Department of Planning and Community Development (DPCD) and the Department of Justice were part of the study to explain the implementation of land-use planning schemes for risk reduction. Volume builders who were involved in the rebuild were interviewed to understand the rebuilding process and responses of the community. At the grass-roots level due to human ethics policy restrictions the general public were not included in this particular study. Instead, officials from the affected local councils, and members from local community level organisations such as the Community Recovery Committees (CRCs) and the local Chambers of Commerce who served as representatives of the community were interviewed on behalf of the wider community.

A total of 44 interviews were conducted with 27 interviewees over four research visits in 2010, 2011, 2012 and 2014. A positive response was received from the participants who avidly contributed to the study over the five year period by taking part in the interviews annually when possible and providing regular updates on progress and latest reports. A key official from VBRRA provided assistance in ensuring that it was possible for interviews to be arranged with all major stakeholder groups involved in the recovery effort. Every attempt was made to interview officials from the same organisations in each annual research visit to track the projects and progress from each organisation over time, as well as evolve the data collection with the recovery effort to include organisations that
became key stakeholders each year as shown in Table 2.

Document analysis involved evaluating documents such as biennial and annual progress reports by VBRRA and FRU, VBRRA and FRU survey data, legislation, guidelines, building reports and academic literature related to the bushfires. The cross-verification of information from the interviews and the document analysis strengthened the reliability and validity of the research findings.

The interview data obtained was transcribed, and both the interview data and information from the document analysis were categorised under the themes: institutional mechanisms; level of centralisation; implementation mechanisms; and sub-categorised under these as successes; failures; and lessons with the aid of the computer programme NVivo 9. The results of this analysis will be explained in the following section.

4. Post-disaster institutional mechanism adopted for Victorian bushfires recovery and lessons learnt

4.1. Institutional mechanism

The Victorian and Commonwealth Governments in Australia established the Victorian Bushfire Reconstruction and Recovery Authority (VBRRA) to coordinate and oversee the rebuilding and recovery programme [47]. Although set up as a centralised body, the role of VBRRA was to work with communities, businesses, charities, local councils and national government departments to “ensure that fire-affected communities are rebuilt, projects are delivered quickly and efficiently, and all those affected by the fires have access to relevant government and non-government assistance” [47]. P23 from FRU stated that VBRRA was “set up as a coordinating body which was supposed to be the central point of contact for all other government agencies but not to actually deliver anything”. Sub-departments were established under VBRRA to manage the different aspects of recovery such as temporary housing, donations management, economic recovery, social and psychological recovery, and rebuilding in affiliation with relevant government organisations [47].

The creation of VBRRA allowed for response, recovery and reconstruction activities to be developed and implemented fairly quickly due to its centralised nature. The clean-up was contracted to a company called Grocon who completed the task ahead of schedule in July 2009 allowing for planning and rebuilding activities to commence (P1, P2 and P18) [47]. P16 and P17 from DHS explained that temporary housing options were provided promptly together with DHS to house the displaced community. Community support services such as the case management service, community service hubs, counselling and various economic recovery support services were successful initiatives put in place by VBRRA to aid recovery in-line with BBB (P12, P24 and P25) [8,9]. The rebuild involved revisions made to the building code and land-use regulations, therefore VBRRA arranged a “Rebuilding Advisory Service” (RAS) with trained advisors providing personalized and hands-on technical and moral support to home-owners who were rebuilding (P3, P4 and P34). Interviewees stated that the systems that were set up by VBRRA to support the recovery and rebuilding effort have been an asset.

One of the primary aims of creating a specialized, central organisation such as VBRRA was to enable effective partnership and collaboration between the different stakeholders involved. However interview participants commented that despite VBRRA’s presence there were problems with coordination and communication (P7 and P10). P14 stated that stakeholders had different views on recovery and at times did different things. P19 noticed tensions between agencies and departments which led to contradictions that were confusing and counter-productive. There was no platform for transparent information-sharing between different stakeholders for better coordination and P33 recommended that “there should be a proper recording system, and this information should be available to all”. P8 shared that a culture of open information sharing would have enabled lessons learnt after the 2003 Canberra fires to have been utilised for the Victorian bushfires recovery effort.

VBRRA’s mandate was to operate for two years when the initial activities related to rebuilding and recovery were anticipated to have

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**Table 2**

<table>
<thead>
<tr>
<th>Research trip</th>
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<td>1</td>
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<td></td>
<td>P14 &amp; P15</td>
<td>2</td>
<td>Volume Builders</td>
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been completed (P23, P36 and P38) [48]. But VBRRA’s operations were extended as P29 explained: “VBRRA was supposed to close down by the end of 2010, but as there were still on-going activities that needed attention, VBRRA was extended until 2011, when in March the functional close took place, followed by full administrative closure on June 30th, 2011”. However P42 said from a community perspective that VBRRA should have remained active for longer since people were not ready to move forward with recovery and needed more time with decision-making.

P23 explained that in anticipation of the need to provide on-going assistance to individuals and communities the Victorian Government established the Fire Recovery Unit (FRU) within Regional Development Victoria (RDV) as part of VBRRA’s exit strategy [49]. FRU officially began its operations on July 1st, 2011. P20, P22 and P23 shared that FRU was a transitional body for monitoring, reporting and coordinating. P38 from the FRU explained that “FRU’s role was not to deliver any actual services. Our role was to direct recovery related queries and issues to normal government streams. All the documents and records from VBRRA were transferred over to FRU and it is part of our duty to work with the Government on upcoming policy considerations with regards to the 2009 bushfires”.

P38 also revealed that by the end of 2014 FRU’s involvement in bushfire recovery was minimal. P38 said at the time of the interviews FRU was in the process of finalizing lessons learnt to transfer over to Emergency Management Victoria (EMV), which was launched in 2014 to act as an overarching body to support event management, response, recovery and resilience in Victoria.

Funding for the recovery effort was organised through the Victorian Bushfire Appeal Fund (VBAF) which was established on the day following the fires by the Victorian Government in partnership with the Commonwealth Government and Australian Red Cross [47]. VBAF was responsible as a central body to collate all the funds donated through Red Cross and allocate them to bushfire survivors and the rebuilding and recovery effort. The Victorian Bushfires Royal Commission was another institution created in response to the fires to investigate the causes of the fires and evaluate the bushfire recovery effort to provide recommendations for improvement [50].

4.2. Level of centralization

Once VBRRA was established, its first task was to formulate a set of fundamentals to govern VBRRA’s stance on rebuilding and recovery and shape its operations. Consequently VBRRA generated its ‘recovery and reconstruction framework’ centred around five guiding principles [47]: Welfare and safety of the people in the local community.

Meeting Needs, where resource allocation will take place based on actual community needs.

Community Engagement during all recovery activities.

Integrity, fairness and equity in the provision of services and resources.

Tailored solutions based on the specific needs of each community.

The framework (shown in Fig. 2) shows the community as the central focal point followed by safety, health and wellbeing of people, reconstruction, economic recovery and environment. Using a consultative approach involving the community in discussions and decision-making with regards to the recovery process was an important part of VBRRA’s agenda [51]. Regular meetings and workshops were held in affected towns bringing together the community, government officials, planners and builders to discuss rebuilding priorities, town plans and other aspects related to recovery (P1, P12, P18 and P24). The setting up of community recovery committees (CRC) to involve the community in taking initiative with small-scale recovery activities and liaise between the wider community and VBRRA was a step taken to decentralize recovery operations [48,52].

Although community members were happy about being consulted interviewees P8, P10, P19 and P25 said that final decisions were made at the Government level and at times were different from wider community preferences. For example P34 said that “locals in Marysville were hesitant to accept the new community centre, library and police station constructed in Marysville that were designed as modern buildings and did not suit the quaint image the town had previously”. P42 and P43 stated that the councils are now struggling to maintain the modern infrastructure that was put in place by VBRRA due to the towns’ small rate base. P24 said that such problems could have been avoided if there was more grass-roots level involvement or decentralized processes.

5. Conclusions

The Victorian bushfires recovery effort took many steps to Build Back Better. The recovery framework created to guide reconstruction and recovery and the recovery decisions taken displayed key BBB concepts including risk reduction, social and psychological recovery, economic recovery, and legislative and stakeholder management mechanisms to improve efficiency [53]. As part of an attempt to BBB, the post-disaster institutional mechanism adopted the creation of a separate recovery authority to coordinate the multi-stakeholder recovery effort, and an intention to decentralize processes to cater to community needs. The literature review in Section 2.1 also suggests that the creation of a separate recovery authority is generally more favourable than using existing government structures to avoid issues such as weakened capacity following a disaster and overly bureaucratic procedures. As for the level of centralisation, the literature review in Section 2.2 recognises decentralization as ideal to ensure the needs of the community are met, but present pros and cons for both centralisation and decentralization. The results of the case study showed a mix between a centralised and decentralized approach in practice. The Victorian Bushfires case study showed that although it was more or less in line with recommendations from literature, there were practical problems encountered during implementation.

The data collected in this study did not explicitly have information about deliberate changes made to the recovery authority or its high-level operations during the reconstruction and recovery effort to incorporate lessons or feedback from this study or their own experiences, however lessons and feedback from the whole recovery experience were collected upon the termination of VBRRA and FRU and incorporated into the creation of Emergency Management Victoria to assist future recovery efforts. The experiences from Victoria serve as good lessons to assist future recovery efforts in order to BBB successfully.

Lessons learnt in adopting a suitable institutional mechanism for BBB include:

Creating a Recovery Authority such as VBRRA that is autonomous and able to function freely to govern the reconstruction and recovery effort is a good option. The recovery authority is an independent central point which can manage and coordinate the recovery effort and relieve pressure on existing government departments, which was successfully achieved through VBRRA.

The recovery authority should consist of members from local government organisations in order to best utilise local knowledge, resources and already established relationships with local stakeholders. VBRRA’s operations could have improved if local council members were included as key stakeholders in the recovery effort.

The recovery authority should establish partnerships with relevant organisations when dealing with different aspects of recovery. For example VBRRA partnered with DHS in the provision of temporary housing solutions in Victoria. Since DHS had existing knowledge about public housing and local community characteristics they were able to successfully provide suitable temporary living arrangements without delay.
The recovery authority has to facilitate collaboration and partnership between stakeholders. It was VBRRA’s intention to maintain an effective multi-stakeholder environment but results showed that in practice communication and inclusivity could have been strengthened. It is recommended that holding regular multi-stakeholder meetings, an open-information policy and database, and a multi-stakeholder communication strategy would assist with better collaboration and partnership.

An effective and appropriate exit strategy for the recovery authority is needed. The termination of VBRRA signalled the end of the “rebuilding and recovery period” and encouraged community members to focus on moving forward and achieving a “new normal.” The creation of FRU to take care of on-going recovery related activities whilst encouraging the return to normal government streams helped smoothen the transition process. Based on the experiences in Victoria it is recommended that the pace of recovery in the local community has to be acknowledged to determine appropriate timelines in exit strategies taking into account effects of trauma and psychological recovery of the people.

Monitoring and evaluation either by the recovery authority itself, or a separate independent body similar to the Royal Commission created in Victoria is necessary to evaluate the recovery effort and obtain lessons learnt in order to make improvements in the future.

Mechanisms should be put in place to transfer lessons learnt. Lessons learnt need to be transferred to relevant government departments or into an exclusive permanent disaster management body like EMV before the recovery authority is dissolved. This will ensure that the knowledge gained from a disaster experience is retained and available in the event of a similar future disaster.

Creating an exclusive, singular fund for disaster recovery and direct all funds received for recovery into one place such as VBAF assist with managing recovery finances.

Lessons learnt in adopting a suitable level of centralisation/decentralization for BBB include:

Decentralizing recovery efforts and receiving grass-roots level input by a centrally established recovery authority help to ensure that reconstruction and recovery practices address and cater to the real needs of affected communities. Studies show that inclusion of affected community members enhance their psychological recovery and help them move forward with their lives following a disaster (54,55). Despite the Victorian bushfires recovery effort being shaped as a decentralized model, there were grievances by the community and local councils that final decisions were made at the Government level and sometimes neglected local community wants and needs. Therefore it is important to acknowledge that decentralization requires inclusion of grass-roots level stakeholders in decision-making.
making and implementation as opposed to only consultation.

To ensure successful community participation and involvement, it is necessary for the implementing body or recovery authority to provide incentives and resources to support and educate the community. Community involvement in decision-making and implementation can be paired with education and support services such as the RAS put in place by VBRRA so that people make informed decisions.

Decentralization requires transparency of the implementing body with the local community and other local-level actors. When grass-roots level stakeholders have all the information they can provide better input in-line with any prevalent constraints.

Acknowledgements

The authors would sincerely like to thank the interviewees for their willingness to participate and provide information openly. This research was funded by the University of Auckland.

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