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Supporting post-disaster social recovery to build back better

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Abstract

Purpose – This paper aims to propose a set of principles for implementation of successful post-disaster social recovery in-line with the concept of "building back better" (BBB).

Design/methodology/approach – A set of preliminary principles for post-disaster social recovery was established from literature review. The 2009 Victorian Bushfires was chosen as a case study to examine the implemented social recovery approaches and impacts.

Findings – Analysis of the literature and case study have led to the creation of a set of modified BBB principles for social recovery under two categories, first, community support and, second, community involvement. Key principles under first category include: providing personalized support for affected families, specialized support for vulnerable groups and improved psychological support; building community cohesion; and keeping the community informed. Key principles under second category include: involving the community in designing and implementing recovery projects; providing support to the community; and maintaining full transparency.

Research limitations/implications – This study focusses on one case study. The appropriateness and applicability of the proposed principles can be further tested using a range of different case studies in both developed and developing countries.

Practical implications – The principles presented should be incorporated into post-disaster social recovery programmes implemented by governments.

Originality/value – This research takes a unique look at drawing from international experiences to form a set of practical and universal principles to aid post-disaster social recovery as an important part of BBB.

Keywords Post-disaster reconstruction, Participatory approaches, Build back better,
Social recovery, Victorian bushfires

Paper type Research paper

1. Introduction

The destruction faced by communities from natural and man-made disasters is multi-faceted. The most noticeable damage is to the built environment and economy. The impact of disasters on a community's psychological state and social life is less visible, yet has a significant effect on the overall recovery (Kristensen, 2012; Cook *et al.*, 2007). Affected people suffer from post-traumatic stress order and prolonged grief

disorder which affect their decision-making abilities and motivation to move forward with recovery (Kristensen, 2012).

Post-disaster recovery intends to help affected communities reach a state equal to or better than the pre-disaster state (Kennedy, 2009; Khasalamwa, 2009). "Build Back Better" (BBB) is a phrase that was developed during the recovery effort, following the 2004 Indian Ocean Tsunami (Clinton, 2006). BBB represents an ideal process where a holistic approach is taken to use reconstruction as an opportunity to improve the physical, economic and social conditions simultaneously beyond its pre-disaster state in an effective and efficient manner (Clinton, 2006; Kennedy *et al.*, 2008).

This paper focusses on the psycho-social aspects of community recovery following disasters. The aim of this paper is to develop a set of propositions for successful social recovery as part of "Building Back Better". The applicability and practicality of suggestions for social recovery from existing literature are assessed using the 2009 Victorian Bushfires recovery selected as a case study. First, recommendations from existing literature are used to create a set of preliminary propositions for post-disaster social recovery. The case study findings are then used to improve existing suggestions to create more practical and applicable propositions for BBB-based social recovery as an important part of overall community recovery.

2. Common post-disaster social issues

Post-disaster recovery focusses on providing fast solutions in an attempt to re-establish a sense of normality in affected communities as soon as possible (Khasalamwa, 2009). The focus on speed results in overlooking the real needs of communities (Baradan, 2006; Silva, 2009). The community is often not consulted to provide their input on reconstruction and recovery (Waugh and Smith, 2006; Boano, 2009). The lack of community consultation and participation leads to the provision of recovery solutions that are not suitable (Boano, 2009; Waugh and Smith, 2006). For example, some of the new houses constructed in Sri Lanka by humanitarian agencies during the Indian Ocean Tsunami rebuild featured bathrooms made with half-heighted walls and shared bathrooms for males and females which were culturally unacceptable (Ruwanpura, 2009). Locals were unhappy with the reconstruction of homes following the 1999 Marmara Earthquake in Turkey, as their local life, culture and aesthetics were not considered (Tas, 2010).

Non-participatory resettlement for risk reduction also creates substantial issues (Oliver-Smith, 1991). In Sri Lanka and Samoa, following the respective tsunami disasters, resettlement of coastal communities inland has led to the loss of traditional livelihoods such as fishing and tourism (Frerks and Klem, 2005; Potangaroa, 2009). Inequalities in the provision of aid and support to different ethnic groups during resettlement in Sri Lanka have created tensions and conflicts (Ruwanpura, 2009). Colten *et al.* (2008) and Khasalamwa (2009) stated that insufficient attention to social, cultural and ethnic facets of communities during recovery exacerbate pre-existing vulnerabilities. Separation during disasters and resettlement operations disrupt community cohesion and psychological recovery (Florian, 2007).

The trauma faced by disaster victims needs to be recognized as a serious issue (Matanle, 2011). In most developing countries where formal psychological support is not common, community networks provide empathetic support to each other (Asian Development Bank, Japan Bank for International Coooporation & World Bank, 2005).

Disasters and resettlement operations can impact upon psychological recovery if the community is separated by disrupting community cohesion (Florian, 2007). The involvement of communities in recovery such as through owner-building, is used as a mechanism to support psychological recovery (Kennedy et al., 2008). However owner-building without training and supervision has created sub-standard homes during the tsunami rebuild in Sri Lanka (Pathiraja and Tombesi, 2009). External tradesmen with construction expertise employed for rebuilding to avoid such problems also leave the locals excluded and disconnected from feeling a sense of responsibility about the community's recovery (Oliver-Smith, 1991), indicating that community involvement to a certain degree is necessary for successful recovery.

3. Recommendations for social recovery

Social issues arising in post-disaster environments presented in Section 2 are primarily related to social/cultural/religious/ethnic factors and psychological factors. Recommendations to address these issues can be categorized into two streams:

(1) support the community to deal with these issues, i.e. "Community Support"; and

(2) empower the community by involving them in recovery, i.e. "Community Involvement".

These recommendations from literature can be used to form preliminary "propositions" for post-disaster social recovery as presented below.

3.1 Community support

Reconstruction is a chaotic and stressful time for individuals who are also experiencing trauma. These communities require various forms of assistance. Propositions for community support from literature include:

- Personalized advice and one-on-one support provided to families in Columbia during the 1999 earthquake recovery was a success (Johnson et al., 2006).

- Arranging specialized assistance for vulnerable communities was recommended by James Lee Witt Associates (2005), Clinton (2006) and Khasalamwa (2009).

- Providing psychological support and counselling are essential during recovery (Omidvar et al., 2010; Kristensen, 2012). Johnson et al. (2006) suggests linking housing projects with social programmes that provide psychological assistance.

- The establishment of information centres which offer easy access to recovery-related information for the community is recommended (Bredenoord and van Lindert, 2010).

- Upholding a sense of community spirit and improving community cohesion through organizing group activities is recommended for social recovery by Chang (2010), Kurata et al. (2011) and Lyons and Schilderman (2011). The Canterbury Earthquake recovery in Christchurch propose sports, recreation, arts and cultural programmes to engage the community and provide a sense of normality (CERA, 2012).

- Clinton (2006), Khasalamwa (2009) and Silva (2009) caution stakeholders in the recovery effort to ensure that fairness and equity is maintained in the provision of

aid and assistance to different community groups to avoid creating issues with inequality and disadvantage.

3.2 Community involvement
One of the first steps to be taken in post-disaster recovery efforts is to understand the local context of the affected community through needs assessments and surveys to provide appropriate assistance to satisfy the community (Lloyd-Jones, 2006; Khasalamwa, 2009). The reconstruction and recovery policies must then be developed based on local requirements to support and preserve the local culture and heritage, as seen in the recovery policy for the 2003 Bam Earthquake in Iran (Omidvar *et al.*, 2010). Propositions for social recovery from literature for community involvement include:

- Maintaining community involvement throughout recovery is integral for success (Murphy, 2007; Batteate, 2006). The level of community involvement can vary depending on the recovery approach taken (Davidson *et al.*, 2007). Highly centralized recovery efforts have no input or involvement by the community, where the government and non-governmental organisations (NGOs) initiate and execute recovery projects. In this type of recovery, community should at least be kept informed and educated about the recovery process through regular workshops (Bredenoord and van Lindert, 2010; FEMA, 2000; Iglesias *et al.*, 2009). Highly decentralized recovery efforts empower the community by supporting them to start and execute their own projects. Other types of recovery efforts that place between these two extremes display varying degrees of community involvement, such as: recovery efforts where recovery plans are created based on community consultation to be tailor-made to suit the specific needs of each community (Monday, 2002; Clinton, 2006; Red Cross, 2010). The importance of decentralisation to empower disaster-affected communities by enabling them to take responsibility of the recovery effort and become involved in decision-making has been stressed by literature from Clinton (2006), Davidson *et al.* (2007), GoSL & UN (2005), Lyons (2009), Monday (2002) and United Nations (2005).

- The establishment of community consultation groups is an effective way to communicate with the community. Community consultation groups consisting of community leaders from pre-existing community groups and reputed members of the community to liaise between the wider community and governmental authorities have been successful in Sri Lanka (Disaster Relief Monitoring Unit of the Human Rights Commission of Sri Lanka, 2006) and India (DN & PA, 2008). Existing community groups can also be called upon to assist with recovery activities (Florian, 2007).

- The government should maintain full transparency with the affected communities about recovery plans, issues and solutions, so that the community has full awareness and is able to make educated decisions (Baradan, 2006).

- Although owner-building was recognized as problematic (Pathiraja and Tombesi, 2009), authors such as Lloyd-Jones (2006), Olshansky (2005) and Ozcevik *et al.* (2009) propose that if it is supported with proper training and thorough supervision and advice, owner-building could be a good way to include the community in the recovery process.

4. Research methodology

The objective of this paper is to understand the psycho-social issues existing in post-disaster environments and determine ways in which social recovery of communities can be incorporated into recovery projects to BBB. A qualitative research design was chosen as the most suitable approach to meet this objective. A case study approach was chosen, as it provides the ability to obtain a deep understanding of experiences from the perspectives of the participants chosen for the study (Maykut and Morehouse, 1994). The case study chosen was the recent 2009 Victorian Bushfires in Australia. This case study provided the opportunity to investigate how much the concept of BBB in terms of social recovery has been integrated into recovery in a more recent event, and as recovery was still on-going, it was possible to observe recovery progress and implications over time. Therefore, a longitudinal approach was taken where data were collected yearly over the course of three years.

4.1 Case study background

The Victorian Bushfires took place on the 7th of February 2009, where fires swept through 78 communities in the state of Victoria. A total of 173 lives were lost, and more than 430,000 hectares of land, 2000 properties, 55 businesses, 3,550 agricultural facilities, 70 national parks, 950 local parks and 467 cultural sites were destroyed (VBBRA, 2009). The areas affected by the bushfires were mountainous high country lands, forests and pastures where the key industries were agriculture, forestry and tourism (VBBRA, 2009).

Several days following the bushfires the Australian Government created the Victorian Bushfire Reconstruction and Recovery Authority (VBRRA) as a coordinating body to manage the reconstruction and recovery process (VBBRA, 2009). Various groups established under the VBRRA managed the different aspects of recovery such as temporary housing, donations management, economic recovery, social and psychological recovery and rebuilding (VBRRA, 2010). Once the VBRRA was closed down in June 2011, the Fire Recovery Unit (FRU) was established to help transition communities who were dependent on the VBRRA back to normal streams of operation and complete any residual recovery-related duties left by the VBRRA (RDV, 2012).

4.2 Data collection

In-depth interviews were chosen as the primary mode of data collection from the bushfires case study, as they provide the researcher the ability to explore and uncover new directions based on the responses of the interviewee (Maykut and Morehouse, 1994). Data were collected on the post-disaster recovery process in Victoria following the 2009 bushfires during three consecutive field trips in 2010, 2011 and 2012. Key actors involved in the recovery (Table I) who agreed to participate in this study were interviewed using a semi-structured interview guideline. The interview guideline consisted of open-ended questions focussed on the themes: participants' understanding of BBB; background on current recovery progress; initiatives put in place for social recovery; social issues encountered during recovery; their impacts over time; and suggestions to improve social recovery.

Interviewees chosen for this study included officials from the recovery authorities established to oversee the Victorian Bushfires recovery effort (VBRRA and FRU); officials from the government department responsible for community recovery (DHS);

Research trip	Interviewee code	No. of interviewees	Description	
Research trip 1 July 2010	P1-P6	6	Victorian Bushfire Reconstruction and Recovery Authority (VBRRA)	Supporting post-disaster social recovery
	P7	1	Building Commission (BC)	
	P8	1	Temporary Village	131
	P9 & P10	2	Volume Builders	
	P11 & P12	2	Department of Human Services (DHS)	
Research trip 2 July 2011	P13	1	Rebuilding Advisory Service (RAS)	
	P14	1	Building Commission (BC)	
	P15	1	Fire Recovery Unit (FRU)	
	P16	1	Marysville Community Recovery Committee (CRC)	
	P17	1	Marysville Chamber of Commerce (CoC)	
Research trip 3 October 2012	P18	1	Volume Builders	
	P19 & P20	2	Fire Recovery Unit (FRU)	Table I.
	P21	1	Building Commission (BC)	Profiles of the interviewees in the
	P22 & P23	2	Rebuilding Advisory Service (RAS)	Australian case study

Source: Author

volume builders who worked closely with the community to rebuild houses; rebuilding advisors appointed by the VBRRA to help the community (Rebuilding Advisory Services [RASs]); officials who implemented the building code changes; and members of community-level organisations to provide a grass-root-level perspective on recovery (Marysville Temporary Village, Marysville CRC and Marysville CoC).

Post-disaster reconstruction and recovery-related documents including progress reports, commission reports and governmental authority reports were also examined as data for this study. Many documents were obtained first hand from case study participants during the interviews conducted. Other documents were obtained from electronic searches related to the subject area.

4.3 Data analysis
The data obtained were transcribed and coded under the categories determined in the literature review: community support and community involvement. The data were further sub-coded within these categories to identify successes, shortcomings and future recommendations. The data analysis for this study was conducted using constant comparative analysis (Maykut and Morehouse, 1994) where data were coded based on the previous findings from literature to form, enhance, confirm or discount the theories. Reliability and validity were assured by analysing responses given by different interviewees on the same subject, as well as triangulating interview data with the documents collected. Section 5 details the results of the data collected from Victoria.

5. Post-disaster social recovery in Victoria
The recovery model for Victoria centred on the community. The guiding principles for the recovery effort consisted of: safety and welfare; meeting needs; community engagement; fairness and equity; and tailored solutions to suit local communities

(VBBRA, 2009). Findings from the interviews are presented below under the categories established previously in Section 3: *community support* and *community involvement*.

5.1 Community support

One of the first lines of support provided to bushfire-affected residents was the launch of a case management service initiated by the VBRRA (VBBRA, 2009). P1, P7 and P18 confirmed that each affected family was assigned a case manager who provided information and direction for recovery (VBBRA, 2009). P8, a bushfire victim, said that "the case management service was one of the most important forms of support". P8 along with P7 revealed that there was a shortage of trained case managers who were familiar with the local community context which led to the service being ineffective at the start. P17 held the opinion that the case management service should have continued over a longer period of time through long-term recovery. Funding for community support was provided by the Victorian Bushfire Appeal Fund (VBAF) arranged by the VBRRA. Community hubs (information centres) were set up to provide direction for advice, financial support, counselling services, and to facilitate social interaction between community members (VBBRA, 2009). RASs were established to provide rebuilding advice, and business information support centres and business mentoring services to assist business-owners. Information was also provided through newsletters, other media and training courses to educate people on building requirements and bushfire-risk (P14 and P18).

Commemorative events and memorials were organized as desired by the affected communities (VBRRA, 2010). The one-year anniversary memorial was a major turning point (P3, P6, P16 and P17). P16 and P17 observed that people began to move forward with their lives and started making decisions following this event. VBAF also provided funds to support community projects recognized as important by locals such as community halls, recreational facilities, schools and medical centres. P1, P2 and P17 found the speedy construction and opening of public buildings a positive step towards rebuilding confidence in residents to remain in these communities and rebuild their lives again. Activities such as retreats and workshops to support individual groups such as men, women, youth, families and school children were also held for social recovery (VBRRA, 2009). Temporary villages which housed groups of people were one form of temporary accommodation provided (VBBRA, 2009). P8 said that the villages helped to create a sense of community: "People were able to support each other and there were regular community dinners in the village to get everyone together".

Although counselling services were provided through the community hubs P7, P10 and P21 believe that more psychological support and interventions were necessary. P17 and P21 said that even a few years following the disaster people were still grieving and unable to make decisions regarding their future, which slowed down the overall recovery progress in terms of housing reconstruction and business rebuilding.

5.2 Community involvement

The recovery in Victoria was designed to be community-centred with community consultation and engagement used to provide tailor-made solutions (VBBRA, 2009, VBRRA, 2010). The first step taken to enable community involvement included a series of community meetings held at the start of the recovery process to learn the specific

rebuilding and recovery needs of each affected community (VBBRA, 2009). P8 explained:

> There were regular meetings to discuss what our identity was, what should be retained, and what it could become. All this information went back to VBRRA, after which they decided on the projects based on funds.

P16 said that people were happy about being consulted through the workshops, but were disappointed that they were unable to be physically involved. He recommended that:

> […] we have to get the community involved, whether it's planting shrubbery, painting or some activity and give them some ownership. Otherwise they're just coming to a town that's been fully manufactured for them and that's not what they are used to.

The creation of community recovery committees (CRCs) consisting of nominated elected members of the community was another tool used for community involvement (P5 and P16). P16 who chairs a CRC said:

> We work through the Community Recovery Plans. Feedback is received from and distributed to the wider community through the CRC members. We sort through the projects and ideas people have proposed to prioritize them based on the money we have.

P11, P12, P14 and P15 said that pre-existing community divisions surfaced during the consultation process, leading to many disagreements.

Ideas and feedback obtained from the meetings and CRCs were used by the VBRRA to develop the infrastructure rebuilding projects (VBBRA, 2011). Housing reconstruction was the responsibility of home-owners ("owner-builders") who employed volume builders or small-scale builders to do the task (P7, P9, P22 and P23). These owner-builders acted as project managers and were responsible for managing funds (insurance and VBAF grants), and the builders and sub-contractors used for the rebuild.

P8 said that long-term residents of these communities were very attached to their identity, as quaint mountainous villages and did not want to see it change. The residents of Marysville were unhappy with the Rebuilding Advisory Centre building, the new school, medical facility and police station that were built using modern architecture (P8, P17 and P23). P23 said that local councils were unable to afford the long-term maintenance of the modern infrastructure put in place. P8 reiterated the importance of community and local council involvement from the start to avoid such problems.

The issue with enabling a high-level of community control is that disaster victims are sometimes not capable of decision-making due to grief and trauma. P16 and P17 said that people were not emotionally ready to do anything. P3, P4, P22 and P23 said that the process of rebuilding homes has put a large amount of pressure on locals. P22 and P23 explained that owner-building was encouraged for community-involvement, but owner-builders were incompetent in rebuilding and managing funds, leaving behind a large number of half-built homes:

> People who have had small houses wanted much bigger houses during the rebuild. But they only had enough money to do a small house. The owner builders burst forth and started building. They got a quarter of the way through and realized they ran out of money (P23).

RAS was put in place to assist owner-builders, but P22 and P23 found that their services were not used frequently. P22 suggested that owner-building can be successful provided

they are trained thoroughly about finances and the rebuilding process before rebuilding is begun along with more hands-on support form services such as RAS.

The next section combines the findings from the data collection exercise in Australia and the findings from the literature review presented in Section 3 to analyse and establish modified BBB-based propositions for social recovery.

6. Modified BBB principles for post-disaster social recovery

The lessons and shortcomings in the social recovery effort in Victoria have been incorporated with the propositions determined from literature presented in Section 3 to develop improved BBB propositions for social recovery. The propositions are presented under the categories: community support and community involvement.

6.1 Improved propositions for community support

- *Provide case managers for each disaster-affected family*: This was recommended in literature and implemented in Victoria. The role of case managers is to support families through recovery by directing them to appropriate sources of information and assistance. Shortcomings in Victoria suggest that case managers should be psychologically trained and educated about the local community to deal with traumatized people. The case management service should be on-going over long-term recovery until families have completed rebuilding and re-established their livelihoods.

- *Organize specialized assistance for vulnerable community groups*: Local council information can be utilized to identify vulnerable groups in the community such as the elderly, women, children, specific ethnic groups, unemployed. Appropriate assistance can then be determined such as support networks, up-skilling programmes, special grants.

- *Enhance psychological support and counselling*: Accessing psychological support should be encouraged by putting in place free support services and making the community aware of the services provided.

- *Organize group activities to build community cohesion*: Commemorative events and memorial services held in Victoria had a substantial impact on recovery and are recommended for social recovery. Literature states that social events such as sports, recreation, arts and cultural programmes also assist social recovery. Providing temporary accommodation in one place (e.g. temporary villages) builds community cohesion early in the recovery.

- *Keep the community informed*: Information centres (community hubs) and services such as the RAS and regular newsletters similar to that implemented in Victoria are suggested for future recovery efforts. It is important that the community is made aware of the facilities that are made available to them.

- *Rebuild public facilities as soon as possible*: The fast rebuilding of public facilities such as schools and hospitals encouraged residents in Victoria to remain in the affected towns and start rebuilding. Speedy rebuilding of public facilities taking into account what the community needs and what the local councils can afford is recommended.

6.2 Improved propositions for community involvement

- *Involve the community in designing recovery plans and implementing recovery projects*: Community meetings and workshops held in Victoria were not very successful. More control has to be given to locals to decide, design and implement projects with the aid of the government and recovery authority to empower communities (Davidson *et al.*, 2007).

- *Create community groups to design and implement local recovery projects*: The creation of community consultation groups was identified in literature and implemented in Victoria. It is proposed that community groups should be utilized to not only consult, but to organize local recovery projects with support from the government/recovery authority. Community leaders from existing groups and reputed community members should be nominated and elected by the community to form the groups.

- *Promote owner-building with sufficient support*: Owner-building displayed mixed results in literature. In Victoria, owner-builders were inexperienced, traumatized and lacked decision-making skills which led to unsuccessful residential rebuilding. Interviewees in Victoria encourage owner-building as a way to involve the community in recovery. Thorough training on rebuilding and financial management for owner-builders is recommended. Services such as the RAS should be strengthened to support owner-builders.

- *Maintain full transparency with affected communities*: The government has to be transparent with the community about constraints such as funding, timelines, resources and potential issues such as relocation that affect reconstruction and recovery.

7. Conclusions

Social recovery of communities affected by disasters is difficult but crucial for overall recovery as part of the concept of BBB. Focus on reconstruction of the built environment and economy often overshadows this aspect of recovery. Locals must be supported to psychologically recover from the trauma experienced and move forward with their lives. The affected must also become involved in reconstruction and recovery to feel a sense of ownership of the community's recovery process and feel motivated to contribute to the overall recovery of the community.

Literature has proposed that social issues during reconstruction can be addressed by providing various forms of support for the community and involving the community in recovery. Initial propositions for BBB-based social recovery have been extracted from recommendations in literature. The Victorian Bushfires case study was studied to assess the effectiveness of these literature-based social recovery propositions. Findings from this study were used to create a modified set of BBB-based propositions for post-disaster social recovery. The modified propositions were presented in Section 6 of this paper under the categories: community support and community involvement. Suggestions for providing effective support to the community and involving the community in recovery have been presented in this paper.

The findings of this paper contribute towards improving post-disaster reconstruction and recovery practices by directing attention to the often neglected aspect of social recovery as a part of BBB. The longitudinal case study analysis

conducted allowed recommendations form literature to be modified to improve practicality and wider applicability. These propositions are recommended for use as a guideline by governments and recovery authorities for planning and implementing recovery programmes to improve social recovery of communities in the future.

8. Research limitations

Semi-structured in-depth interviews were chosen as the most suitable form of data collection for this study. However, distance and budget constraints only permitted data collection at specific times during the short periods the researcher was able to visit the case study location. The data collected were also limited to interviewees who were willing to participate in this research study and those who were available during these time periods. This sometimes led to interviewees who took part in data collection to be unable to participate in following years. Therefore, the findings of this study are limited to the selection of interviewees who agreed to take part in this study. Every attempt was made to find representation from all major stakeholder groups involved in recovery and to maintain consistency over the three years of data collection. As a result all major stakeholder organisations such as national and local government, NGOs, regulatory authorities, construction industry representatives and local community-based representatives were included in this study. Data being collected yearly for three years, however, added to the quality and reliability of the findings. Data collected were also complemented with documents obtained from the case study locations and international literature containing more findings on these case studies to enhance the comprehensiveness of the data.

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