Public-private partnerships in emergency and disaster management: examples from the Queensland floods 2010–11

Associate Professor Bhishna Bajracharya and Dr Peter Hastings, Bond University, examine a framework for public-private partnerships in building community resilience. ©

ABSTRACT

Numerous international studies have corroborated the value of public-private sector partnerships in reducing vulnerability and building resilience to emergencies and disasters. This paper proposes a simple conceptual framework for publicprivate partnerships in emergency and disaster management that could be applied to research and policy analysis in Australia. The framework proposes three dimensions: sector types (public, business and community), partnership arrangements (legislated and formal to informal agreements), and partnership roles (strategic and resilience-building and response and recovery). This paper describes how the three sectors can work together under various partnership arrangements for preventive or responsive measures in emergency and disaster management. Public-private partnerships during and after the Queensland floods of 2010-11 are used to illustrate the relationships presented in the framework and to give a snapshot of these partnerships in Queensland.

Introduction

There is potential for partnerships between governments, non-government organisations and private sector enterprises of all sizes to enhance emergency and disaster resilience. So-termed public-private sector partnerships have been formally developed in Australia, particularly in relation to critical infrastructure (e.g. Commonwealth of Australia 2010). However, there has been relatively little systematic identification or analysis of other emergency and disaster management-related public-private partnership experiences particularly at local government and community levels.

Public-private partnerships are often defined in the infrastructure and development environments as contractual arrangements between governments and the private sector that support the government's broader service responsibilities (e.g. Commonwealth of Australia 2008). Consistent with the National Research Council of the National Academies (2011), this paper extends the definition to embrace a wider range of collaborations to include formal and informal arrangements and the not-for-profit sector.

The aim of this paper is to suggest a simple conceptual framework of public-private partnerships that is applicable to Australian emergency management and, hence, guide research and policy analysis. The term 'emergency' is used hereafter to represent the spectrum of incidents from minor to catastrophic (see Attorney-General's Department 2014) as it is envisaged that public-private partnerships potentially play roles across the breadth of incident intensities.

The efficacy of public-private partnerships for emergency management and resilience-building has been established across the range of socioeconomic and hazard settings (United Nations 2008, Business Civic Leadership Centre 2010, United States Chamber of Commerce Foundation 2014). Successful partnerships have facilitated the organisation, exchange and use of capital and cash, equipment, labour, services, infrastructure, expertise, training and more. They allow governments to access the resources, capabilities and logistic networks available in the private sector and hence to concentrate on their own priorities and avoid the inefficiencies of duplication. Meanwhile, the private sector can be rewarded directly with business and through the development of trusted networks and community exposure (National Research Council of the National Academies 2011, Busch & Givens 2013). The contemporary operational emphasis is on identifying 'good practices' for publicprivate partnership initiation and maintenance, and establishing effective supporting structures of coordination and governance.

Conceptualising public-private partnerships

In its compendium of public-private partnership case studies in emergency management and resiliencebuilding, the International Strategy for Disaster Risk Reduction (United Nations 2008) broadly conceptualised public-private partnerships in terms of their goals and outcomes, being advocacy and awareness, social investment and philanthropy, and core business partnerships.

This and similar collections (e.g. as previously cited) highlight the diversity of public-private partnership participants and arrangements that have successfully achieved such outcomes. In attempting to synthesise the real world experiences, analyses by Abou-bakr (2012), and Chen and colleagues (2013) yielded publicprivate partnership frameworks that rationalised stakeholder participation, arrangements and roles in the emergency management context.

Drawing on this work, a general framework is proposed as a basis for conceptualising public-private partnerships for emergency management in Australia (see Figure 1). The broad structure of the framework follows Chen and colleagues (2013) who suggest a taxonomy of public-private partnership arrangements that broadly identifies sector involvement, partnership arrangements and purpose (linked to emergency management phases). The latter is refined by adopting the classification by Abou-bakr (2012) who delineated 'strategic policy-orientation' and

'responsive' partnerships (the former being longterm arrangements that seek to mitigate crises and disasters, while the latter tends to be driven in the response and recovery phases by a shared sense of urgency and the perception of mutual gain). The sub-elements of the framework reflect the Australian political and business landscape and are briefly outlined below.

Sector types - public and private sectors

The National Research Council of the National Academies (2011) recommends representation from the full fabric of society for sustainable and effective resiliencefocused collaboration. In this framework, and consistent with Chen and colleagues (2013), public, private and non-government sectors are included.

The public sector comprises the three tiers of government (Commonwealth, state and local) and recognises government-based emergency services within these as potential partners.

The private sector is divided into the business sector and the non-government and community sectors, which broadly aligns to the familiar 'profit' and 'not-forprofit' delineation. Within the business sector, business size and type are identified as important variables as they potentially reflect the nature and magnitude of possible contributions to emergency management efforts (refer to case studies from the United States Chamber of Commerce Foundation 2014).

The non-government, not-for-profit and community sectors comprise the recognised components of voluntary services, humanitarian non-government organisations (NGOs) and local community groups, all of which have established roles in emergency management (e.g. Queensland Government 2013). Type and size of the operations are acknowledged, including the specific differentiation between local community-based groups and humanitarian NGOs that are relatively large national and international organisations.

By way of the arrows encircling each sector type in Figure 1, the framework observes that partnerships are not only inter-sectorial, but also occur within the sector types. For example, levels of government can have internal and hierarchical co-operative arrangements, as can businesses or NGOs.



Figure 1: Proposed conceptual model for public-private partnerships in emergency management.

Partnership arrangements

The legal mechanism underpinning partnerships is seen as an important characteristic as it defines the degree of legal robustness in the relationship and may reflect levels of commitment and, therefore, the certainty and enforceability of realising anticipated co-operation. Partnership arrangements ranging from formal (legislated and formal contracts) to less formal and informal agreements are delineated in a hierarchical sub-categorisation.

Role of partnerships

Finally, the role of partnerships in emergency management and resilience-building is classified as either strategic (aimed at prevention and preparedness activities) or responsive (aimed toward response and recovery operations) following Abou-bakr (2012) classifications. This provides an analytical framework with which to investigate partnership objectives and biases with reference to the comprehensive emergency management approach.

Partnerships during the 2010-11 **Queensland floods**

The following illustrates the application of the framework to conceptualise and describe some of the public-private partnerships operating during the Queensland and Brisbane flood disasters of 2010-11. A detailed account of the events is not provided here, but is available in the Queensland Floods Commission of Inquiry final report¹. Evidence of public-private partnerships were identified by reviewing publiclyavailable sources including the Queensland Flood Commission of Inquiry publications, company reports and company media releases, local government communications and non-government sector reports dealing with the disaster and its aftermath. Prominent, sourced examples of partnership types are collated into Table 1, which is formatted to reflect the framework. It is not intended to be a comprehensive account.

The examples in Table 1 are biased towards reporting partnerships involving larger enterprises. These are more readily identifiable from publicly available information perhaps because larger entities have the resources, media access and motivation to publicly promote their support of the community. Conversely, capturing accounts of partnerships featuring smaller businesses and community-based organisations was difficult as few instances had been publicly reported.

A diversity of emergency management public-private partnerships is identified, including strategic and responsive partnerships between governments, NGOs and businesses of various types and sizes. Partnership mechanisms and governance range from legislation and formal contracts to ad hoc informal understandings. The following describes some examples of public-private partnerships that can be

Queensland Floods Commission of Inquiry report. At: www. floodcommission.qld.gov.au/publications/final-report/.

conceptualised under the framework by classifying sector involvement, partnership arrangements and partnership roles.

Government-private sector partnerships: legislated and contractual, responsive and strategic

Formal, strategic public-private sector partnerships are established between government and critical infrastructure and service providers, notably at the Queensland state government level. For example, Energex (electricity distributer) has responsibilities under Queensland's Disaster Management Act 2003 and nominates representatives to participate in local, district and state emergency management groups (Energex n.d.). Further facilitating public-private partnerships at this level, the Queensland State Disaster Management Plan (Queensland Government 2013) specifies other possible non-government members of the state's peak disaster co-ordination group, including larger state and nation-wide organisations such as the Red Cross, Surf Life Saving Queensland, large utility companies, the Insurance Council of Australia and others. Oloruntobo (2010) previously observed that the Queensland Government had integrated effectively with the private sector (including larger businesses and NGOs) in the aftermath of Cyclone Larry, citing the successes of logistical support from private businesses on the basis of unspecified pre-emergency agreements (not specified).

Government-private sector partnerships: MOU and agreement-based, responsive and strategic

At local and regional levels and less formally, Queensland local councils have entered into agreements with the Red Cross, usually in the form of Memoranda of Understanding (MOUs), to manage and operate local evacuation centres. Red Cross itself partners with other organisations and Queensland government departments (e.g. Lifeline and Queensland Department of Police, Fire and Emergency Services, formerly Department of Communities, Child Safety and Disabilities) to provide community outreach services. Red Cross also contributes to emergency management planning and policy through committee representation at all levels of government (Red Cross 2011).

A significant outcome of the 2010–11 floods was the engagement between the insurance industry and some Queensland local governments, including the Balonne and Murweh shire councils, to address the issues of flood insurance access and affordability (e.g. Balonne Shire Council 2014, Suncorp Insurance 2013). Agreements (formality not indicated) encouraged investment in risk assessment, hazard mitigation and subsequent risk-information disclosure by local councils in return for insurance reassessments, potentially resulting in sustainable, more affordable insurance coverage for community members. Access to insurance and premium reductions have eventuated in some cases. This provides quantitatively definable

economic and community benefits for mitigation investment (Suncorp Insurance 2013).

Government-private sector partnerships: informal, responsive and strategic

The Queensland flood disaster was also a catalyst for relatively informal *ad hoc* public-private partnerships during the response and recovery phases. Table 1 outlines some of these, which commonly feature

opportunistic donations of cash and supply of labour, goods and equipment by the private sector. At state government level a policy was established to guide this aspect of disaster response and recovery (Queensland Policy for Offers of Assistance, Donations, Volunteers and Goods in Disasters) (Queensland Government n.d.). However, contemporary state emergency management policy and guidelines, including the Queensland Local Disaster Management Guidelines (Queensland Government 2012), do not provide specific quidance

Table 1: Examples of the range of public-private partnerships evident in the Queensland and Brisbane flood of 2010-11.

Partnership type	Partnership example	Activity	Partnership arrangement	Partnership role in emergency management and resilience building
Public Sector with Business Sector	State government with critical infrastructure providers e.g. Queensland Government and Energex [Energex n.d.]	Maintain electricity supply.	State Legislation: Energex has responsibilities under the Queensland Disaster Management Act 2003. Energex nominates representatives to all levels of government.	Response and recovery.
	State government with large businesses	Cash donations to the Queensland Premier's Flood Appeal.	Agreement: donation pledges.	Response and recovery.
	e.g. Queensland Government with a range of mining, retail, financial and other large businesses [Burke 2011, Wesfarmers 2011]	Large retailers provide and modify logistical support (freight services, warehousing and distribution) to ensure supply of essential items to disaster zones.	Not determined.	
	State government with all businesses e.g. Queensland Government with a range of businesses	Business relief and recovery assistance.	Legislation and contracts: loans, subsidies, tax concessions.	Response and recovery.
	(Queensland Government 2014)	Provision of instructional materials and templates to facilitate business continuity planning (including for specific natural hazard types).	Informal: information provision only.	Strategic resilience-building.
	Local government with large businesses e.g. Queensland local governments with the insurance industry (Suncorp Insurance 2013)	Local government undertaking mitigation and sharing risk information with industry to encourage re-assessment of risk and hence insurance product accessibility and lower cost.	Informal.	Strategic resilience- building.
	Local government with small-medium businesses e.g. Brisbane City Council with private plant and machinery contractors [Brisbane City Council 2011]	In the response phase, council actively solicited contract plant and machinery operators (in the case of Brisbane City Council, through social media), to assist in the postflood cleanup.	Council procurement processes.	Response and recovery.

continued

Table 1: (continued)

Table 1. (continued)								
Partnership type	Partnership example	Activity	Partnership arrangement	Partnership role in emergency management and resilience building				
Public sector with the non- Government and Community sector	Local government with NGOs e.g. Brisbane City Council Ipswich Regional Council with Australian Red Cross (Brisbane City Council 2011)	Management of evacuation centres, registration and social support (Red Cross).	Memorandum of Understanding.	Response and recovery. Strategic resilience- building.				
	Local government with community groups e.g. Gold Coast City Council with Varsity Lakes Community Group (Bajracharya et al. 2012)	Gold Coast City Council advised the community group to enhance preparedness for future emergencies.	Informal, non- contractual	Strategic resilience-building.				
Private Sector with the non- Government and Community Sectors	Businesses with NGOs e.g. major retailer and the Salvation Army (Luscombe 2011)	A major retailer collecting and matching donations for the Salvation Army flood appeal.	Not determined.	Response and recovery.				
Intra-sector partnerships	Intra-business partnerships e.g. Ergon with Energex and interstate entities e.g. Queensland Urban Utilities with Unity Water, Sydney Water Corporation and Aliconnex (Queensland Floods Commission of Inquiry 2011)	Resource sharing during severe weather events.	Memorandum of Understanding and Mutual Aid Guidelines for the water sector.	Response and recovery. Strategic resilience-building.				
Complex community-based partnerships	Government with business and the non-government, community sectors e.g. various locations with retail chains and mining companies, NGOs, community centres and state and local Governments (Bourke 2011, Queensland Resources Council 2011, Luscombe 2011, Wesfarmers 2011)	Retailer donations of essential goods and social support to the public, emergency teams and evacuation centres, e.g. supply of essential items, labour, clean-up goods, back-to-school supplies, photocopy/ office services, sausage sizzle events. Mining company assistance to Emerald by allowing their local workforce to assist in local flood preparations (e.g. sandbagging). Mining company accommodating evacuated Theodore residents in their mine camps. Mining company supply of a helicopter for rescues.	Informal, opportunistic donations and services.	Response and recovery.				
	Neighbourhood and community centres e.g. Brisbane Neighbourhood and Community Centres with Brisbane City Council, Queensland Government, private enterprise and NGOs (West End Community House 2011)	In liaison with a range of public and private sector stakeholders, neighbourhood and community centres performed a range of social support and recovery roles including relief co-ordination, outreach, local intelligence, counselling and evacuation centre support.	Not determined.	Response and recovery.				



Energex representatives participate in local, district and state emergency management groups in Queensland.

on the development of strategic or responsive publicprivate partnerships involving small to medium private sector organisations, or even large, 'less-critical' private enterprises (e.g. the mining industry). The emphasis is on broad procurement protocols (e.g. for evacuation centre and emergency supplies), general community-building and individual business continuity.

All sectors: informal agreements, strategic and responsive

The establishment of ad hoc public-private partnership arrangements is notable at the local level. The West End Community House report, on behalf of several Brisbane community-based organisations, described the reality of public-private partnerships at this level as being one of complex patterns of (often) informal and dynamic arrangements between larger NGOs, smaller community groups, businesses and local and state government, particularly in the response and recovery phases. The report recommended greater clarity in defining roles and protocols (i.e. partnership arrangements) for community and neighbourhood centres within emergency and recovery plans at all levels of government (West End Community House 2011).

Cautionary note

This paper reported public-private partnerships that have generally proven to be useful in building resilience. There are, however, significant challenges to establishing and maintaining effective publicprivate partnerships in this context. Reconciling the

diverging interests and expectations of partners (e.g. duty of care versus profitability), problems of spanning organisational boundaries and scales, managing perceived roles and outcomes, negotiating information-sharing, establishing trust and certainty in service delivery, and challenges in maintaining active partnerships are some of the issues that can temper the development of successful public-private partnerships (National Research Council of the National Academies 2011, Chen et al. 2013, Busch & Givens 2013).

Conclusion

The conceptualisation of public-private sector partnerships for emergency management seeks to prompt discussion and exploration of such publicprivate partnerships and could be refined for use as a broad analytical framework in this field. This paper briefly outlined the diversity and scope of public-private partnerships in terms of stakeholder participation and partnership aims, operation and outcomes.

Further research is needed across Australia to identify and describe public-private partnerships for emergency management, particularly at the local level where they have not been well-documented and may be underpinned by relatively informal agreements of unknown efficacy. Analyses and evaluation of publicprivate partnership arrangements may then be applied to distinguish 'good practices' that encourage both responsive and strategic partnerships across a range of situations.

There are also issues to be investigated concerning the balance and dynamics of power and resources among the stakeholders in public-private partnerships. Formal attribution of responsibilities in developing and maintaining relationships, and their governance, may not be addressed in detail by emergency management policy and guidance, notably at the local levels of business and government.

References

Abou-bakr AJ 2012, Managing Disasters through Publicprivate Partnerships (Public Management and Change series) Georgetown University Press, Washington D.C.

Attorney-General's Department 2014, Australian Emergency Management Arrangements, Handbook 9, Australian Emergency Management Handbook Series.

Bajracharya B, Hastings P, Childs I & McNamee P 2012, Public-private partnership in disaster management: a case study of the Gold Coast, Australian Journal of Emergency Management, vol. 27, no.3, pp. 27-33.

Balonne Shire Council 2014, Thumbs Up for Levee as Insurance Set to Go Down (News). At: www.balonne.qld.gov.au/news/index. shtml/-/asset_publisher/Keo8/content/media-release-thumbsup-for-levee-as-insurance-set-to-go-down.

Brisbane City Council 2011, Brisbane City Council Initial Submission, Queensland Floods Commission of Inquiry. At: www. floodcommission.qld.gov.au/__data/assets/file/0020/8363/BCC_ Brisbane_City_Council_11.03.11.pdf.

Burke J 2011, Miners Give Big to Qld Flood Victims, Australian Mining, January 2011.

Busch NE & Givens AD 2013, Achieving Resilience in Disaster Management: The Role of Public-private Partnerships, Journal of Strategic Security, vol. 6, no 2, pp. 1-19.

Business Civic Leadership Center (BCLC) 2010, A Decade of Disasters, United States Chamber of Commerce.

Chen J, Hsuan Yun Chen T, Vertinsky I, Yumagulova L & Chansoo P 2013, Public-Private Partnerships for the Development of Disaster Resilient Communities, Journal of Contingencies and Crisis Management, vol. 21, no 3, pp. 130-143.

Commonwealth of Australia 2010, Critical Infrastructure Resilience Strategy, Commonwealth of Australia.

Commonwealth of Australia 2008, National public-private partnerships guidelines overview, Infrastructure Australia.

Energex n.d, Energex Flood Risk Management Plan 2013-14. At: www.energex.com.au/ data/assets/pdf file/0010/57529/Flood-Risk-Management-Plan-2013-14.pdf.

Luscombe M 2011, The Salvation Army Flood Appeal (Woolworths media release) At: www.woolworths.com.au/wps/ wcm/connect/website/woolworths/about+us/woolworths-news/ the+salvation+army+flood+appeal.

National Research Council of the National Academies 2011, Building Community Disaster Resilience through Private-Public Collaboration, The National Academies Press, Washington D.C.

Oloruntobo R 2010, An Analysis of the Cyclone Larry Emergency Relief Chain: some key success factors, International Journal of Production Economics, vol. 126, pp. 85-101.

Queensland Floods Commission of Inquiry 2011, Interim Report, August 2011. At: www.floodcommission.qld.gov.au/ publications/interim-report/.

Queensland Government n.d., Queensland Policy for Offers of Assistance, Donations, Volunteers and Goods in Disasters, State Disaster Management Group.

Queensland Government 2012, Queensland Local Disaster Management Guidelines, At: www.disaster.qld.gov.au/Disaster-Resources/Documents/Queensland%20Local%20Disaster%20 Management%20Guidelines.pdf.

Queensland Government 2013, 2013-2014 Queensland State Disaster Management Plan, www.disaster.qld.gov.au/Disaster-Resources/Documents/State-Disaster-Management-Plan_WEB.

Queensland Government 2014, Business Industry Portal, Disaster Resilience and Recovery, www.business.qld.gov.au/ business/running/disaster-resilience-and-recovery.

Queensland Resources Council 2011, Submission to the Queensland Floods Commission of Inquiry, Queensland Floods Commission of Inquiry. At: www.floodcommission.qld.gov.au/_ data/assets/file/0018/6174/Queensland-Resources-Council.pdf.

Red Cross 2011, Submission to the Queensland Floods Commission of Inquiry, 10 March, 2011, Queensland Floods Commission of Inquiry. At: www.floodcommission.qld.gov.au/__ data/assets/file/0019/4258/Australian_Red_Cross.pdf.

Suncorp Insurance 2013, Suncorp Starts Writing New Business as Roma Levee Kicks Off (News). At: www.suncorpgroup.com. au/sites/default/files/pdf/news/Media%20Release%20and%20 Infographic%20-%20Roma%20sod%20turning%20-%20FINAL.

United Nations 2008, International Strategy for Disaster Reduction, Private Sector Activities in Disaster Risk Reduction, Good Practices and Lessons Learned, United Nations.

United States Chamber of Commerce Foundation 2014, Changing the Game: how business innovations reduce the impact of disasters, United States Chamber of Commerce.

Wesfarmers 2011, Queensland flood disaster - how Wesfarmers helped (News). At: http://media.corporate-ir.net/media_files/ IROL/14/144042/RBA003_6854_site/queensland-flood-disaster.

West End Community House 2011, Strengthening People and Places: the role and value of neighbourhood community centres. At: www.communityindicatorsqld.org.au/sites/default/files/ Role%20of%20community%20centres.pdf.

About the authors

Bhishna Bajracharya is an Associate Professor of Urban Planning at Bond University. He has conducted research on public-private partnership in master-planned communities as well as on disaster management in Queensland.

Dr Peter Hastings is a researcher at Bond University. He is involved in geography teaching and hazard research at the University of Queensland, the University of New England and the Queensland University of Technology.