



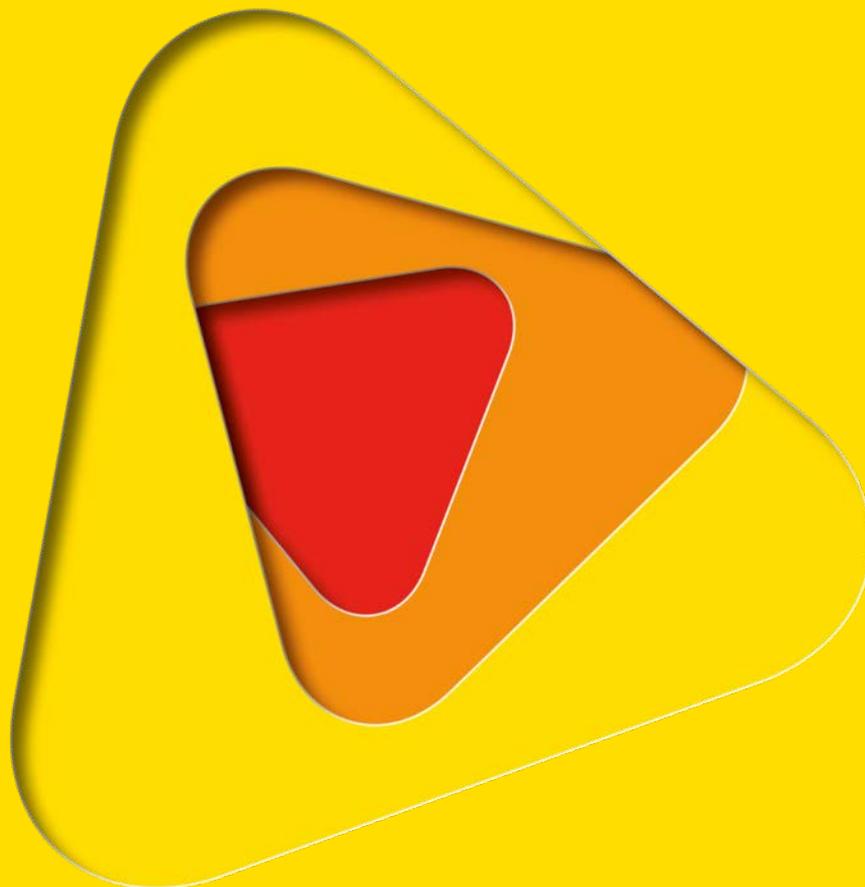
# EVIDENCE-BASED PRACTICE, PRACTICE-BASED EVIDENCE: MOVING TOWARDS SCALED IMPLEMENTATION IN CHILD-CENTRED DISASTER RISK REDUCTION

Non-peer reviewed research proceedings from the Bushfire and Natural Hazards CRC & AFAC conference  
Brisbane, 30 August – 1 September 2016

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Version	Release history	Date
1.0	Initial release of document	30/08/2016



**Australian Government**  
**Department of Industry,  
Innovation and Science**

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**Publisher:**

Bushfire and Natural Hazards CRC

August 2016



## EXTENDED ABSTRACT

Disaster risk reduction (DRR) research conducted through the Bushfire and Natural Hazards Cooperative Research Centre (CRC) is intended to have a focus on utilisation, translation and tightening the policy-practice-research nexus. An important link within this nexus relates to a fundamental proposition: Does the subject under empirical scrutiny have sufficient empirical support to be translated in both practice and policy sectors? In the case of our program of research in child-centered disaster risk reduction (CC-DRR), research has made some bona fide strides in the past 15 years producing data that supports two key questions linked to this fundamental proposition. The first question is 'Are CC-DRR initiatives effective in reducing risk and increasing resilience for children, families, communities?' The second question is 'Can CC-DRR initiatives be sustainably implemented at scale?'

Against this backdrop, this symposium intends to present findings of our program of research from 2014 to the present. These findings are drawn from a major scoping and review exercise, pilot research, co-development and co-evaluation of a practice framework for disaster resilience education and, in 2016, the evaluation of several flagship CC-DRR programs. The symposium will also present our CC-DRR research narrative, the accompanying conceptual framework and utilisation roadmap, and new perspectives on the sustainable and scaled implementation of evidence-based programs.

### Background to symposium

In a CRC model of research, the ultimate focus is on research translation and utilisation. In this context, the driving question is 'How can findings of research be translated into knowledge, skills and other applied products that solve particular societal problems?' One simple schematic to depict a focus on translation is one that links research with both policy and practice.

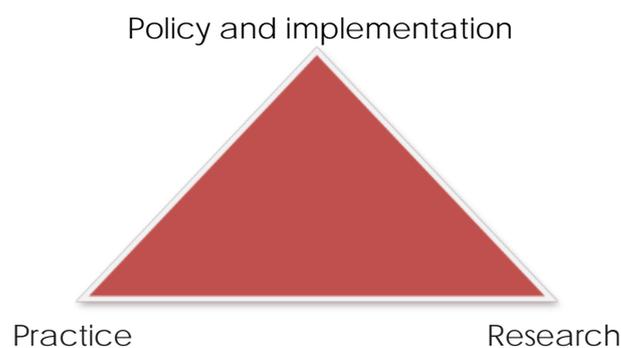


FIGURE 1. THE POLICY-PRACTICE-RESEARCH NEXUS

A guiding model for the current CRC-funded child-centered disaster risk reduction (CC-DRR) program of research has been developed. As seen in Figure 2, it incorporates this research-practice-policy nexus and speaks to two fundamental issues that review and scoping activities, both nationally and internationally (Ronan, 2015; see also Amri et al., 2016a; Ronan et al., 2015), have identified as the core themes of CC-DRR and disaster resilience education (DRE) research. The two main themes, or problems-to-be-solved, are ensuring the effectiveness of CC-DRR/DRE initiatives and facilitating CC-DRR/DRE policy and practice implementation.



## BUILDING BEST PRACTICE IN CC-DRR: GUIDING MODEL FOR RESEARCH

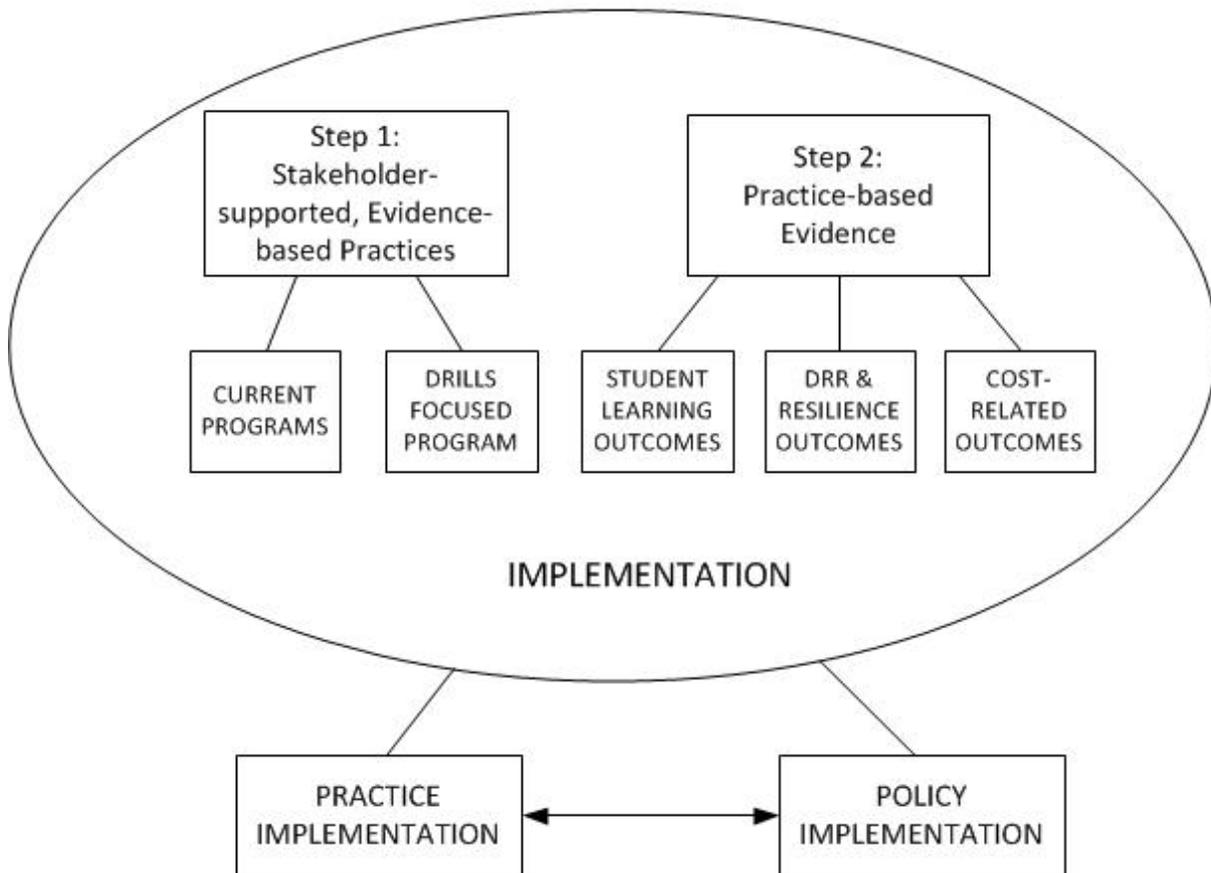


FIGURE 2. GUIDING MODEL FOR CC-DRR RESEARCH

CC-DRR research has expanded exponentially over the past 15 years. Prior to 2000, just one study had published, but over 40 studies have been published since. Most studies have focused on the effectiveness of programs in producing DRR and resilience outcomes for children and youth. A handful of studies have focused on extending child- and youth-based benefits into the household (Ronan et al., 2015). Overall, it is now clear that these programs are capable of producing significant, beneficial DRR and resilience outcomes. However, at the same time, significant challenges remain. For example, programs based on key safety messages and routine drilling can produce significant outcomes, including significant gains in DRR-related knowledge and skills, risk perceptions, self-efficacy, and household preparedness and mitigation activities (Johnson, Ronan, Johnston, & Peace, 2014a; see also Ronan et al., 2015, 2016). However, at the same time, a focus on key safety messages has also been shown to produce some unintended consequences (Ronan et al., 2016). In some cases, these unintended consequences can actually increase risk. The seminar will discuss some of these unintended consequences, one of which involves children engaging in behaviours that raise their risk for a range of negative consequences, including injury and death (e.g. running into buildings during an earthquake)(Ronan et al., 2016; Amri et al., 2016b; see also Johnson, Johnston, Ronan, & Peace, 2014).



In light of these findings, moving beyond a focus on key messages is warranted. Key messages themselves focus on *what to do* to reduce risk. However, they typically are not accompanied with the knowledge and skill development necessary for enacting those key messages in a real-life context. Thus, including a focus on important adaptive capacities, or resiliency skills, would be thought to assist children and youth to enact key messages in a manner that leads to intended consequences (e.g. increased safety) versus unintended consequences (e.g. increased risk). For example, problem-solving skills can help children step through not only the *what to do* to prevent, mitigate, prepare, respond, and recover, but also how to carry out behaviours in ways that consider the local context, changing contingencies, and how to work with others to reduce risks.

Initial stakeholder research has identified that a majority of children, parents/caregivers and teachers endorse the idea of children actively participating in DRE programs, and in household and school planning and decision-making (Amri et al., 2016b; Kelly & Ronan, 2016a, b). In addition, the majority of parents in a recent study (over 71 per cent) preferred a learning and teaching format that provides children with 'decision-making tools to solve problems' compared to a program format with a more singular focus on disaster preparedness (47 per cent) (Kelly & Ronan, 2016a). Thus, based on both research findings and stakeholder preferences, incorporating resiliency skills like problem-solving and decision-making into DRE programs has merit. Based on a large scale review of factors that promote resiliency in disasters, other adaptive capacities would include arousal management skills (e.g. how to stay calm to make good decisions under stress), helpful thinking strategies, how to cooperate and work with others to make decisions and get support, and strategies for enhancing a sense of mastery and confidence (Hobfoll et al., 2007).

In addition, educational research demonstrates that participatory, interactive and experiential learning approaches can translate into increased benefits, including on DRR and resilience outcomes (Haynes & Tanner, 2015; Ronan & Towers, 2014; Towers, 2015). A recent study in a high-hazard area in Canberra (Webb & Ronan, 2014) incorporated participatory, interactive and skill-building elements based on theory and research. The program was found to produce significant pre-post changes on a number of indicators (e.g. reduced fears of hazards; increased knowledge; increased DRR planning and practice skills; increased home preparedness). These changes included the biggest gains on knowledge and home-based preparedness that have been reported to date in the published literature. In addition, this study was one of the first to use a performance-based measure that focused on verified 'planning and practice' factors (e.g. have you and your family planned and practiced what to do in an emergency?). Similarly, Haynes and Tanner (2015) found that a participatory, interactive, problem-solving approach in the Philippines also produced important outcomes, including tangible DRR outcomes and policy-related improvements (Haynes & Tanner, 2015).

The symposium will discuss additional ways forward, linked to recent practice developments, including a CC-DRR practice framework (Towers et al., 2016), a new evidence- and stakeholder-informed tool to assist in developing programs of the sort described above. It will also explore policy developments, and related research, focused on 'comprehensive school safety' (UNISDR/GADRRES, 2014), including how a more systemic, holistic approach to CC-DRR and resilience building might confer added benefits, economic benefits, and how it might also enhance the potential for the scaled implementation of CC-DRR initiatives and education programs. The scaled implementation of CC-DRR initiatives and education programs represents a



major challenge in Australia, New Zealand, and internationally (Amri et al., 2016b; Johnson et al., 2014b). Finally, a discussion of research translation will include a description of a recently developed CC-DRR research utilisation roadmap, including plans that anticipate the development of a toolkit to assist project end Users in developing, evaluating and implementing CC-DRR initiatives and education programs effectively.



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