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HAZARDSCRC

MOVING TOWARDS SCALED IMPLEMENTATION OF EFFECTIVE CHILD-CENTRED DISASTER RISK REDUCTION INITIATIVES

Kevin Ronan, Briony Towers, and CC-DRR
Project/End User Team



An Australian Government Initiative



PROJECT TEAM

- 1) Kevin Ronan: CQUniversity
- 2) Briony Towers: RMIT University
- 3) John Handmer: RMIT University
- 4) Kat Haynes: Risk Frontiers/Macquarie Univ
- 5) Eva Alisic: Monash University
- 6) Nick Ireland: Save the Children Australia
- 7) Marla Petal: Save the Children Australia
- 8) Vicki Johnson: JCDR, Massey University
- 9) David Johnston: JCDR, Massey/GNS Science

PROJECT TEAM

10) Avianto Amri	PhD Student
11) Barb Kelly	Masters Student
12) Ben Martin	PhD Student
13) Mayeda Rashid	PhD Student
14) Andrew Clarke	PhD Student
15) Revathi Krishna	PhD Student
16) Matt Henry	PhD Student
17) Julia Crowley	BA(Hons) Student
18) Libby Tooth	BA(Hons) Student

PROJECT END USERS

- | | |
|--|-----------|
| 1) Liz Addison/Tracey Leotta | WA DFES |
| 2) To be determined | A-G |
| 3) Sandra Barber | TFS (TAS) |
| 4) Gwynne Brennan/Matt Henry/
Dawn Hartog | CFA (VIC) |
| 5) Peta O'Donohue/Fiona Dunstan | CFS (SA) |
| 6) Jackie Quaine/Susan Davie | VIC SES |
| 7) Tony Jarrett/Brenda Doran-Higgins | NSW RFS |
| 8) Rob Purcell | MFB (VIC) |
| 9) Greg Mennie | SA SES |
| 10) Francie Tonkin | MFS (SA) |
| 11) Conrad Walsh | F&R NSW |

PROJECT END USERS

12) Bruno Greimel

QFES

13) Antonia Mackay/John Richardson

Red Cross

14) Simon Goodwin

SAFECOM

15) Sarah Anderson

ATAG

PRESENTATION OVERVIEW

- **Introduction and overview of project**
- **Summary of project, findings, developments**
 - Year 1: 2014
 - Year 2: 2015
 - Year 3: 2016
- **2017 and beyond**
 - How far can we go here?

AUSTRALIAN NATIONAL STRATEGY FOR DISASTER RESILIENCE

NSDR notion of “shared responsibility”:

“Risk reduction knowledge [should be included] in relevant education and training programs, such as enterprise training programs, professional education packages, schools and institutions of higher education.”

Moving from expert models to shared responsibility

1. Community capacity-building and helping a community help itself
2. A role for children & youth
 1. Who are nested within schools, households and families
 2. Who are nested within organisations and communities
3. Why do it and is it worth doing?

SENDAI FRAMEWORK ON DISASTER RISK REDUCTION, 2015-2030

“In particular children and youth have been singled out as having specific needs in terms of school safety, child-centred risk assessments and risk communication. But, more importantly, if appropriately educated and motivated on disaster risk reduction, they will lead and become the drivers of change” (UNISDR, 2013)

“Children and youth are agents of change and should be given the space and modalities to contribute to disaster risk reduction” (UNISDR, 2015)

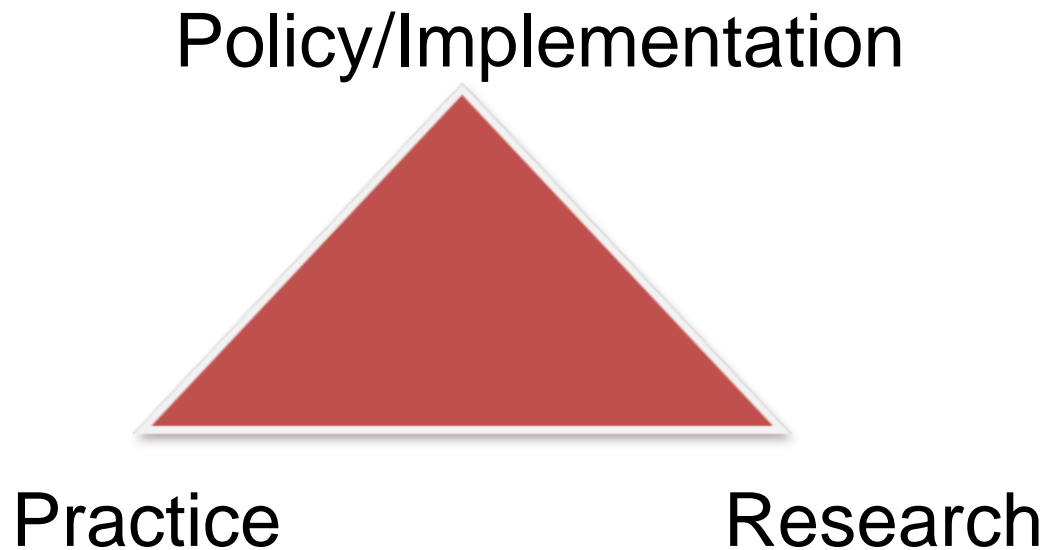
NATIONAL AND INTERNATIONAL ADVOCACY IS IMPORTANT...

BUT EMPIRICAL SUPPORT IS THE ARBITER

Recent reviews of children's disaster resilience education programs done by our team, both nationally and internationally, note both substantial progress and significant challenges

- Ronan, Towers et al. (2016). *AJEM*
- Ronan (2015) and Towers, Handmer, Ireland et al (2015). In UNISDR Global Assessment Report 2015
- Johnson, Ronan, Johnston, Peace (2014). *IJDRR*
- Ronan, Alisic, Towers, Johnson, Johnston (2015). *CPR*

TRANSLATION RESEARCH: THE TRIANGLE



2014 YEAR 1 SUMMARY

1. Comprehensive scoping and review
2. Stakeholder research: What are their views?
3. Initial education program evaluations
 - a. Effectiveness of programs
 - b. Implementation & utilization: Can effective programs be implemented on large scales?

Scoping reviews of policy, practice and research: Main findings

1. Children's disaster resilience education (C-DRE) programs: Over 40 published studies
 - a. Only one published prior to 2000
2. Child and youth disaster resilience education (C-DRE) programs produce benefits in knowledge, risk perceptions, mitigation, preparedness, reduction in fears and other indicators
3. Experimentally-based studies support child & youth "interest" and increases in DRR & resiliency indicators, including those done in Australia and New Zealand

EXPERIMENTAL STUDY EXEMPLAR

Study in Canberra (Webb & Ronan, 2014)

Participatory C-DRE education program

1. Brief description of program and youth

1. More participatory & interactive
2. 4 sessions
3. Youth were from high hazard, lower SES area, half were not attending school/vocational training

2. Incorporated theory and previous research

1. Enhanced emphasis on “key DRR messages”
2. Increased interactivity within and between sessions
3. Children and youth given more “choice and control”

Findings

1. Child-reported DRR & resiliency indicators
 - a. Interest in learning about disasters, esp local ones
 - b. Reduced hazards anxiety and fears
 - c. Increased knowledge on risk reduction behaviours
 - d. Increased, and verified, planning and practice

2. Parent-reported
 - a. Increase of 6 additional DRR activities done at home between pre- and post-test

(Webb & Ronan (2014), in *Risk Analysis*)

DEFINITELY GOOD NEWS TO DATE.....

BUT

- They are often developed without reference to evidence-supported tenets and major stakeholder input
- They are often not monitored & evaluated
- They are done in sporadic, one off ways, rather than consistently or at scale
- We don't know to what extent they actually produce DRR & Resilience outcomes when it matters

SCOPING AND REVIEW:

NEED FOR GUIDING MODELS

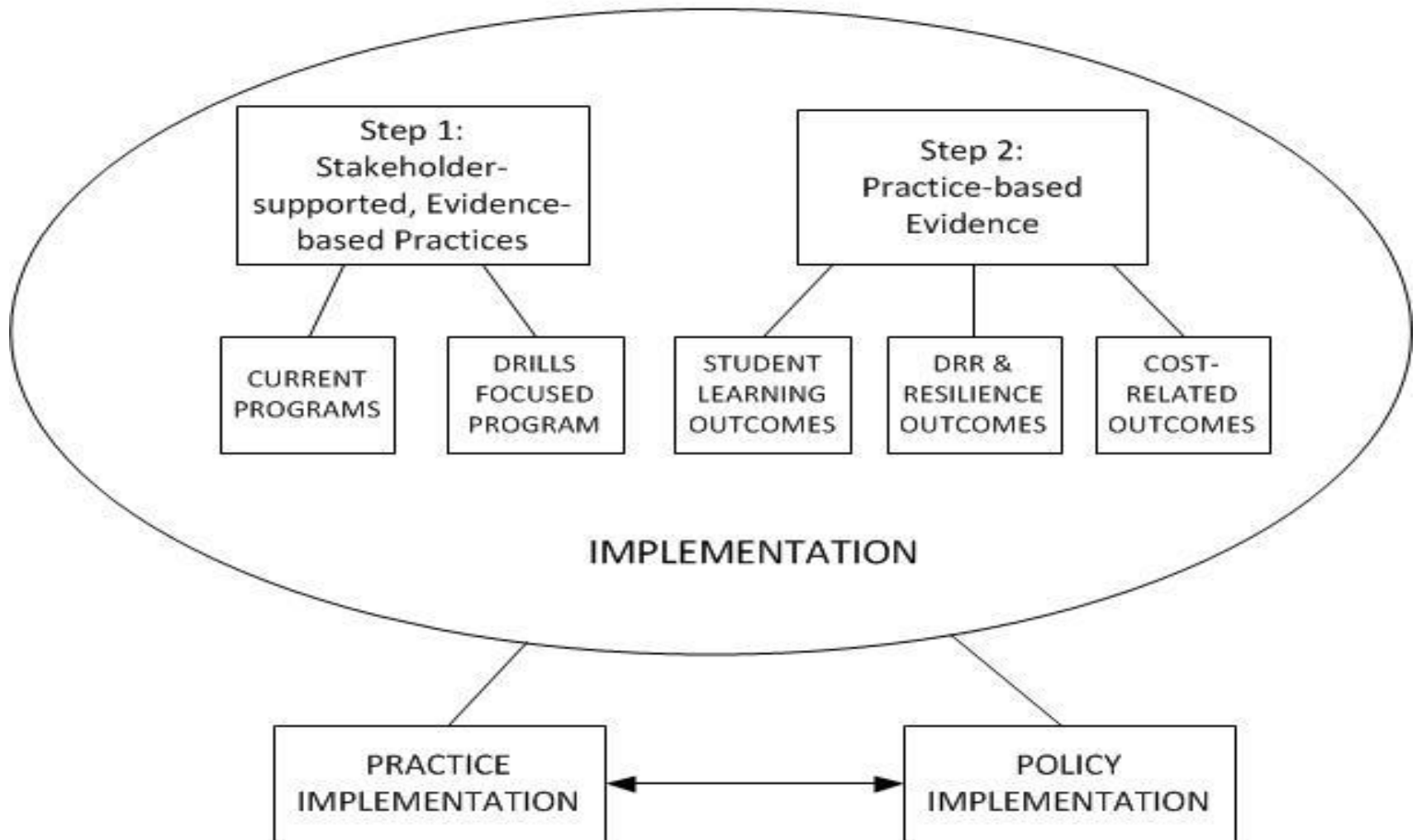
- To guide research, to both:
 - Support important knowledge production
 - And to guide application.....translation....utilisation
- To guide practice and policy development

Guiding Research Model:

Our research narrative

- 1. Practice-research nexus:** Are programs **effective** in all instances; do benefits extend to schools, homes, communities and into Response and Recovery; are benefits cost effective?
- 2. Policy-practice-research nexus:** Can **effective** C-DRE/CC-DRR programs be **implemented at scale** and **sustained** over time?

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



2015 YEAR 2 SUMMARY

Based on findings and scoping/review to date, 2015 focused on both:

1. Research focused on key questions from our narrative and
2. Model and tool development

YEAR 2 SUMMARY

Illustrative Findings

1. Children's, parents, teachers wants, needs, tendencies
 - a. Children want to learn about and participate in DRR at home and school
 - b. Parents and teachers want children to participate
 - i. They also show a preference for programs that are delivered via a problem-solving approach
 - c. Household preparedness, planning and practice is at low to moderate levels

YEAR 2 SUMMARY

Illustrative Findings II

1. Findings continue to confirm DRE effectiveness on a range of outcomes
 - a. But, also capable of producing a range of unintended consequences

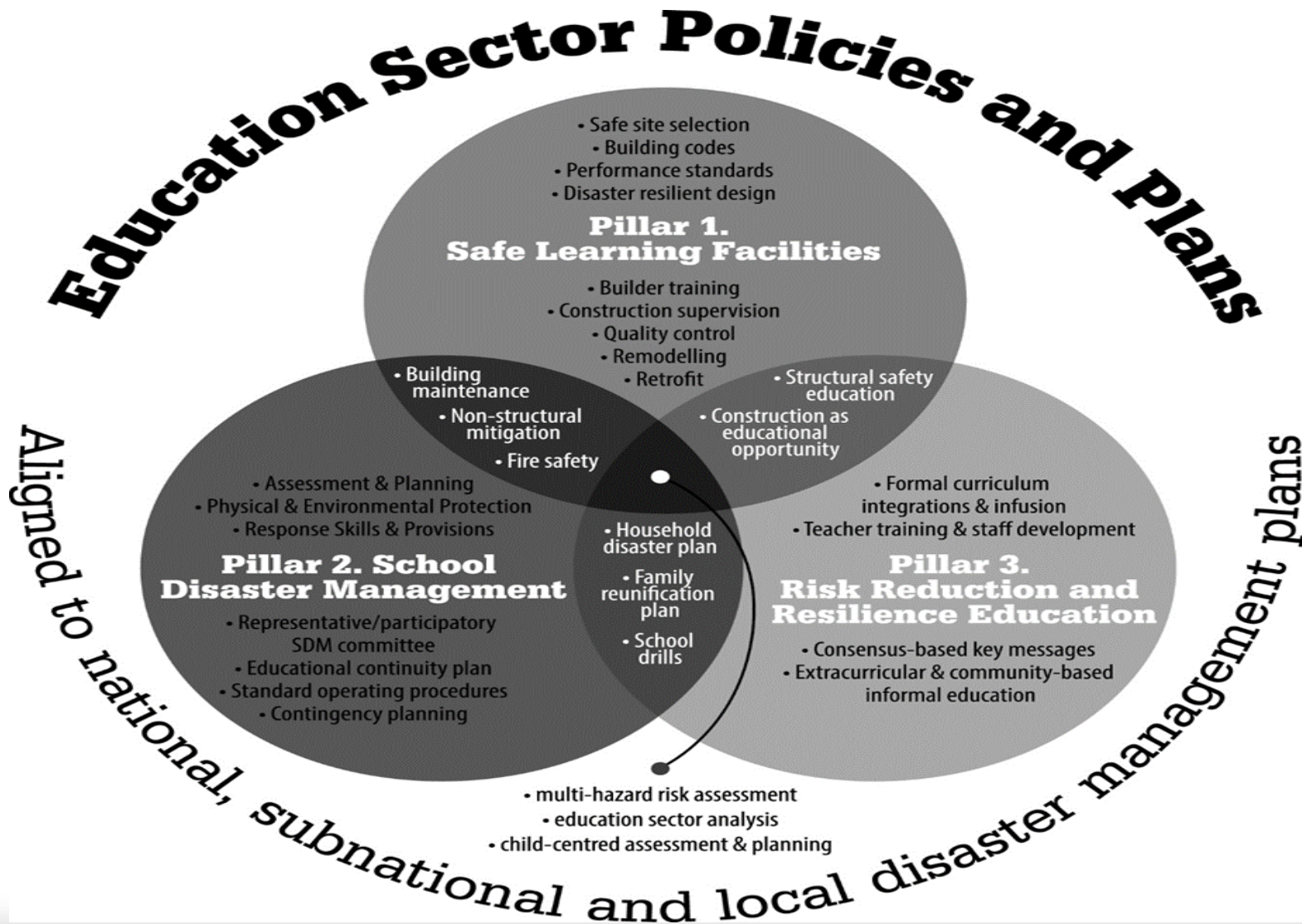
2. Findings confirm sporadic implementation of DRE programs
 - a. While replicating and extending previous research on implementation obstacles and facilitators

YEAR 2 SUMMARY

Model and Tool Development: Policy and practice guiding framework and tools

1. Comprehensive School Safety Framework and 3 Pillars

MODEL AND TOOLS: CSS FRAMEWORK



A PILLAR 3 FRAMEWORK AND TOOL

2. Disaster Resilience Education (DRE) Practice Framework

- A tool to help develop DRE programs based on research and theory

DRE PRACTICE FRAMEWORK

PURPOSE:

To provide Australian emergency management agencies with a strategic, evidence-based approach to the development of school-based DRE programmes that *reduce risk, increase resilience* and can be *implemented at scale*.

INFORMED BY:

- National and international frameworks (Sendai, NSDR, CSS).
- Existing DRE practice guidelines (AFAC, UNESCO/UNICEF).
- Peer reviewed research (education, geography, sociology, anthropology, psychology).
- Tacit knowledge within the EM sector (co-authored with agency representatives).

Outcome evaluation

- Learning outcomes
- DRR & resilience outcomes
- Unintended outcomes

Process evaluation

- Implementation
- Challenges, obstacles

Impact evaluation

- Reduced loss and damage

Aims and Objectives

- Learning objectives
- DRR and resilience objectives

Teaching & learning activities

- Participatory, active learning approaches

Assessment

- Formative assessment
- Summative assessment

Evaluation

Design

Implementation

THREE CORE DIMENSIONS

Curriculum integration

- Horizontal and vertical

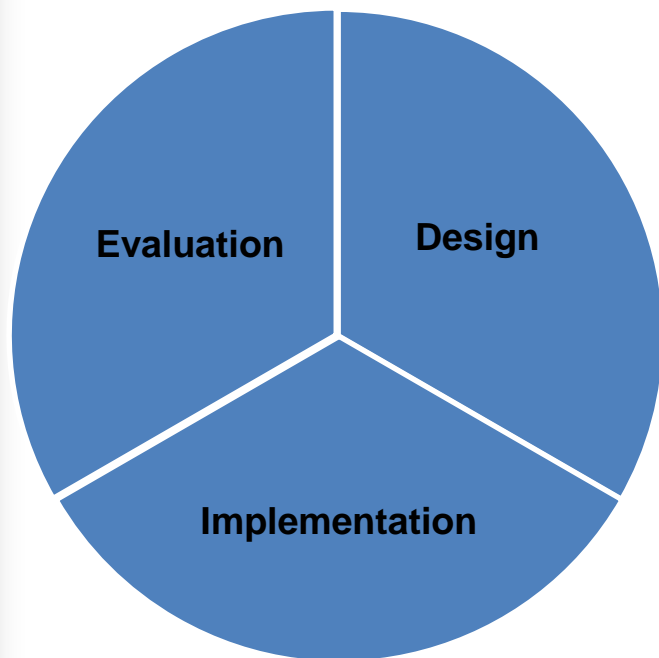
Teacher training

- In-service and pre-service

Comprehensive school safety

- Safe school facilities
- School emergency management

THREE GUIDING PRINCIPLES



Collaboration and partnership

- EM sector
- Education sector
- NGOs, NFPs, CBOs
- Private sector
- Academia
- CHILDREN AND YOUTH

Equity and inclusion

- CALD
- Disability
- Socioeconomic disadvantage
- Gender
- Remote and rural
- Digital divide

Protection and participation

- Must ensure the child such protection and care as is necessary for his or her wellbeing.
- The child who is capable for forming his or her own views has the right to express those views.

YEAR 2 SUMMARY: MODEL AND TOOL DEVELOPMENT

3. Development of DRE programs

- Evidence-based and “more bang for the buck”
- That also include stakeholder views
 - Key Learning Objectives from EM professionals
 - More participatory from child and youth input
 - Problem solving formats from parent and teacher input
 - The value of an increased focus on resiliency and adaptive capacities

2016 TO DATE:

YEAR 3

1. Practice-based evidence: Outcome evaluations
 - a. Student learning outcomes
 - b. DRR & Resilience outcomes
 - c. Cost-related outcomes
 - a. With Veronique Florec and Fiona Gibson from UWA

2. Implementation research
 - a. How can effective programs overcome known obstacles to be implemented at scale, done consistently and sustained over time?

3. Utilization focus: Models, tools, roadmap

DRR AND RESILIENCE OUTCOMES

Understanding risk

- Awareness of the local hazards (home, school, community, holiday destinations)
- Recognising potential consequences (physical and psychological)
- Interpreting local environmental conditions (e.g. high wind, low humidity)

Prevention

- Understanding the fire danger period and what actions should be taken during this time (e.g. no recreational fires)

Mitigation and preparedness

- Knowledge of and participation in, emergency planning (household, school, community).
- Emergency kits

Response

- Access, interpreting and respond appropriately to warnings (e.g. bushfire alerts, fire danger ratings, environmental cues).
- Identifying 'helpers'
- Calling Triple Zero

Recovery

- Psychosocial coping skills

DRR AND RESILIENCE OUTCOMES

ADAPTIVE CAPACITIES

- Problem solving (individual and collective)
- Critical thinking (interpreting and adapting key messages)
- Inquiry skills (finding credible and reliable information)
- Emotional regulation and functioning under stress
- Situational awareness (decision-making in complex environments)

EVALUATION

Outcome evaluation

- Are students achieving the intended learning objectives?
- Are students achieving the intended resilience objectives?
- Are there any unintended outcomes?

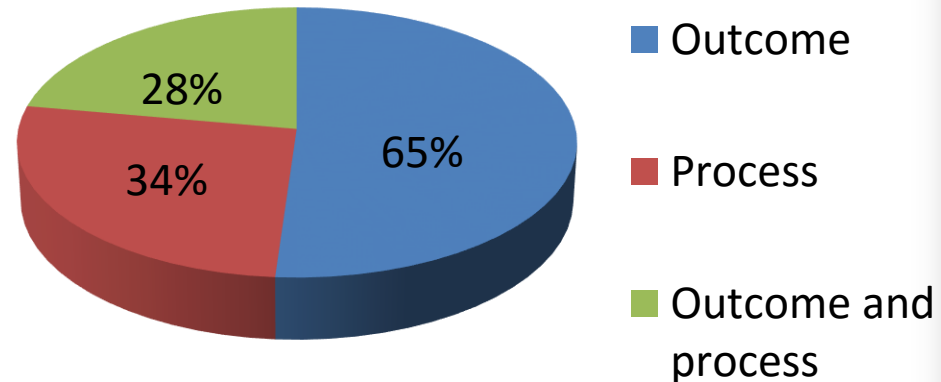
Process evaluation

- Is the programme being implemented as intended?
- Are the teaching guides or training sessions adequate?
- What challenges did teachers and students confront during the program and how were these addressed?

Impact evaluation

- Do outcomes translate into reduced loss and damage in the event of a hazard or disaster?

Existing DRE evaluations



Source: Johnson et al (2014)

EVALUATION

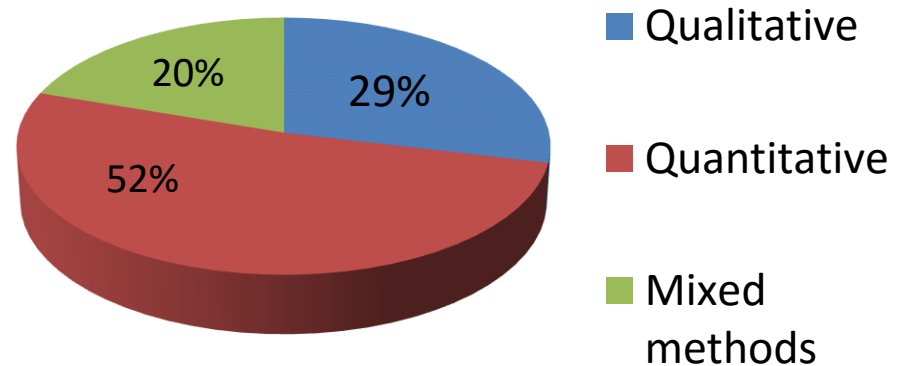
Quantitative methods

- Surveys, questionnaires
 - Measuring change over time
 - Generalisable results

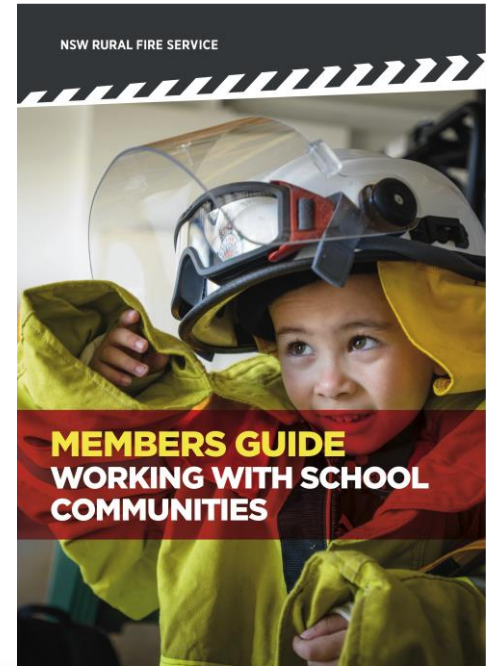
Qualitative methods

- Focus groups, interviews, participant observation, diaries/journals
 - Understanding context
 - Understanding the full range of outcomes, including unintended outcomes
 - Understanding why and how change occurred

Existing DRE evaluations



Source: Johnson et al. (2014)





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RESEARCH UTILISATION ROADMAPS: CHILD-CENTRED DISASTER RISK REDUCTION: 2014-2020



Australian Government
Department of Industry,
Innovation and Science

Business
Cooperative Research
Centres Programme

UTILISATION ROADMAP

CLUSTER NAME: COMMUNICATIONS AND WARNINGS

PROJECT NAME: BUILDING BEST PRACTICE IN CHILD-CENTRED DISASTER RISK REDUCTION

Utilisation descriptor

- **What need is being addressed?** Creating effective CC-DRR programs that increase resilience and reduce current and future disaster risk and can be sustainably implemented at scale.
- **What is the utilisation product?** Products include those that are End User-driven, including knowledge and skills capacity building and a range of co-created tools to facilitate effective program development, monitoring and evaluation, cost effectiveness, and scaled, sustainable implementation.
- **What difference will this utilisation make?** Increase resilience and reduce disaster risk for children, youth, households and communities in both current and future terms, including across the disaster cycle and into adulthood.
- **Who wants it?** End Users, the National Strategy for Disaster Resilience, and other research-endorsed stakeholder support (children/youth, parents/households, teachers/school/education department personnel; emergency management agencies and personnel)

BUILDING BEST PRACTICE IN CHILD-CENTRED DISASTER RISK REDUCTION

(WHAT is it): A study designed to build End User, and nationwide capacities for (1) development, delivery, monitoring/evaluation, scaled implementation of CC-DRR initiatives, inc disaster resilience education programs, that produce effective learning, DRR/resilience and cost-related outcomes, including those focused on both current and future disaster risk.

(WHO is it for): Emergency management agencies, schools/education departments, children and youth, households, communities, policy-makers

(Why will it matter) It will lead to children and youth who are better equipped to deal with disaster risks now and in adulthood, including developing knowledge, skills and values that can have effects on others in households and communities to reduce disaster risks and increase resilience across the disaster cycle.

Key Research Milestones *(activities already part of project research plans)*

2014-15: Review and Scoping/Pilot work/Stakeholder views and resultant publication/presentations

2015-16: Evidence-based practice: Co-development with end users of a practice & evaluation framework and drills-related program/app, resultant publications and tool development (see below)

2016 - 2021: Practice-based evidence: Outcome evaluation inc DRR/resilience over time & cost-related and resultant publications and tool development (see below)

2015 - 2021: Implementation research: Facilitators and obstacles to local and scaled, nationwide sustainable, implementation of effective CC-DRR initiatives for (1) schools/education departments and (2) EM agencies; policy advocacy intervention research to support CC-DRR reflected in state/territory and national policy, resultant publication and tool development.

2015

2016

2017

2018

2019

2020

Who is doing it?

Project Team:

CQUniversity
RMIT University
Risk Frontiers
Save the Children Australia
JCDR, Massey/GNS Science

End User Agencies:

See next page

Who needs to be involved?

AFAC CETG/CSG
AIDR DRESG
AZEMC CESC
Depts of Education: State & Territory/Federal
EM non-end-user agencies who develop and deliver CC-DRR initiatives
Attorney-General
State, territory, federal policy-makers
Universities/teacher training settings

What are the key challenges?

Research identified obstacles to scaled implementation in practice and in policy
EM agency and Dept of Education cooperative policy/practice facilitation & cooperation
Ensuring CC-DRR initiatives are producing effective DRR/resilience & cost outcomes

What are the key opportunities?

Australian national curriculum framework as a facilitator
Motivated End Users
School drills are done in every school to facilitate effectiveness & implementation

What will it cost?

- TBD, though costings shouldn't be extensive given resources, and capacities, developed through this project. Teacher training may have costings related.

How will it be done?

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Key Utilisation Activities

End User Capacity Building: 4 workshops to date; another planned 2016

CC-DRR Practice Framework co-creation process w End Users

CC-DRR Monitoring & Evaluation Toolbox co-development with End Users

Drills-focused education program and app co-development & evaluation

CC-DRR Implementation Toolbox co-development

Best Practice Guidelines co-development: CC-DRR Research, Practice/Training, Policy

Facilitate research-driven means to support scaled implementation of cost-effective CC-DRR initiatives, and policy, through EM agencies and departments of education and other potential supportive mechanisms (e.g., BNHCRC, AFAC, AIDR-DRESG; ANZEEMC)

Who is doing it? (Researchers and End Users)

End User Agencies

Australian Red Cross
Department of Fire and Emergency Services (WA)
Tasmania Fire Service
Country Fire Authority
Country Fire Service
Victoria SES
Fire and Rescue NSW
NSW Rural Fire Service
Metropolitan Fire Brigade (VIC)
South Australia SES
SA Metropolitan Fire Service
SA Fire and Emergency Services Commission (SAFECOM)
Australia Tsunami Advisory Group
Queensland Fire and Emergency Services
Australian Attorney-General

How will it be done?

2015

2016

2017

2018

2019

2020

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Key Utilisation Milestones

End User capacity building: knowledge, skills and tools to facilitate scaled implementation of effective CC-DRR/DRE initiatives and programs

Research-produced tools and utilisation milestones

2015-16: CC-DRR Practice Framework co-creation process w End Users

2016-2018: CC-DRR Monitoring & Evaluation Toolbox co-development

2016-2018: Drills-focused education program development & app

2016-2020: CC-DRR Implementation Toolbox co-development

2016-2021: Best Practice Guidelines: CC-DRR Research, Practice/Training, Policy (updated annually)

2017-2021: Scaled, sustainable implementation of cost-effective CC-DRR initiatives, including disaster resilience education, and related policy, through EM agencies and departments of education and other potential supportive mechanisms (e.g., BNHCRC, AFAC, AIDR-DRESG; ANZEEMC)

2015 2016 2017 2018 2019 2020

START HERE

2017-2020

Producing additional research knowledge and actual tools/utilization products for End Users to promote development of effective programs that, by 2020, translate into scaled up, cost effective programs that reduce risk **AND**

Increase resilience

For children, schools, households and communities

Before, during and after hazard events

THANK YOU

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Briony Towers

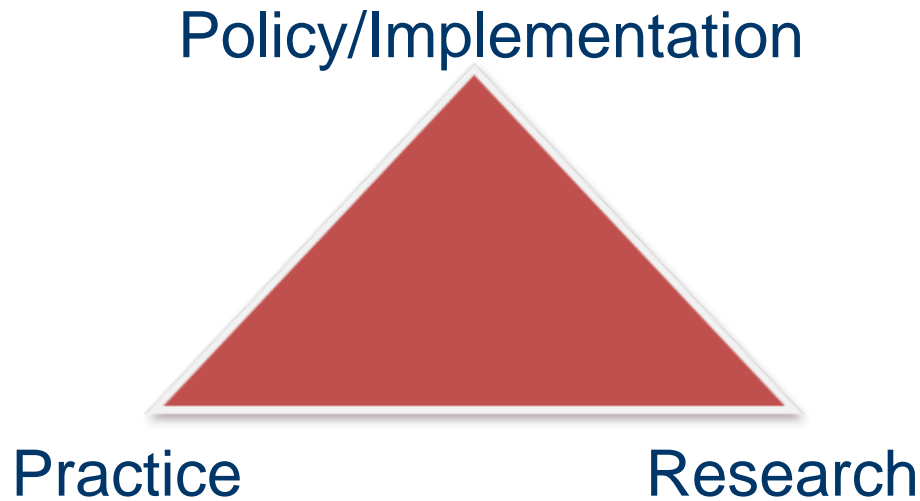
briony.towers@rmit.edu.au

BE WHAT **YOU** WANT TO BE



Content Slide

The “translational space”: The policy-practice-research nexus



Going to Scale: Recommended Steps

1. Develop education programs
2. Develop partnerships: policy, practice, research
3. Pilot evaluations
4. Implement on larger scale
5. Evaluate over time to ensure
 1. 'Ultimate' outcomes during Response & Recovery
 2. Integration with community-driven approach
 3. Builds resilience in adults of tomorrow

Key findings - Divergence

- Different facilitating and deterrent factors in implementing DRR education in classrooms

JKT
n.s

Key Factors

AUS

48%

Not enough space in the curriculum

63%

84%

Lack of DRR education materials

53%

Training is required

47%

36%

Weak coordination between schools and other stakeholders

42%

n.s

Topic is timely with upcoming risks

42%

30%

Not enough budget and personnel

37%

52%

Not aware of existing policies on DRR in schools

n.s

41%

Personal interest is key facilitator

n.s



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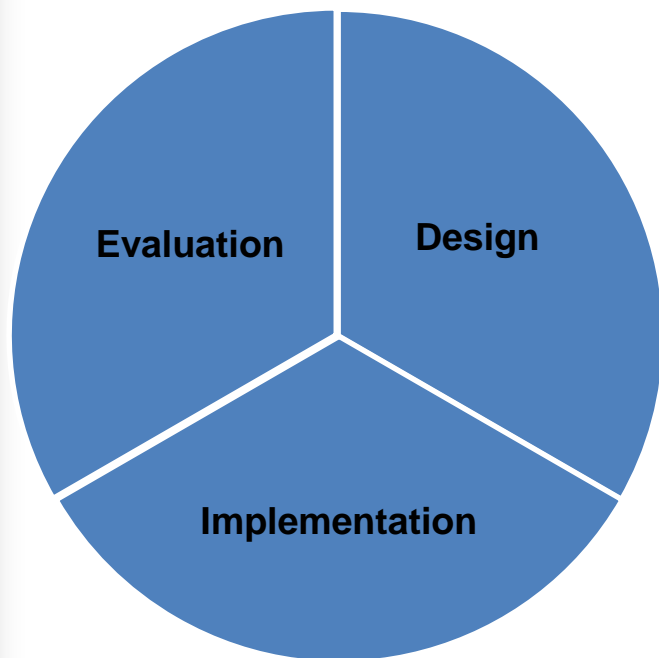
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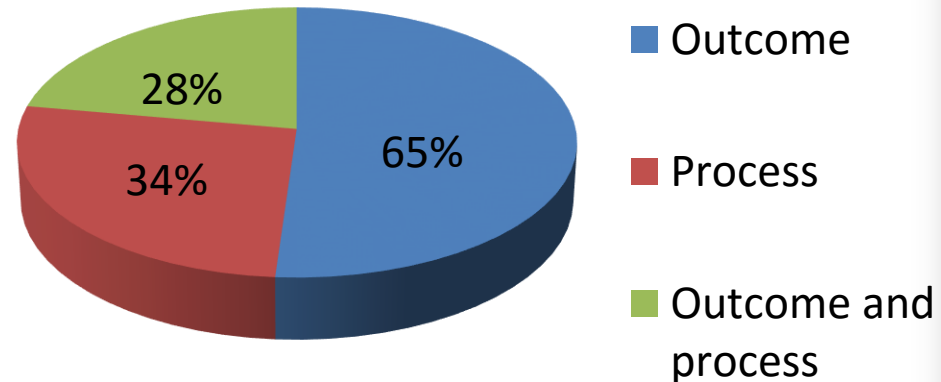
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Existing DRE evaluations



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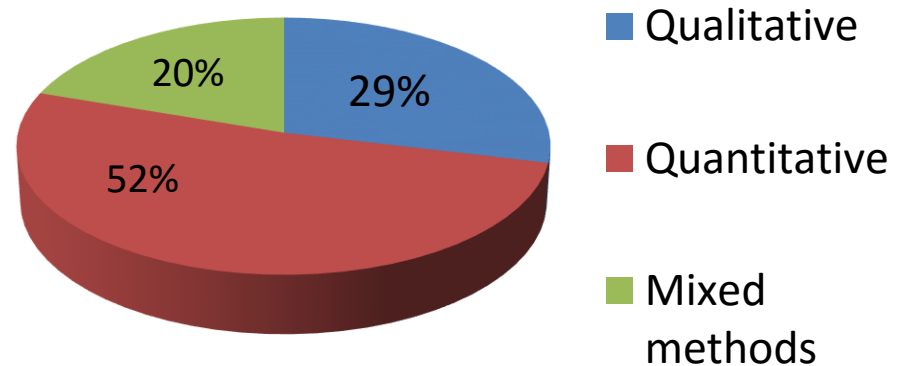
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