



FINDINGS

A pragmatic approach to valuing research on disaster risk reduction

The Value of BNHCRC Research

John Handmer^{1,2,3}, Adriana Keating^{1,2,3}, Ken Strahan^{1,4}

¹ Bushfire and Natural Hazards CRC, Victoria

² The Risk Laboratory

³ RMIT University

⁴ Strahan Research

Funders of research on fire and emergency management increasingly want to ensure that research dollars will generate value for the emergency management sector and contribute to risk reduction. Researchers are often asked to justify their funding requests as well as their expenditure. This paper sets out two approaches developed to value the disaster risk management research funded by the BNHCRC.

Introduction

The key objective of this work is to estimate values of research for communicating with: a) Treasury, where economic impacts across society in the form of e.g. benefit-cost ratio, cost effectiveness, or return on investment are important; b) agency funders, who are interested in financial impact for their agencies and focus on the return on their contribution; and c) dedicated research funding organisations who want to understand and promote the value of the research they fund, for Australian society broadly.

Methods

There is no specific framework for assessing the value of research in the wildfire – or more generally the disasters – context. However, we have identified a number of pathways for BNHCRC research to have positive impact and therefore value. Drawing on the models reviewed (Strahan et al 2020), and applying a broad view of public value, we have identified four main pathways to value for hazards related research:

- Project level impacts – mostly direct impacts on agency policy or practice;
- Training and capacity building;
- Knowledge generation;
- Broader social and economic impacts.

We have taken two approaches to estimating monetized value. Approach one is to estimate the total value of each pathway; approach two is to ascribe value for each of the four pathways by individual BNHCRC projects.

Discussion

Conventionally, research value for emergency management related research in Australia has been conceptualised in terms of value for specific fire and emergency service agencies, or in some cases for the whole formal fire and emergency management sector. We have broadened the potential worth by considering a variety of pathways to value. These were drawn from the relevant literature on the value of public research. They expand the potential value of research and highlight the range of strategic areas that publicly funded research enhances.

1. The first approach values each of the four identified pathways using methods that are easily reproduced and compatible with the available data.
2. The second approach identifies CRC project impacts by pathways, and then rates each impact using a dimensionless ratio scale. Drawing on the case studies, a sample of impacts will be valued in dollar terms and this will allow the monetisation of all impacts.

Some factors, such as the estimated effect of CRC research on loss reduction and discount rates, are likely to have major impacts on the final value and these should be tested for sensitivity.

For more information, please email john.handmer@rmit.edu.au

Figure 1

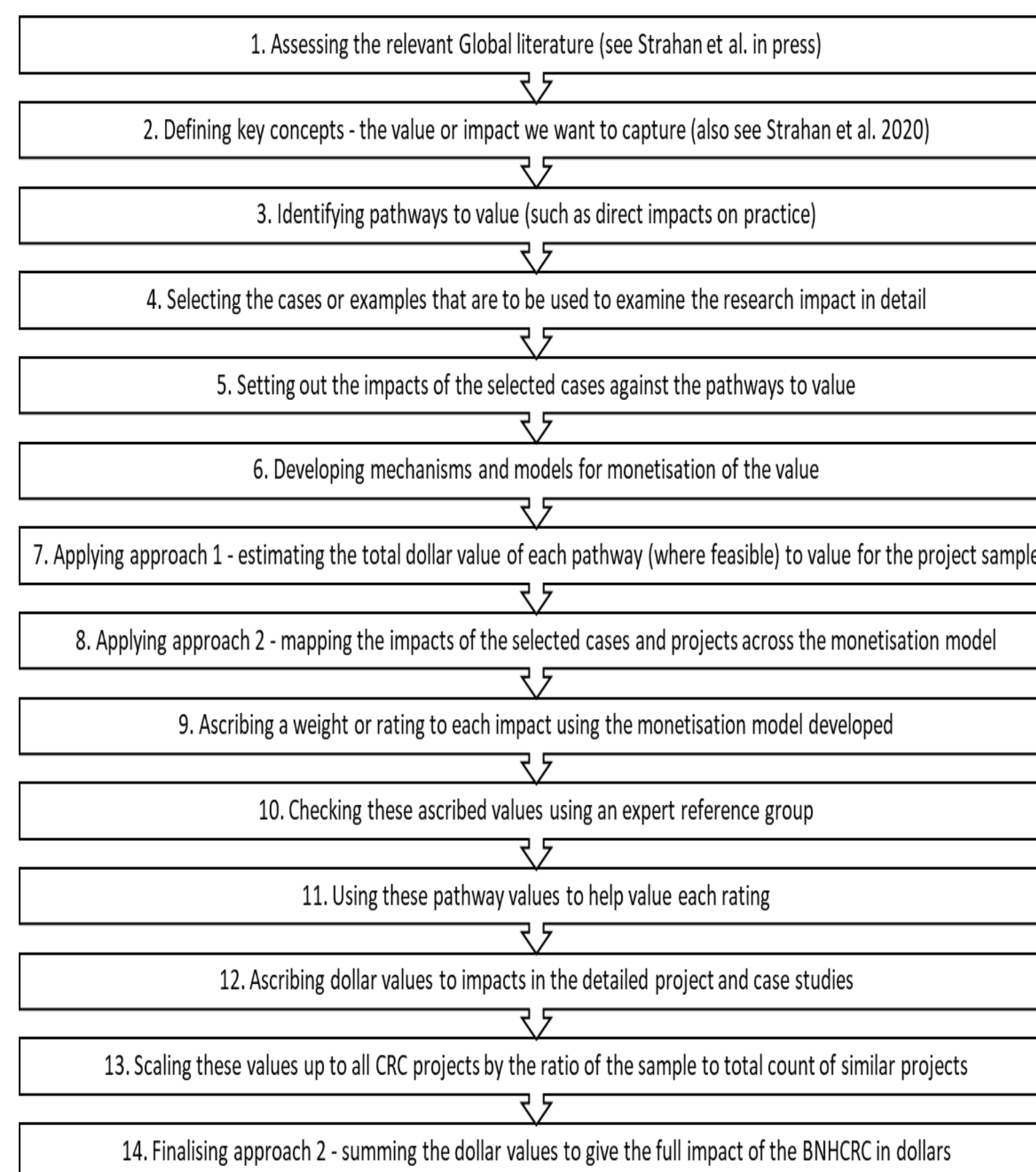


Figure 1: Steps in assessing the dollar value of BNHCRC research

Strahan, K, Keating, A, Handmer, J (2020) "Models and frameworks for assessing the value of disaster research" Progress in Disaster Science <https://doi.org/10.1016/j.pdisas.2020.100094>