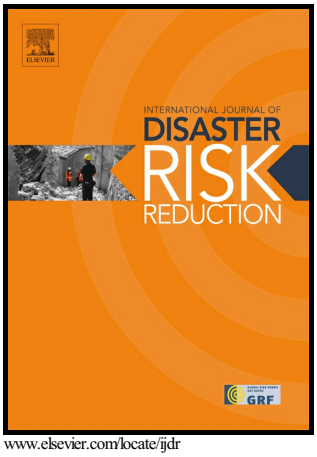
Sending a message: How significant events have influenced the warnings landscape in Australia

Linda Anderson-Berry, Tamsin Achilles., Shannon Panchuk., Brenda Mackie, Shelby Canterford, Amanda Leck, Deanne Bird.



www.elsevier.com/locate/ijdr

PII: S2212-4209(18)30276-0
DOI: https://doi.org/10.1016/j.ijdrr.2018.03.005
Reference: IJDRR827

To appear in: *International Journal of Disaster Risk Reduction*

Received date: 18 August 2017
Revised date: 1 March 2018
Accepted date: 1 March 2018

Cite this article as: Linda Anderson-Berry, Tamsin Achilles., Shannon Panchuk., Brenda Mackie, Shelby Canterford, Amanda Leck and Deanne Bird., Sending a message: How significant events have influenced the warnings landscape in Australia, *International Journal of Disaster Risk Reduction,* https://doi.org/10.1016/j.ijdrr.2018.03.005

Sending a message: How significant events have influenced the warnings landscape in Australia

Authors: Linda Anderson-Berry (Bureau of Meteorology Australia); Tamsin Achilles (Victoria State Emergency Service); Shannon Panchuk (Bureau of Meteorology Australia); Brenda Mackie (Emergency Management Victoria); Shelby Canterford (GeoScience Australia); Amanda Leck (Australasian Fire and Emergency Service Authorities Council; Deanne Bird (University of Iceland, Monash University)

Abstract

The Bureau of Meteorology has a mandate to issue warnings for weather and climate events that are likely to result in harm and loss. This service has been delivered in an end-to-end (science to service) context and warnings messages have typically been crafted to describe the current and predicted future state of the environment and recommended protective actions. However, the warnings landscape is evolving and Australian governments and emergency management agencies are adopting rapidly diversifying roles in a range of warnings processes. This evolution coincides with the shift in international strategies: from the mitigation and crisis management approach to the emphasis on building community resilience. Following a number of severe weather-related events that resulted in serious losses a series of Australian inquiries, reviews and social research investigated warnings efficacy. This included the National Review of Warnings and Information for Australia, with a recommendation suggesting that a Total Warning System concept be more formally considered across multiple hazards, rather than just flood, as it currently stands. Consequently, Australian warnings agencies are embracing a more people-centred approach recognising the need for messages to include detail of likely impact alongside an implied level of risk. Thus, developing capability to deliver impact forecasting and risk-based warnings services in a multi (natural) hazard context. With a key focus on flood, fire and tropical cyclone, this paper reviews international and national warnings policy documents and social research and explores the evidence-based evolution of warning services with respect to the Total Warning System concept.

Keywords: Total Warning System; impact forecasting; risk-based warnings; community engagement; communicating uncertainty; disaster resilience.