

The contribution and value of the social sciences and socio-economic research to the development of effective warnings systems in the weather and climate services

Dr Linda Anderson-Berry

College of science and Engineering, James Cook University

Townsville Queensland 4811 Australia

Contact email: linda.anderson-berry@jcu.edu.au

Abstract

Warnings are only effective if those at risk are able to access and fully understand the information about impending peril and take appropriate life and property savings actions. Over the decades physicists, atmospheric and earth scientists, mathematicians and computer scientists, and a range of others working in the physical sciences have focussed on building our knowledge and understanding of natural hazards and developing excellent prediction, forecasting and monitoring processes and systems. They do this with a motivation of protecting human populations.

Social scientists are similarly motivated to alleviate and minimise human suffering in the event of natural hazards. For more than half a century sociologists, geographers, psychologists, anthropologists, economists and a range of other social scientists have researched human behaviour and decision-making processes in response to hazard risk. They have provided depth in the understanding of what elements are essential in communicating science-based detail of a hazard to decision-makers in need of this information in a way that will promote appropriate and effective action.

There has been a growing appreciation of value of the information that social science is able to contribute to the development of warnings systems. However, until relatively recently, this has been under-valued and under-utilised. There are many reasons for this, some can be explained through an understanding of the evolution of warnings systems from a provision of services that are essentially hazard focussed towards services that are impact and risk focussed.

Through this presentation I will discuss this evolution and its drivers. I describe and explain the development of new formalised working partnerships across all sciences and sectors that weather and climate services are actively engaging with in support of the development of warnings services, and highlight the contribution and value of the application of societal and economic research.

Key word: warnings, risk communication, natural hazard risk, social science