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Thesis abstract

Conceptualising household flood preparedness: explaining attitudes, coping strategies, and information needs

Willow F. F. Forsyth

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"Unprecedented" flood events are increasing, and catastrophic loss of property and life is the norm despite significant public flood education and warning. This study considers two aspects of the "wicked problem" of the lacklustre pairing of flood intelligence and community engagement. It explores whether authorised systems' generic education and risk communication approaches support households to gain sufficient Know Your Flood Risk (KYFR) capability to a) gauge their personal flood risk exposure (FRE) and b) proactively set coping strategies and, during events, effectively enact response plans.

A total of 58 participants were interviewed during or after significant 2022 flood events in NSW. Qualitative analyses revealed what supports participants' FRE awareness, what coping strategies are chosen, and what is sufficient information to trigger response plans.

By using a theoretical framework that explores the purpose that attitudes to FRE serve, it differs from existing research that studies causal pathways to explain preparedness' beliefs. It overcame two methodological gaps — how to engage publics unfamiliar with the topic, and how to observe their KYFR capabilities.

The study found publics, once aware, are willing but unable to enact response plans. They mostly see official flood information as inaccessible, unactionable, and lacking sufficient local relevance. Official intelligence voids sustain FRE unawareness, feed denial, and fail to explain why-floods-behaved-as-they-did. Unauthorised productive systems emerge to fill these voids.

The study identifies how ten KYFR activities map across coping strategies' response plans (CSRPs) — which differ in complexity, cognitive effort, and motivation. The actionable intelligence (Act-I) model of KYFR is proposed to explain the socio-educative dynamics that amplify the flow of actionable intelligence, inferences, and indicators that fill data voids, provide timely and actionable warnings, and can reduce uncertainty and delays in publics taking protective actions. This thesis makes important contributions to existing knowledge on households' FRE and KYFR attitudes and learning needs.

Dr. Willow Forsyth
School of Environmental & Life Sciences
University of Newcastle, NSW

E-mail: willowforsyth@gmail.com

URL: http://hdl.handle.net/1959.13/1498444