

T2-A2 Flash flooding case  
studies to improve predictions  
and the communication of  
uncertainty

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# Flash flooding case studies

## Why is it important?

- ❖ The most dangerous type of flooding, killing more than 5,000 people each year globally (WMO).
- ❖ Major hazard in Australia and can develop in almost any location, from rivers and creeks to the urban cityscape.
- ❖ Flash floods have had significant impacts, particularly on the east coast in the last couple of years.
- ❖ It is often difficult to predict the location, timing and intensity of the heavy rainfall that typically causes flash flooding.
- ❖ Many factors – topography, drainage, land use – affect how the water behaves when it hits the ground.

Flash flooding is *flooding occurring within about six hours of rain, usually the result of intense local rain and characterised by rapid rises in water-levels (BOM)*

The risk of flash flooding is often assessed as **high impact, low probability**.

Significant communication challenge



Flash flooding wreaks havoc in Melbourne suburb of Lilydale Herald Sun

# Flash flooding case studies

## Project design

- ❖ Identified as a priority at stakeholder workshop in June 2022
- ❖ Aims to improve predictions and the communication of uncertainty
- ❖ Focus on analysis of end-to-end warning system through case studies (understanding the problem)
- ❖ Insights from hydro/met/EM/community surveys about 'uncertainty'
- ❖ Case study selection with stakeholders
- ❖ Inter-disciplinary, partnership approach

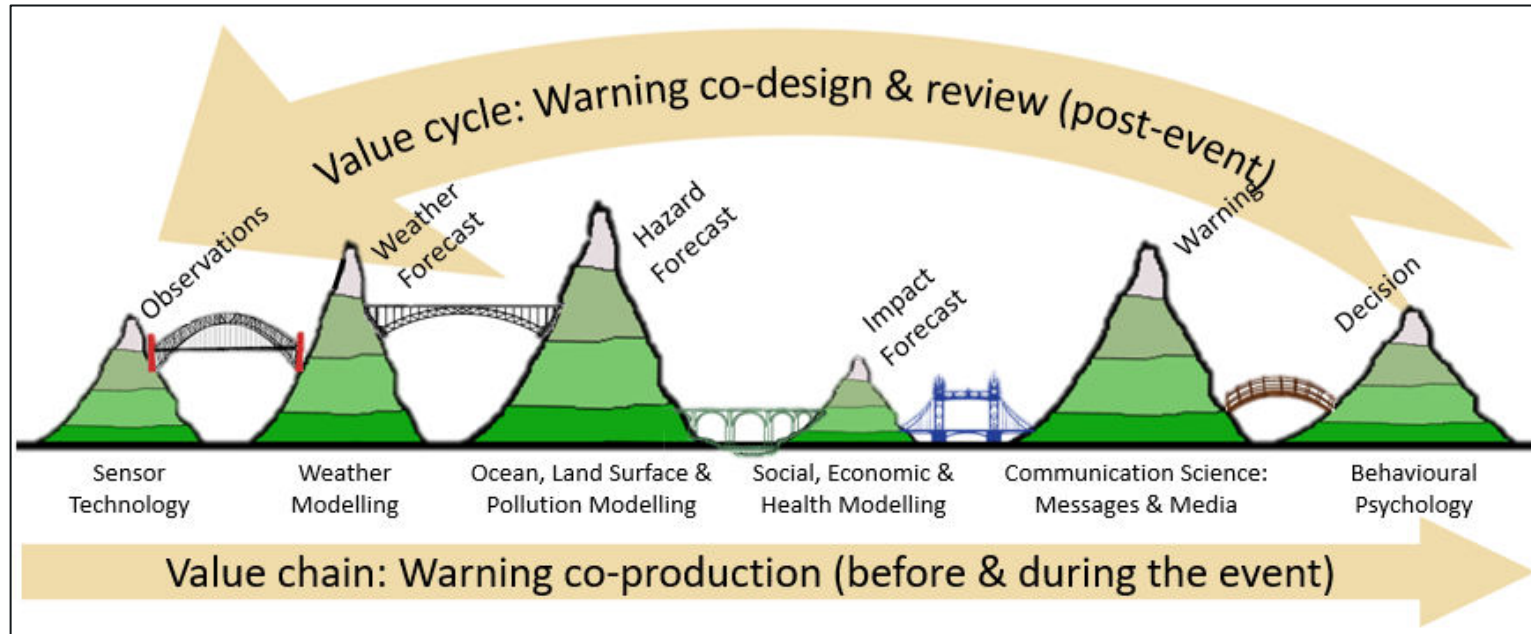
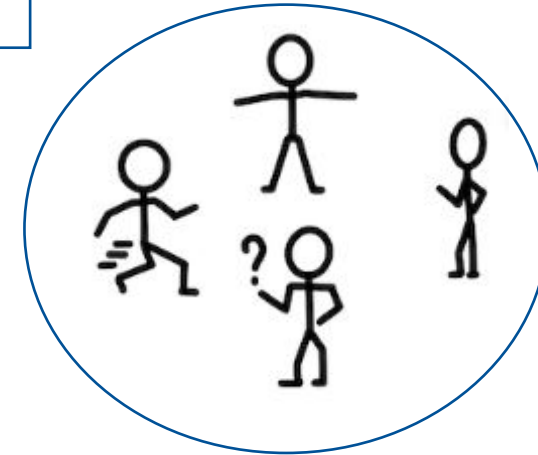
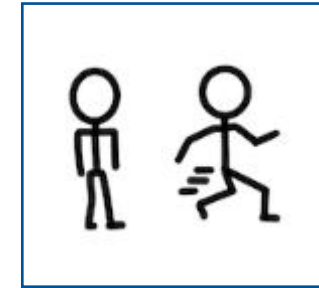
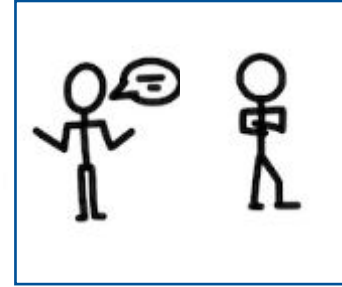
Bureau issues warnings for conditions which may lead to flash flooding - jurisdictions may issue flash flood warnings



Total Warning system ADR (2021)

# Flash flooding case studies

Communication, particularly about uncertainty, can be challenging as information is transmitted along the value chain.



# What we need from you

Case studies suggestions,  
information, survey dissemination

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# Thankyou

