POLICY TRANSFER: BETWEEN COUNTRIES, BETWEEN DISCIPLINES

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FLOODING IS AUSTRALIA'S MOST EXPENSIVE NATURAL HAZARD. CLIMATE CHANGE SCENARIOS predict increasing flood intensity and frequency. This potentially exposes Australia to greater damages in the future, making flood management key to improving adaptive capacity. This research explores whether 'resilience' strategies will result in outcomes that are truly adaptive.

RESEARCH QUESTIONS

- Which flood management approaches are most adaptive to future scenarios ?
- Can we transfer innovative approaches used overseas ?
- Will the resilience approach adequately address future flood threats ?

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Is it possible to transfer adaptive flood management policies that appear successful elsewhere to Australia ?

Ecosystem-based approaches are highly adaptive but are little recognized in Australia. They reduce flood risks and usually have co-benefits (e.g., Leeton case study: new tourism ventures, biodiversity and youth training).

In some cases, ecosystem-based measures require the relocation of flood sensitive development. Why is relocation used overseas but so hard to achieve in Australia ?

My research looked at incentives, government program delivery, cost and timing. It drew on examples of relocation in Australia (including Grantham, QLD) and overseas (NL, China, USA).

Other policy transfer issues investigated include barriers to better development planning and factors favouring structural measures.

ADAPTIVE MANAGEMENT OPTIONS, POLICY TRANSFER AND RESILIENCE

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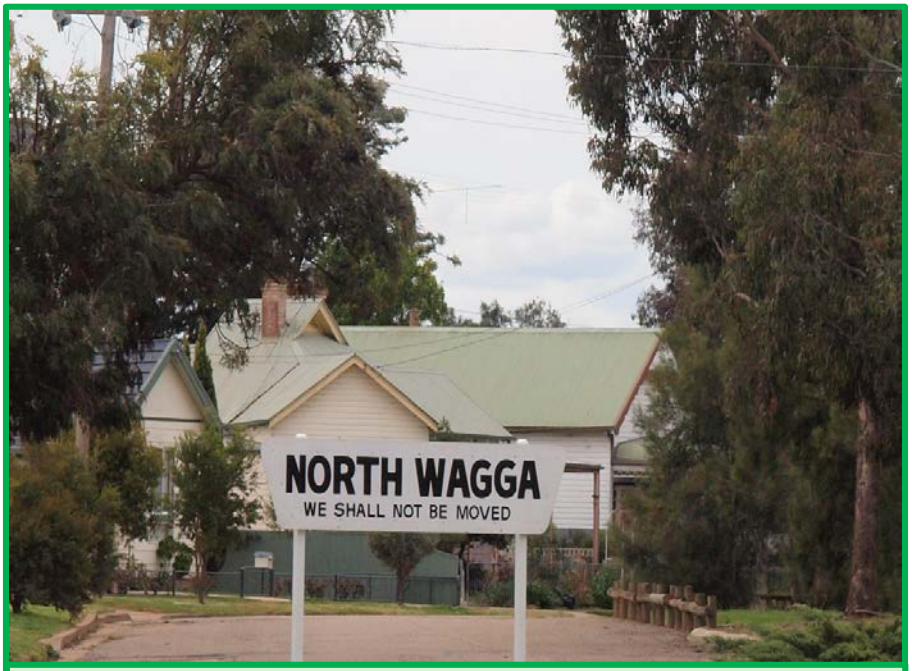

Barriers to achieving relocation
Who pays for flood damages ? Who benefits from avoided damage ?
How does program design affect participation ? How can we minimise relocation costs ?

THE LEVEE PARADOX

When investigating adaptive options for flood management, I studied some recent examples of 'the levee paradox' (Smith 1998), whereby structural mitigation facilitates further development of hazardous areas. This leads to increased assets in the wrong place and greater consequences when levees fail.

The paradox also applies to dams, including Wivenhoe Dam, QLD.

The levee paradox is a resilient feedback loop and it forms a 'transformational' challenge. My research looks at circumstances where levees might be justified and how feedbacks can be altered to create incentives for change.

RESILIENCE: POLICY TRANSFER BETWEEN DISCIPLINES

The concept of resilience transferred to disaster management from other scientific fields, including engineering and ecological systems. However, these disciplines interpret resilience very differently. One supports stability and *status quo*; the other accommodates system variability. Applied to flood management, these are associated with different activities.

Research suggests resilience has been superimposed on disaster management frameworks without much analysis. The result is that all management options remain open, regardless of how adaptive they are in the longer term.

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