FLOODWATER WATER NEW ZEALAND

Flood **GROUNDHOG D** AGAIN How to break the disaster-response cycle

It's not just the floods that keep happening - the postevent conversations also have a familiar ring. Iain White and Graham Haughton suggest ways to change the 'groundhog day' nature of disaster response.

looding is the most frequent natural hazard in New Zealand. Within the past year, we have seen major events occur from Northland to Otago, with the most recent being the March 2016 Franz Josef flood. This devastated the small town and reignited debates about the causes of flooding and how we should respond.

The political and public conversation in this case ranged from the establishment of a relief fund, to fears that the town was 'too expensive' to protect, to an editorial suggesting that the entire town could be moved to a safer spot a few kilometres away^{1,2}.

Similarly, after the severe June 2015 floods in Whanganui, Rangitikei and

Manawatu, the public debate ranged from the rise in global temperatures affecting weather patterns, to the need for more infrastructure investment, to Prime Minister John Key acknowledging that the Government will 'need to act' to mitigate the effects of extreme weather events³.

These examples are typical of the aftermath of many floods, and emphasise how high-profile events such as these provide an important opportunity to reflect on what went wrong, consider how future risk may be increasing due to factors such as climate change or urbanisation, and focus the attention of politicians.

These brief 'policy windows' are vital

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for galvanising diverse stakeholders into action and providing the political momentum needed to attract new investment or implement more effective policies. But to what extent are these opportunities taken? How often do events stimulate any more than a brief press spotlight before political priorities change along with the news agenda?

Our research into repeated major flood events in the UK over recent years. provides a salutary warning that not only do these calls for action fail to lead to significant policy change for many vulnerable places, but that the public responses mooted follow an all too predictable pattern. After the Somerset floods in the winter of 2014, an academic article4 suggested, in somewhat tonguein-cheek fashion, a 'checklist' for how the media and politicians respond to new major flood events - and in the case of the most recent December 2015 floods in North West England, Yorkshire and Scotland, sadly, virtually all of the boxes had been ticked within a week.

Calls for a major review of policy, tick.⁵ Doubts about existing flood risk assumptions and forecasting models, tick.⁶ Concerns about whether cities and prosperous regions have benefited more from flood investments while poorer areas are left behind, tick.⁷ Questions about whether planners should do more to prevent development on floodplains, tick.⁸ Debates about whether the floods are related to climate change, tick. Calls for international solutions, tick.9 Calls for officials to listen to local knowledge, which might have helped prevent the most recent floods, tick.10 Major figures in flood policy vilified for not being present on site quickly enough, tick; followed by visits from leading national politicians and royalty, double tick.11 Government money promised to help out affected householders and businesses, tick.¹² Gesture politics, tick. In 2014 a UKIP politician linked gay marriage policy to floods; in 2015, some MPs claimed money to help English flood-affected communities should be diverted from the overseas aid budget.

In short, while the precise nature of flooding might not be predictable, the immediate political and journalistic response certainly has been.

Call to act - no action

Despite repeated calls in both New Zealand and the UK from scientists and the public in recent years for a fundamental rethink of flood policy in the light of increasing events, it remains essentially unchanged; an acknowledged need to act but with little action. The radio wakes us all up with the same awful song and 'groundhog day' begins anew. So what do we need to do to help break this trend and design much more effective flood management policies?

The first step is to recognise both the recurring nature of the disasterresponse cycle and the need to design steps that have the potential to engender real change. While policy windows are critical opportunities to do this, they are all too brief and rely too heavily on capricious press interest – the need to act should be initiated in a strategic manner at the national scale in partnership with scientists and designed to enable longterm change.

As part of this approach, we also need to recognise that floods occur due to a very dynamic and multi-scalar combination of human and natural factors, from uncertainty over global emissions to inappropriate developments on the floodplain. This provides a challenging policy context that demands flexibility and responsiveness, factors which may currently be in short supply.

There are alternative approaches,

however. At the local and regional scale, policies can be designed to be automatically re-examined after events of a certain scale are measured. Early warning signals with built-in triggers can enable appropriate responses to be initiated and funded in order to take some of the politics out of flooding.

But local policy on its own will not be enough, given that flood policies in one area will almost always require integrated policy interventions in surrounding upstream and downstream areas. To address this issue, we need more effective regional and catchmentscale thinking, which can provide an overarching governance and strategic approach that has the authority to bring stakeholders together.

Joined-up conversations

'Flood proofing' does not have to apply to a building, rather we can apply the principle to other plans, practices and policies, to ensure that we are not incentivising run off within related policy silos, such as not overstocking land where soil compaction is a concern. Similarly, we may include reconsideration of the management and usage of upland areas, which will require a national conversation to ensure that the public, landowners, and visitors appreciate why landscapes will change, as more shrub and tree cover is brought in as a means of improving water retention at source.

At the global level, we will need to make tackling global warming a central part of a multi-scalar approach to flood policy. Extreme weather events have become the new 'normal' – there will be no reversion to earlier climate patterns even if we address global warming due to the lag in the system and the high development pressures in New Zealand. The majority of climate scientists tend to agree on two things: that recent extreme weather events are unprecedented; and that we will continue to experience more of them.

As a matter of urgency, we need to find ways of integrating policy at all scales. But in isolation these measures do not break out of the silo approach to flood policy and its governance. The repeated events lend weight to the argument that we are in need of serious, integrated reform that integrates across scales and sectors rather than a small-scale tinkering or an incremental rise in flood defence funding.

These proposals accept that, while flood protection measures are helpful, we need to take a systemic perspective to engender real change. None of these proposals will be without their detractors. Vested interests will endeavour to ensure that there is minimal change to existing policy or lobby against stronger powers for national, regional and territorial governments to resist development or change agricultural practices.

Measures which require strong state direction and change the status quo routinely run the risk of being simplistically pigeon-holed as 'red-tape' on business efficiency.

Flooding is too important to be constrained by such ideological blinkers – governments will always have a role in seeking to reduce the impacts of flood events and in helping with recovery where there are major impacts. The alternative to our proposals is that we continue with our 'groundhog day' approach to flood policy, but with the unpleasant twist that with each repeated failure to understand the consequence of our actions, things get worse. WNZ

• A version of this article first appeared in the academic journal Town and Country Planning¹³.

(Endnotes)

- See: http://www.stuff.co.nz/national/78266363/stateof-emergency-lifted-as-mop-up-begins-on-floodedwest-coast
- 2 See: http://www.stuff.co.nz/the-press/ opinion/78347521/editorial-franz-josef-floods-areminder-of-townships-vulnerability-to-hazards
- 3 See: http://www.radionz.co.nz/news/national/276840/ govt-to-discuss-flood-response
- 4 G. Haughton, T. Coulthard and G. Bankoff: 'The murky waters of flood policy'. Town & Country Planning, 2014, Vol. 83, Aug., 336-40
- 5 M. Tran and D. Gayle: 'Cameron defends flood defence spending amid calls for 'complete rethink' – as it happened'. The Guardian, 28 Dec. 2015. www. theguardian.com/environment/live/2015/dec/28/ukfloods-thousands-evacuated-after-unprecedentedcrisis
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- 7 J. Groves and T.Cohen: 'Uninsured victims face £1billion bill as total cost of floods soars to £5.8 billion: Exactly the amount we are giving to the fight against global warming abroad'. Daily Mail, 29 Dec. 2015. www.dailymail.co.uk/news/article-3376935/ Putsuffering-Britons-PM-Floods-cost-5-8bn-exactlygivingfight-global-warming-overseas.html; and M. Tran: 'North-south divide cited as factor in Yorkshire flooding devastation'. The Guardian, 28 Dec. 2015. www.theguardian.com/uk-news/2015/dec/28/ yorkshireflooding-north-south-divide-york-leedslondon-southeast
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www.theguardian.com/commentisfree/2015/dec/29/ deluge-farmers-flood-grouse-moor-drain-land

- 11 D. Gayle: 'Environment Agency chair heads to floodhit areas after Barbados break'. The Guardian, 30 Dec. 2015. www.theguardian.com/environment/2015/ dec/30/environment-agency-sir-philip-dilley-flood-hitareasbarbados-break; K. Rawlinson: 'Minister visits Tadcaster as Yorkshire town braces for more flooding'. The Guardian, 30 Dec. 2015. www.theguardian.com/ uknews/2015/dec/30/tadcaster-more-flooding-liz-truss; and 'Storm Desmond: Prince Charles visits clean-up operation in Cumbria'. BBC News, 21 Dec. 2015. www.bbc.co.uk/news/uk-35151414
- 12 'Winter 2015 to 2016 floods: Government response'. News Story. Department for Environment, Food and Rural Affairs et al., 8 Dec. 2015. www.gov.uk/ government/news/north-west-englandfloods-2015government-response
- 13 Haughton, G. and White, I. 92016) Groundhog Day the great floods of 2015, Town and Country Planning, March: 134-137.