

Disaster policy and climate change: how much more of the same?

Professor Steve Dovers

Fenner School of Environment & Society, Australian National University, Canberra

Professor John Handmer

RMIT University, Melbourne

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Grand challenges in natural hazards research and risk analysis

Starting proposition...

- **Disaster and risk research focused on:**
 - *natural sciences/hazards*
 - *quantitative risk analysis*
 - *emergency management/response.*
- **... absolutely crucial, and more needed, but there are gaps.**
- **Climate change, increasing exposure, and a fuller world demands added focus:**
 - *strategic policy and institutional settings*
 - *beyond quantifiable risk*
 - *'mainstreaming' disaster policy – policy integration across sectors.*

Sources...

- ◉ Dovers, S. & Hezri, A. 2010. Institutions & policy processes: the means to the ends of adaptation. *WIREs Climate Change*. 1: 212-31.
- ◉ Dovers. 2009. Normalizing adaptation. *Global Environmental Change*. 19: 4-6.
- ◉ Ross, A. & Dovers, S. 2008. Making the harder yards: environmental policy integration in Australia. *Aust J Public Admin*. 67: 245-60.
- ◉ Handmer, J. & Dovers, S. 2007. *The handbook of disaster and emergency policies and institutions*. London: Earthscan.

Parts of this talk...

1. The changing profiles of disasters.
2. Limits to disaster and emergency thinking.
3. Climate change adaptation, and limits to adaptation thinking.
4. Connections: disasters & climate change.
5. Future challenges – resurrecting sustainable development.

Changing profile of disasters

⊙ **Increasing vulnerability:**

- *rising population*
- *diminishing traditions of community resilience*
- *a full world – resource limits*
- *lessened redundancy (the price of optimisation)*

⊙ **Changing risk portfolios:**

- *‘natural disasters’ but increasingly also*
- *technological, terrorism, trade, financial...*
- *the ‘securitisation’ of disaster and emergency research and policy*
- *multiple/cumulative/sequenced disasters.*

Disasters: what are we good at?

- ◉ **Varies by country, but generally well-developed capacities in...**
- ◉ *Emergency management: response and immediate recovery.*
- ◉ *Understanding risk of natural hazards in a quantitative sense.*
- ◉ *Specialised response agencies.*
- ◉ *Mobilisation of near-term aid.*

Disasters: what are we not good at?

- ⊙ Higher level strategic policy and institutional thinking and capacities.
- ⊙ Proactive reduction of vulnerability.
- ⊙ Long term recovery and – where necessary – transformation.
- ⊙ Dealing with residual risk and other forms of uncertainty (social, political).
- ⊙ Handling the broadened portfolio of threats.
- ⊙ Cross-sectoral policy coordination (“mainstreaming” disasters).

The unfinished evolution

(Salter 1998)

◉ FROM:

- ◉ Focus: hazards
 - ◉ Reactive
- ◉ Single agencies
- ◉ Science-driven
 - ◉ Response management
- ◉ Planning for communities
- ◉ Communicating to communities

◉ TO:

- ◉ Focus: vulnerability
 - ◉ Proactive
- ◉ Partnerships
- ◉ Multi-disciplinary
 - ◉ Shared risk management
- ◉ Planning with communities
- ◉ Communicating with communities.

Climate change

- ⊙ Increased frequency/intensity of severe weather, cyclones, wildfires, and
 - ⊙ ... reduced local and national capacities from drought, water scarcity, agricultural production, energy scarcity.
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- exacerbated disasters
 - multiple-cumulative-sequenced events
 - other pressures on response resources
 - overwhelmed public perceptions
 - high political costs?

How big a challenge?

(Dovers 2009; Handmer & Dovers 2007)

A TYPOLOGY, WITH DISASTER ANALOGUES:

1. **Not too dissimilar to existing variability** over recent centuries, within institutional & societal memory, but to which we could adapt better than we have. Up to 2°C? *Routine disaster problems.*
2. **Significantly exacerbated variability** – droughts, floods, cyclones, heatwaves, vector-borne diseases, etc – not outside our lived and historical experience, but very challenging. Extremes become common. 2 – 4°C? *Non-routine disaster problems.*
3. **Change and variability beyond human experience** and institutional memory, threatening productive base of societies, inundation of major cities, health of large parts of the population, economic stability, integrity of ecosystems, etc. Strong non-stationarity, extremes the norm. Over 4°C? *Complex, unbounded disaster problems.*

Type 3: Upper end climate change, and complex, unbounded disaster problems...

“Things are gonna slide in all directions,
Won't be nothing, won't be nothing you can measure
anymore,
The blizzard, the blizzard of the world has crossed the
threshold.
And it's overturned the order of the soul...
... I've seen the future, brother, it is murder.”

Well-known climate scientist, Leonard Cohen (1992)

Limits to adaptation thinking

Dovers & Hezri 2010

- ◉ Seeing climate adaptation as a 'new' policy problem.
- ◉ Dealing with non-quantifiable risk and long run uncertainty in research, law and policy.
- ◉ A self-referencing literature and policy discourse – not connecting to disasters, public policy, development, public health, institutional studies, etc.
- ◉ Cross-sectoral policy coordination and learning: natural resource management, health, disasters, water, local economic development – many years of experience with climate variability...
- ◉ **Proposition:** that (for example Australia), can cope with Type 1, and much of Type 2, drawing on and developing existing knowledge and capacities.

Climate & disasters: coincident issues...

- ◉ **FUTURE CHALLENGES:**
- ◉ *Being proactive – reducing vulnerability.*
- ◉ *Dealing with non-quantifiable risk (residual risk, other forms of uncertainty).*
- ◉ *Dealing with multiple, cumulative and sequential threats and events.*
- ◉ *Maintaining capacities in the down times – the public doesn't thank you for long.*
- ◉ *Cross-sectoral policy learning – drawing on a wider catchment of knowledge and experience.*
- ◉ *Policy integration and coordination.*

Future directions?

- Connect disaster and adaptation research and policy.
- Draw on the policy integration literature: old and new structures and processes, institutional measures.
- Continue the EM evolution – more proactive.
- Incorporate disaster funding and capacity into climate adaptation – what better use of \$100 billion?
- ...toward 'mainstreaming' emergencies and climate change in public policy sectors.

→ Re-unite disasters and climate change with sustainable development – the only integrative agenda we have...

The opportunity of Rio +20

- **The lost agenda...**
- Sustainable development, from articulation in 1987, thru WCED, in 1992 was the integrated agenda -- human development, environment, disasters, climate change, urbanisation, global commons...
- Too big, too difficult, too hard to define?
- The opportunity, 40 years from Stockholm, to resurrect the connections – can we think and do more than one thing at a time?

- *...the future is more than a “green economy”.*
- *...sustainable environments and better human development are the best antidotes to disasters.*