

Drying & perceptions of climate change

Insights from a Riverina site in the Southern Murray Darling Basin

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Big Picture The Learning to be drier research

- Four water-dependent sites (Alpine; Mid River, Lower River, Drylands)
- Four teams of researchers from UB & Deakin
- Three states (Victoria, NSW, South Australia).
- Audio-recorded and transcribed interviews in 2010 with a range local people (education & training orgs, water authorities & land managers, farmers, other enterprises, community orgs & individuals).
- Series of papers published in *Australian Journal of Adult Learning* 49 (3) Nov 2009.
- This paper based on Barry Golding & Jennifer Angwin's Mid River research site in Hay, NSW.

Context for drying

- A decade of unprecedented dry conditions to 2009.
- Predictions that 'global greenhouse emissions will continue to drive changes in climate across Australia for the foreseeable future' (PMSEIC 2007).
- Predictions of higher temperatures, lower rainfall and less runoff to Riverina area.
- Flows to Murrumbidgee & Lachlan Rivers significantly affected, by virtue of high dependence on irrigation water.

Literature on climate change

- Without firm evidence climate change risk remains hypothetical & easy target for climate change sceptics.
- Climate (and drought) *had* been considered natural; now perceived as systems and phenomena with which humans have interfered.
- The battle over climate change occurs 'as much in the cultural and individual imagination' as in the atmosphere ... and has more to do with 'science, government & the civil society than it does about a physical reality' (Hulme 2007)
- A 'Super wicked' problem (multidimensionality, scientific uncertainty, value conflict, mistrust, urgency).
- Individuals need the right incentives, resources, knowledge & skills to adapt efficiently.

Findings

- Few people talked about climate change in discussions about drying (NOTE: causality was not presupposed in the interviews).
- Most people talked about 'dry periods' or 'drought' that they anticipated/believed hoped would reverse.
- In 163 pp of mid River transcripts (32 interviewees), climate change was spontaneously mentioned twice.
- 'Drought' mentioned 67 times (Riverland 138pp, climate change X2; drought X36; Alpine 61pp, climate change X6; drought X17).

Positions on climate change

once the word was introduced into the interview

- **Acceptance:** but possibly natural cycles, which human influence might be 'speeding up; a need to counter widespread 'gloom and doom'
- **Uncertainty and vacillation:** over-reactions to climate change and equivocation
- **Total denial:** based on personal recollection and narratives of similar cycles or reversion to persistent myths.

Dryland Farmer 4, Booligal

- Climate change has been *happening for how many millions of years* and will continue to happen. I am sure we have increased carbon dioxide production ... all the figures are there [1] ... It's in *cycles* and I hope we go back into a wet cycle, whether we do, who knows? We don't know. We could be sitting here in five years time and we could be all stuffed. I don't know ... but it is *definitely cycles* [2] and climate change has been happening *for a million years* [3] and *we won't stop it* [4]. Whether there are things we can do to *slow it down* or push it one way or the other, I don't know. *The scientists will probably come up with that* [5]... *but information wise, read, listen, radios...* [6] I listen to ABC radio and there is always something on there once a week about climate change, there's plenty of stuff to read on the Internet. There is plenty of stuff out there to read ... It's *cycles, well I hope it is cycles* [2], and *we are suffering* [7], *we are in the wrong game aren't we* [8] ... but *I think it will rain* [9]. *It has been tough before and it will be tough again* [8].
- **This narrative includes evidence about:** long-term climate change [1], a perception of definite cycles [2], change over long periods of time [3], doubts about humans being able to influence change [4], deferral to scientific opinion [5], the need to be informed [6], the suffering being experienced [7], a recognition that they may be in the wrong business if climate change is a reality [8] and perpetual and optimistic hope [9].

Perceptions of government responsibility

- Very few spontaneous mentions about causality of drying
- Overwhelming concern about short-term water 'allocations' (X113) by governments as a percentage of 'entitlements' during the 'drought'.
- Upstream X4; Downstream X2.
- Environment X 24, typically in a disparaging way, linked to the term 'frog's and Peter Garrett.

Conclusion

- Most adults in this highly water-dependent site remain ignorant or dismissive of the big picture problems in the Murray-Darling Basin.
- Most remained hopeful & optimistic that the 'drought' would break.
- Most were dismissive or sceptical of climate change: this was simply seen as an extended, natural, cyclic drought.
- There was a strong sense of entitlement and minimal perceptions of responsibility.
- Government department (and EC funding) still regarded this as an exceptional drought.

Implications for adults

- Adults in this highly water-dependent site were unable or reluctant to think seriously about the longer term responsibility of sharing and conserving much-reduced allocations of irrigation water.
- There was minimal thought or consideration of this being an inter-connected Basin.
- Adults did not understand or accept the real risks of climate change.
- There is a need for a newer area of adaptation for all adults, beyond scientific and technical reports that has a communication and education focus.