

How expert knowledge is valued & communicated in the natural resource management (NRM) sector



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scope of research



- What decision-makers value about science, how they access & engage with it
- Conducted semi-structured interviews with participants from two facilitated engagement processes

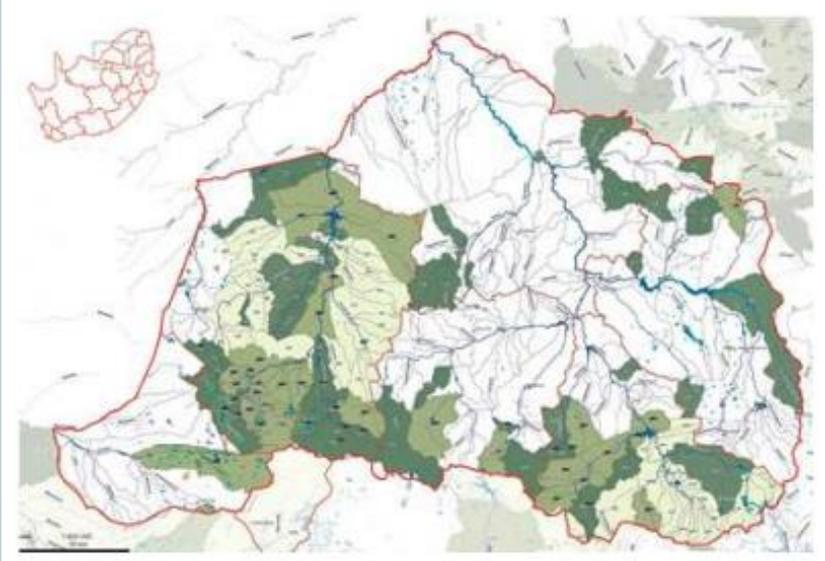


Image credits:

*Terrain Natural
Resource Management*

case study: NFEPA

National Freshwater Ecosystems Protected Areas



- Decision-makers:
federal & provincial water & environment agencies
- Policy context:
freshwater biodiversity conservation
- Aim:
knowledge co-production (prioritization system) & implementation
- Scale:
national (South Africa)

see: Nel et al. 2016

decision contexts



Markets Data

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Tony Abbott finally cuts deal to axe carbon tax

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Prime Minister Tony Abbott is prepared to recall parliament if a new deal to end the carbon tax does not pass the Senate this week. **Photo: Alex Ellinghausen**

July 14th, 2014

Cape Town faces Day Zero, with officials predicting water will run out in April

Updated Mon at 8:12am



PHOTO: Cape Town faces becoming world's first major metropolis to run out of water. (Reuters: Mike Hutchings)

South Africa's Cape Town has been scrambling to avoid an impending Day Zero scenario when taps are expected to run dry and people are left without water.

MAP: South Africa

January 29th, 2018

decision contexts



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“there was a Liberal government at State level and... they weren’t allowed to even mention the two words ‘climate change’”

Home / Jul 14 2014 Updated. Tor tax



Prime Minister Tony Abbott is prepared to recall parliament if a new deal to end the carbon tax does not pass the Senate this week. Photo: Alex Ellinghausen

July 14th, 2014

Cape Town faces Day Zero, with officials predicting water will run out in April

Updated Mon at 8:12am

“So if we go to court the science needs to be there and it needs to be rivers and it needs to support implementation when there’s conflict”

PHOTO: Cape Town

South Africa's Cape Town has been scrambling to avoid an impending Day Zero scenario when taps are expected to run dry and people are left without water. MAP: South Africa

January 29th, 2018

how decision makers access science



- Removed pre-publication

* note: some interviewees personally conducted research. This is considered engaging in science as an expert rather than with science as a lay person

how is science valued?



words used in relation to science:

South Africa: *foundation, pivotal, fundamental, cornerstone*

Australia: *core, key, critical, cornerstone*

how is science valued?



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“the value [of science] is I guess that it’s trying to move beyond just being some opinion that I hold, to trying to get an outcome that is not political but real”

“as a conservation agency, how do you work without science?”

practical knowledge/experience also valued



- **Australia:** decision-makers not often identified as “experts” but
- most explicitly acknowledged the value of their colleague’s knowledge without specific prompting

“We also had the opportunity to deal with other NRMs around Australia... That’s really assisted us because they are having similar issues and problems and dealing with the very things we are all dealing with together.”

practical knowledge/experience also valued



South Africa

- the tacit knowledge of decision-makers was recognised at the outset as a key knowledge input
- Over 100 experts from government, private & civil society engaged in NFEPA = >1000 person years of ecological & planning experience (Nel et al., 2016).

“it was a very wide consultation and we sat around the tables and we talked. And this one said this, and that one said no, no remember this and remember that, oh yes I forgot about that, that kind of thing you know?”

decision-maker expertise



- organisations and institutions
- policy, planning & management instruments
- implementation of policy
- nature of local biophysical systems
- nature of stakeholders/communities



crisis in expertise: loss of accumulated experience



Australia

“I’m one of the originals now. I’ve been nearly 4 years with [NRM group X]”

“I’ve been in [NRM group Y] for 13, 14 years... coz I’ve been around the region a long time I can interpret a lot of local issues and what have you”

crisis in expertise: loss of accumulated experience



South Africa

“at a rough guess I’d say probably 80% of the capacity around water resource management resides in consultants as opposed to government”

“we had people playing a major role with the development of environmental water, etc. Most of these people, ja some people died. Others left the department”

- *“human capacity in South Africa is vulnerable” (Roux & Nel 2013)*

in summary



- Decision-makers in NRM value science: to understand the natural world & legitimise decisions
- Engagement processes enable decision-makers to explore the application of science
- Decision-maker expertise is critical in the application of science
- The importance of decision-maker expertise may be overlooked. Don't understand the significance of its loss.

value of communication process



- Knowledge: increasing access to a range of relevant knowledge
- Process of communication: mutual learning & also *application* of science through dialogue and deliberation
- Legitimacy: accessing “good” knowledge may not be enough. Processes need to be fair/transparent

