

Adapting to water scarcity: Importance of monitoring and accounting

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TRANSCEND Kick off Meeting / Salamanca / 16 February 2023

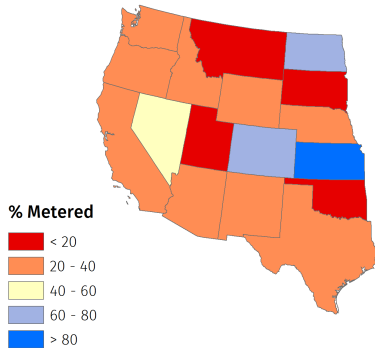
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The water information gap

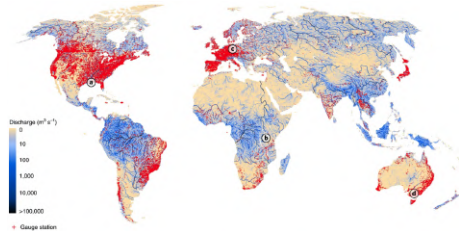


Which do we know more about?

Large gaps in monitoring of water demand and supply



Foster et al. (2020)



Krabbenhoft et al. (2022)

Why are we not monitoring more?

- Monitoring requires money and capacity that often don't exist
- Water demand monitoring gaps arguably more significant than those for supply
- Especially problematic for agriculture due to:
 - Large numbers of dispersed abstractors
 - Infrastructure for extracting water is private
 - Large proportion of use is consumptive

Leads to unsustainable or inefficient water allocation

ENVIRONMENT

Spain's vast network of illegal wells exposed after death of toddler

The death of a Spanish toddler who fell into an illegal borehole has put the country's water crisis in the spotlight. It's estimated that there are more than 1 million illegal wells in Spain.



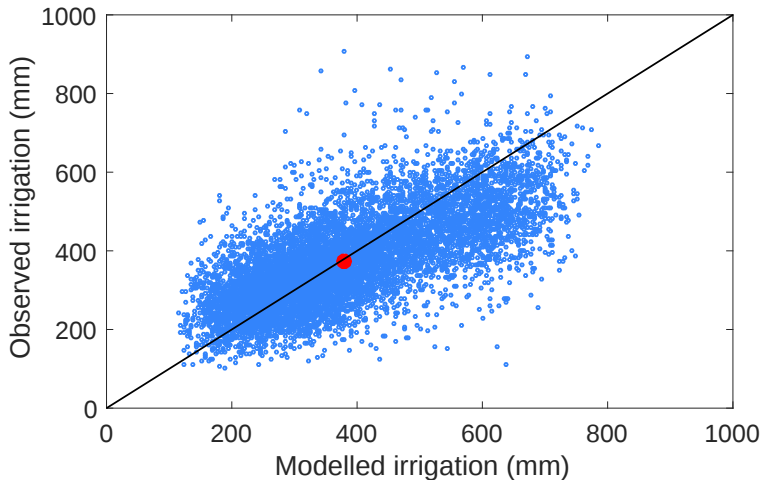
Murray-Darling basin: allegations of water theft spark calls for judicial inquiry

Outrage and demand for Icac investigation follows ABC report alleging that taxpayer-bought water was being pumped out for cotton growing



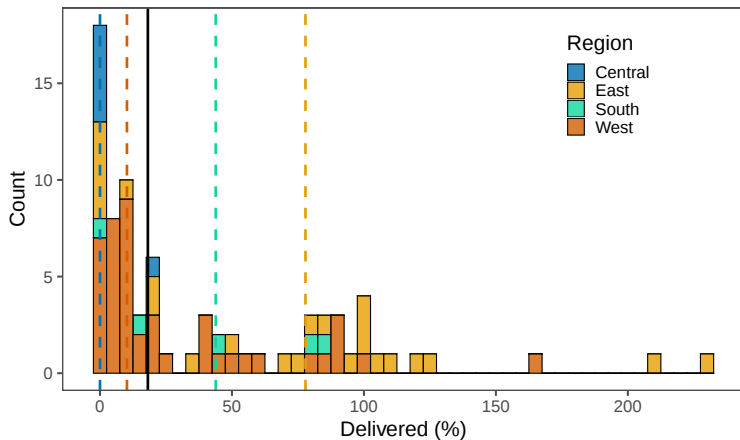
► The Australian Conservation Foundation said 'the Murray-Darling basin plan has made a fortune for a lucky few' after allegations that water was being harvested by some irrigators to the detriment of downstream communities. Photograph: Dean Lewins/AAP

... + poorly targeted policies and investments



Foster et al. (2019)

... + failure to learn from past policies and projects



Higginbottom, Foster et al. (2021)

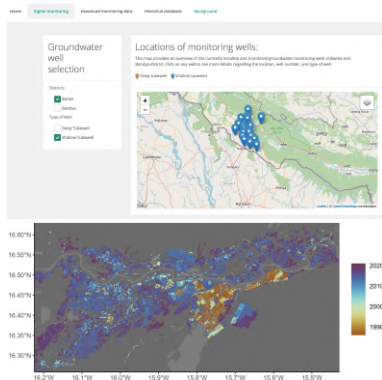
TRANSCEND's monitoring pillar

As part of pillar 3 of TRANSCEND, key goals will be to:

- Document existing monitoring approaches to facilitate learning and knowledge sharing about good (and not so good!) practices
- Extension of socio-ecological modeling approaches to explore how monitoring capacity impacts policy robustness under future change
- Development of new monitoring tools, methods, and data to strengthen monitoring for policy implementation and enforcement

Monitoring and accounting tools

- Make existing data easier to access and use for policy design, implementation, and enforcement
- Enable uptake of new tech and data sources to improve policy planning, targeting, and evaluation



Urfels et al. (2022); Higginbottom,
Foster et al. (2023)

Monitoring and accounting tools - discussion points

- Tools need to reflect user needs - what are key monitoring challenges and indicators?
- We can't solve every data need - how should we prioritise effort to maximise value added for users?
- How do we ensure sustained impact - how do we create tools that stakeholders can own and maintain long-term?