Australian Government
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Measuring the SDGs : Challenges in the environmental domain

Dr Stuart Minchin,

Chief, Environmental Geoscience Division.

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What do we want to achieve with the SDG Framework?

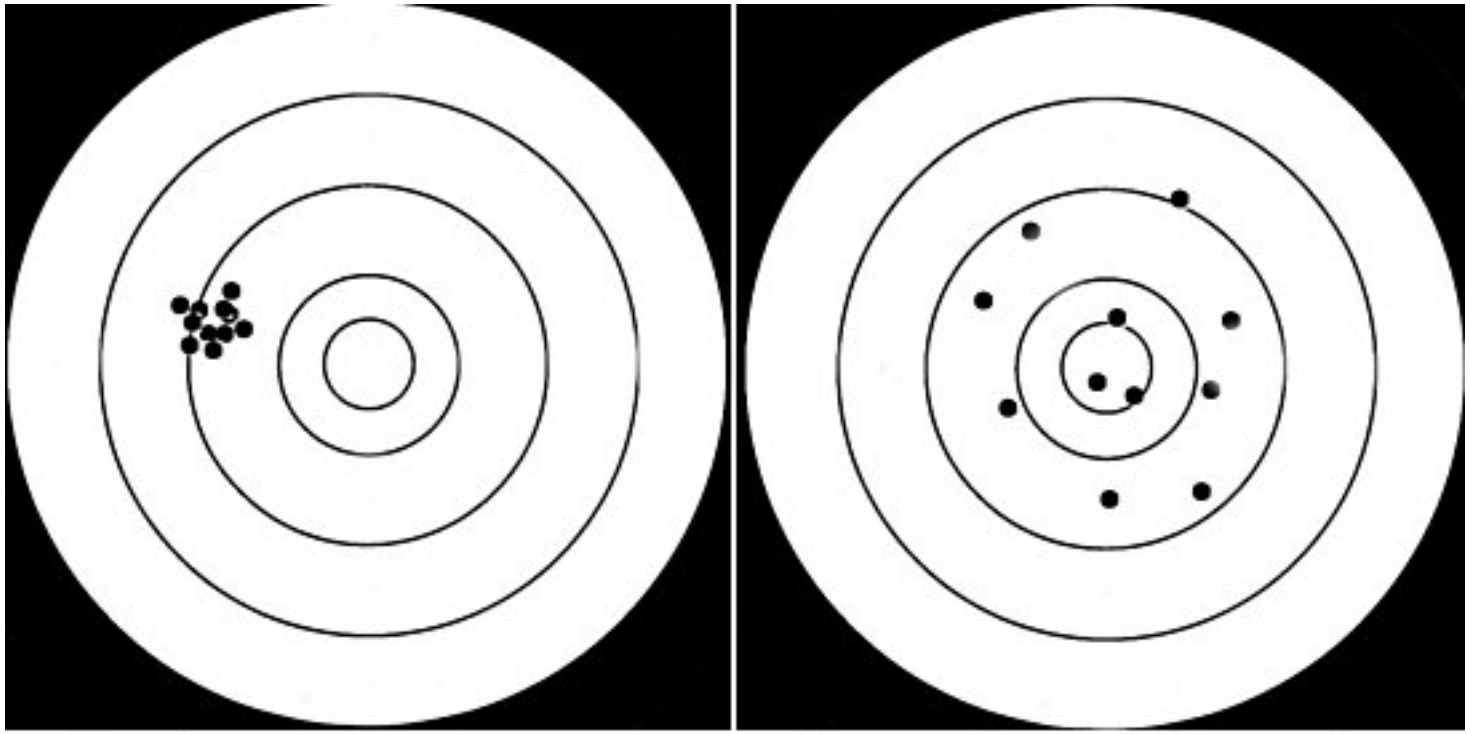
“To achieve positive social, economic and environmental change”

What do we need from environmental SDG indicators?

“To measure the change that we achieve”

Coverage: Can the indicator be measured globally?
Transparency: Is the method clear and able to be repeated?
Relevance: Is it measuring important aspects of the SDG?
Simplicity: Do all countries have the capability and capacity to deliver?
Cost: Can all countries afford to monitor this indicator?
Clarity: Do people understand the measure and how it relates to the SDGs?
Precision vs Accuracy: Which is more important?
Robustness: Is the measure resistant to manipulation?
Power/Sensitivity: Will you be able to detect a change in the SDG?

Precision vs Accuracy



Precise and Inaccurate

Accurate and Imprecise

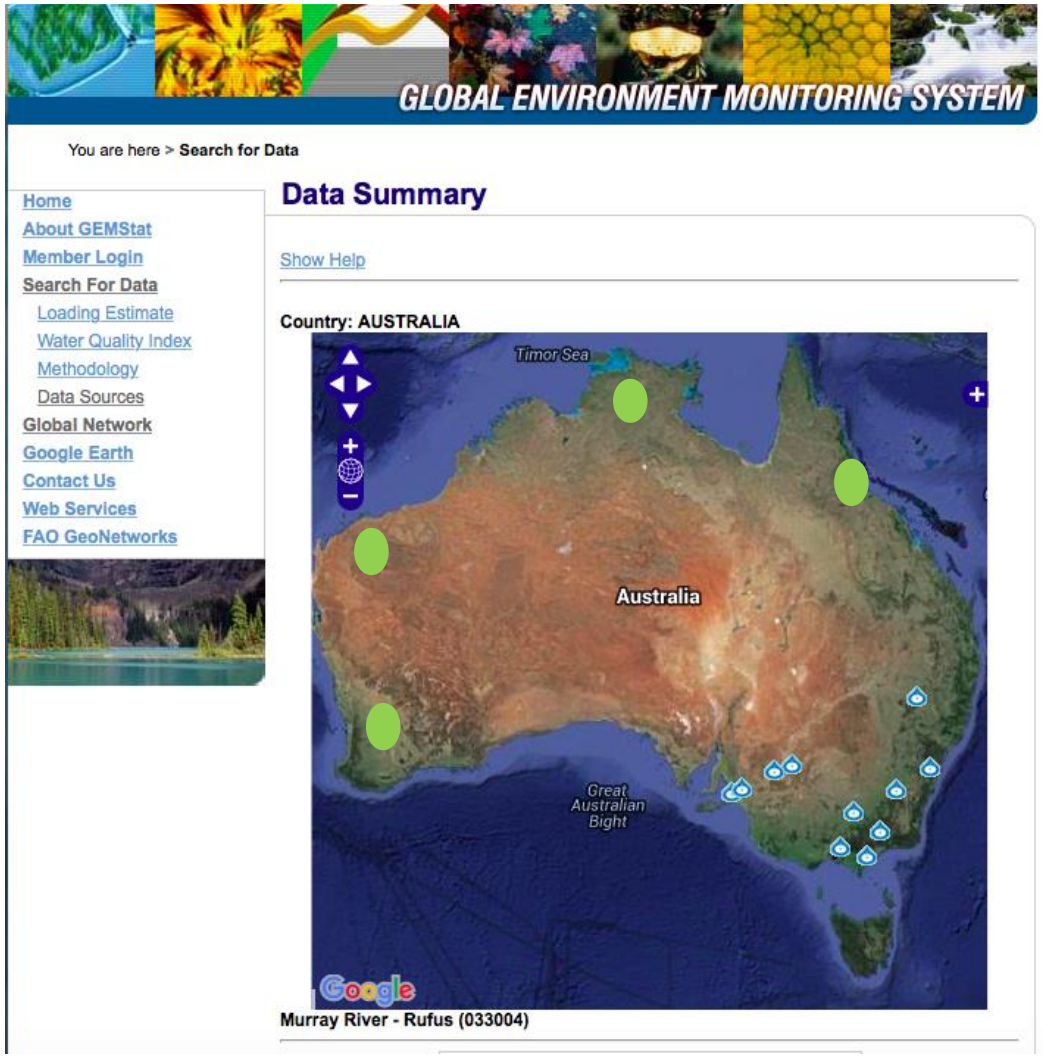
Houston University

Robustness: Can it be manipulated?

- **6.3.2 Proportion of bodies of water with good ambient water quality**

- Proposes using UN GEMS data
- 11 sites for all of Australia!
- Monthly monitoring (at best)
- Australia well resourced to report up through UN process …..
- Developing countries?

- Example:
- 6 good, 5 bad 54%:46%
- Add 4 good sites: 66%:34%
- 20% improvement in Australian WQ..!



Power/Sensitivity: Will you be able to detect a change in the SDG?

Environmental change is often gradual on a highly variable baseline…..

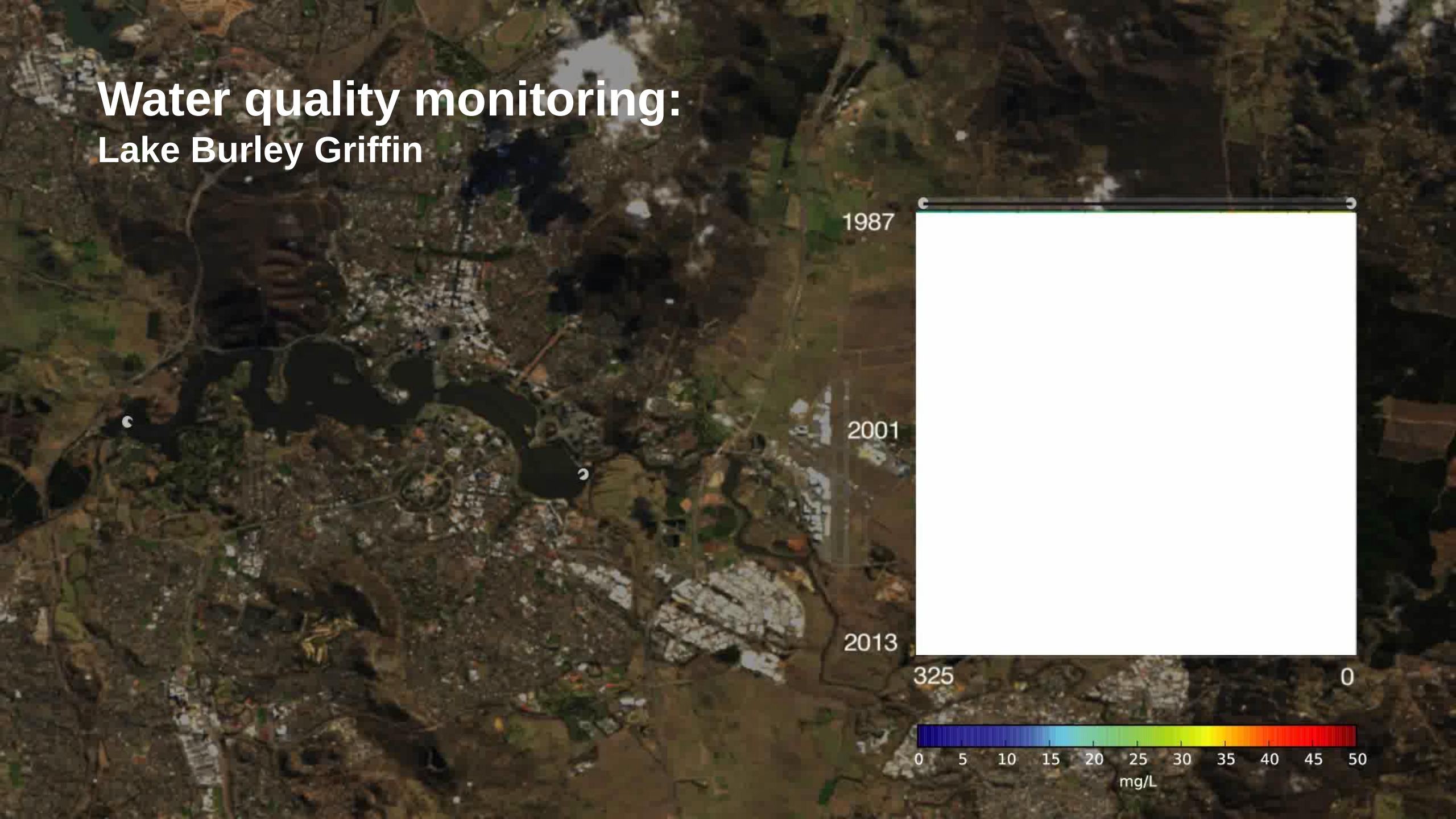
How long would you need to monitor to detect a 66% change in monthly monitoring of ambient WQ at a normal Water Quality monitoring site?

a) 2 months b) 6 months c) 2 years d) >10 years

If you can't reliably detect a change of 66% at a single monitoring site in less than 10 years, how sensitive do you think a summary of change at 11 representative sites will be to changes in water quality across a continent?

Answer: We need to make use of spatial and temporal coverage of Global Earth Observation datasets to provide improved statistical power in environmental change detection.

Water quality monitoring:
Lake Burley Griffin



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Thankyou

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