

Benthic invertebrate and mudflat monitoring

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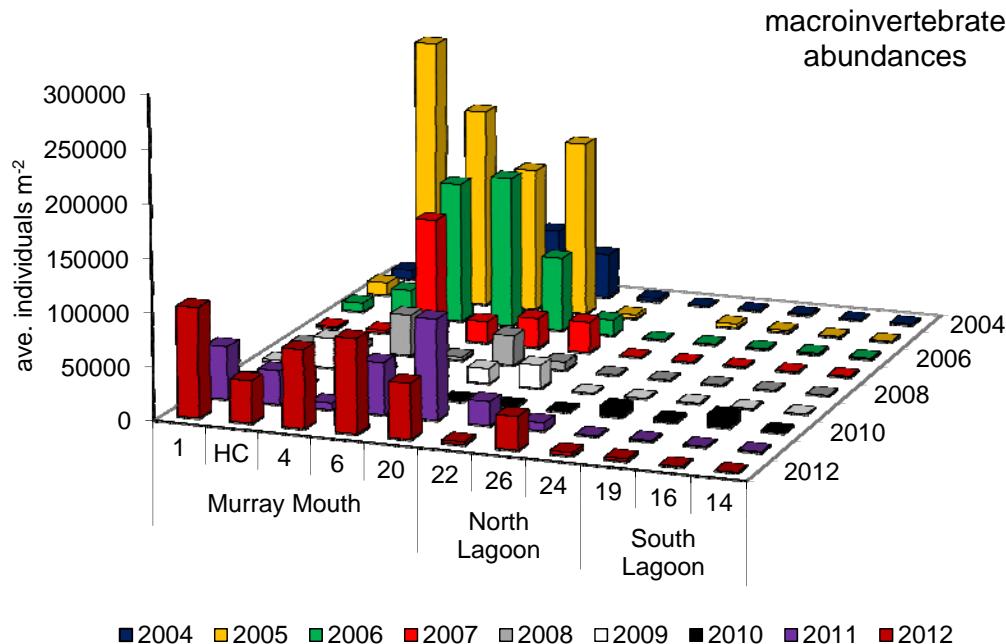
inspiring achievement

Why macro-invertebrates?

- Rapid response to environmental changes
- Indicator functions
- Important part of the estuarine food web
 - prey for shorebirds and fish
- Important for ecological processes
 - e.g. bioturbation

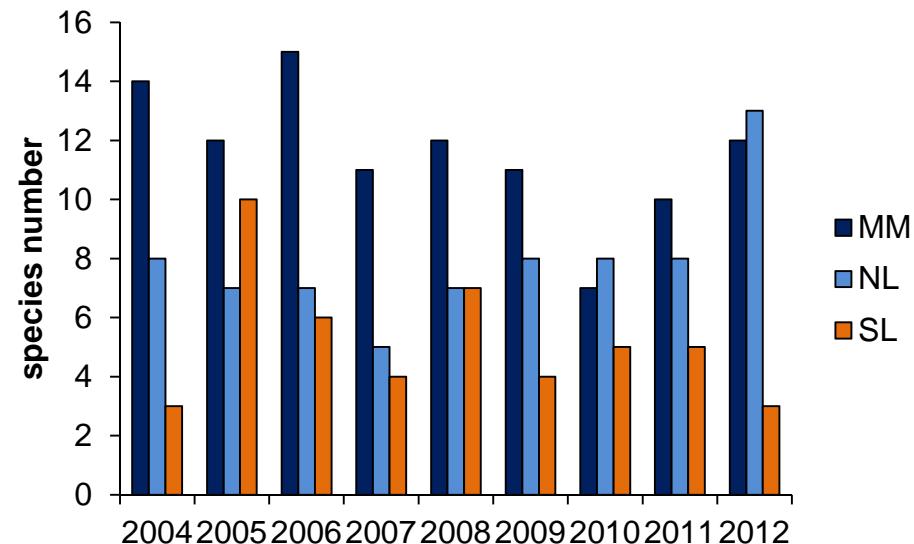


Did macroinvertebrates respond to environmental changes?

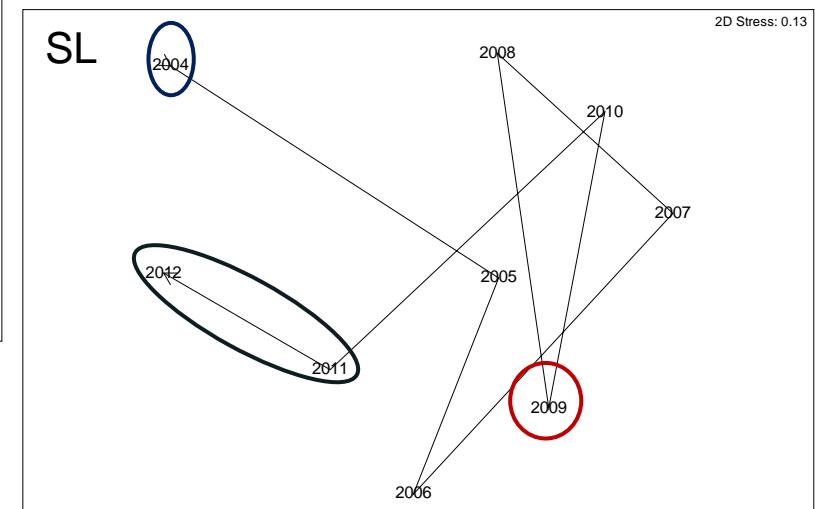
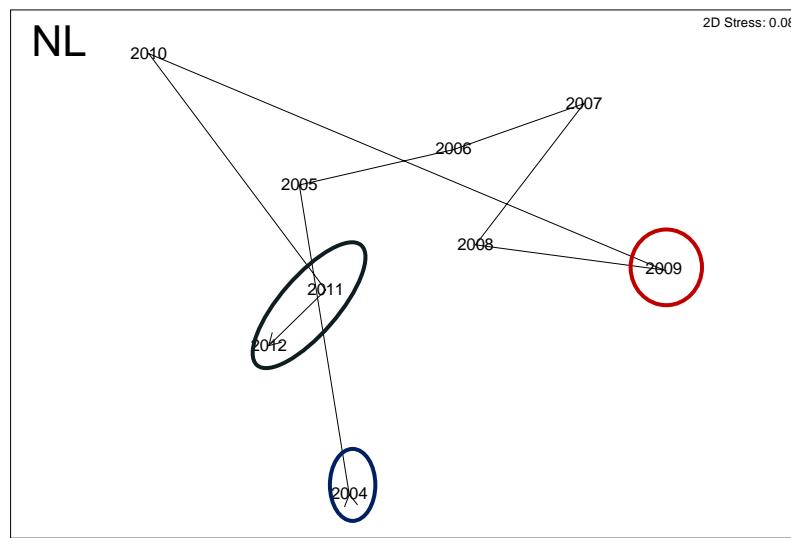
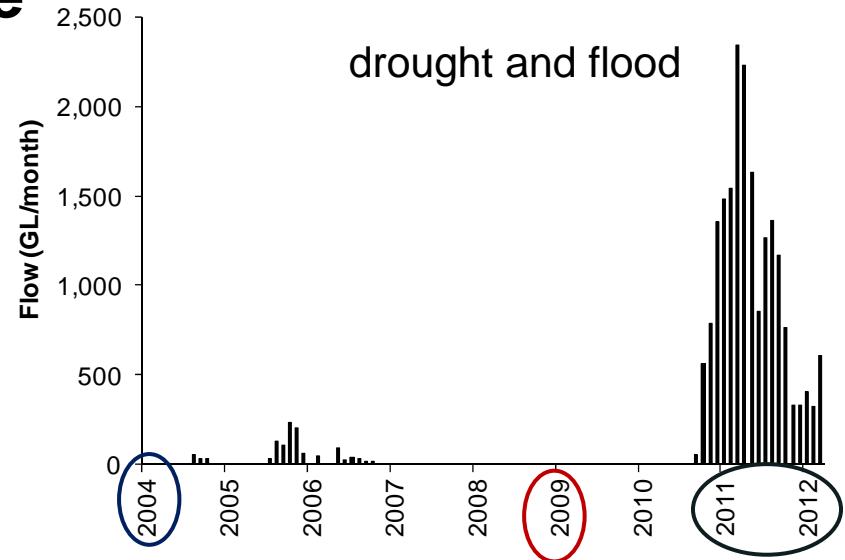
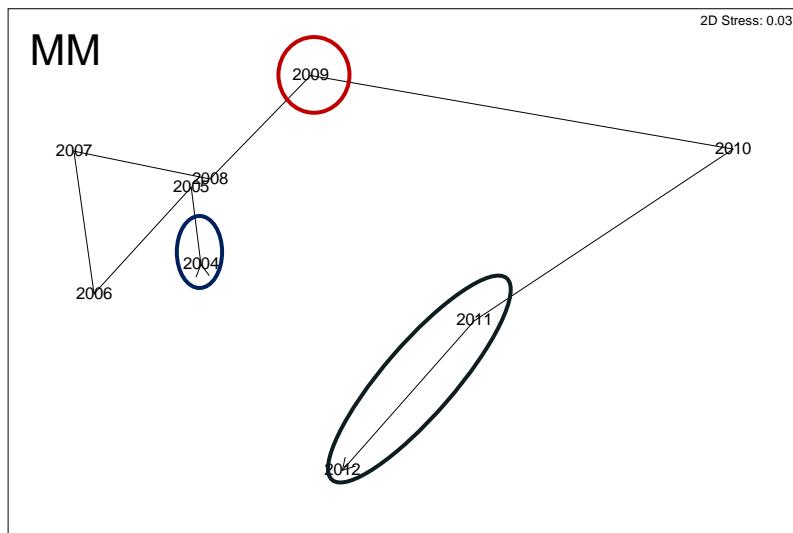


- Murray Mouth and Coorong lagoons quite different in diversity and abundances.
- Overall decrease in severe drought years 2008-2010.
- Recent increase in MM and NL

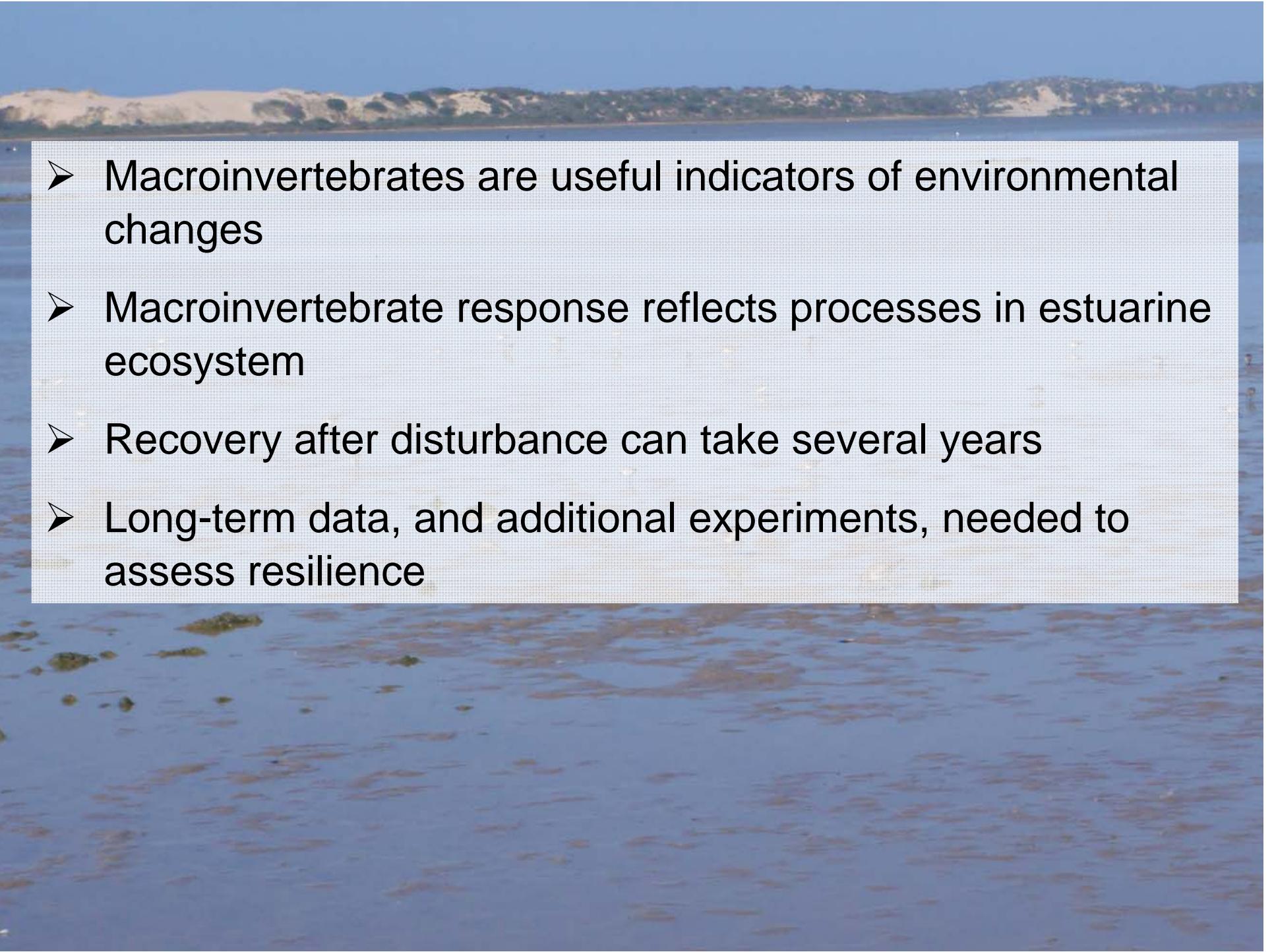
- Responses were distinct by regions
- Responses were species specific
- Changes in occurrence and distribution



Trajectory of macroinvertebrate community change over time



➤ Tracking towards recovery

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- Macroinvertebrates are useful indicators of environmental changes
 - Macroinvertebrate response reflects processes in estuarine ecosystem
 - Recovery after disturbance can take several years
 - Long-term data, and additional experiments, needed to assess resilience

BIG thanks to:

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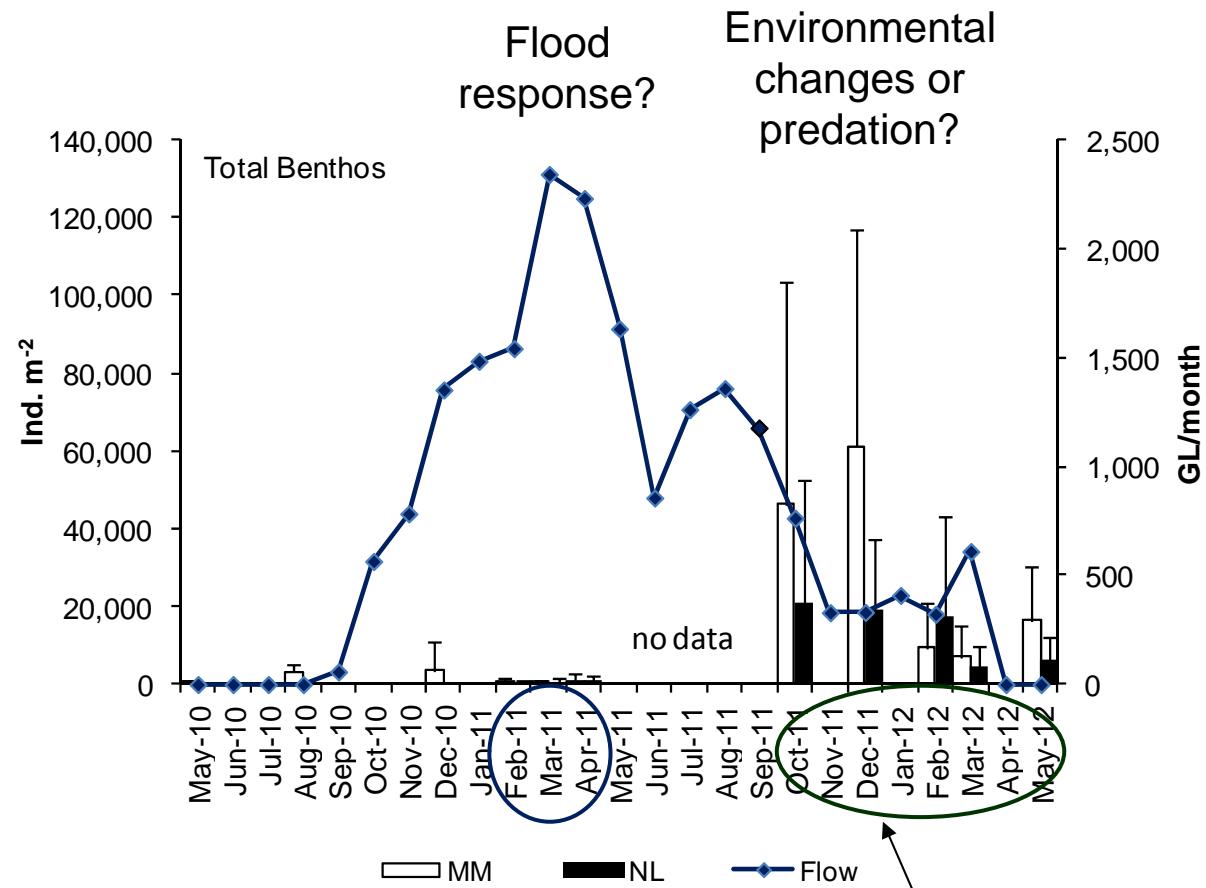




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Macroinvertebrate abundances

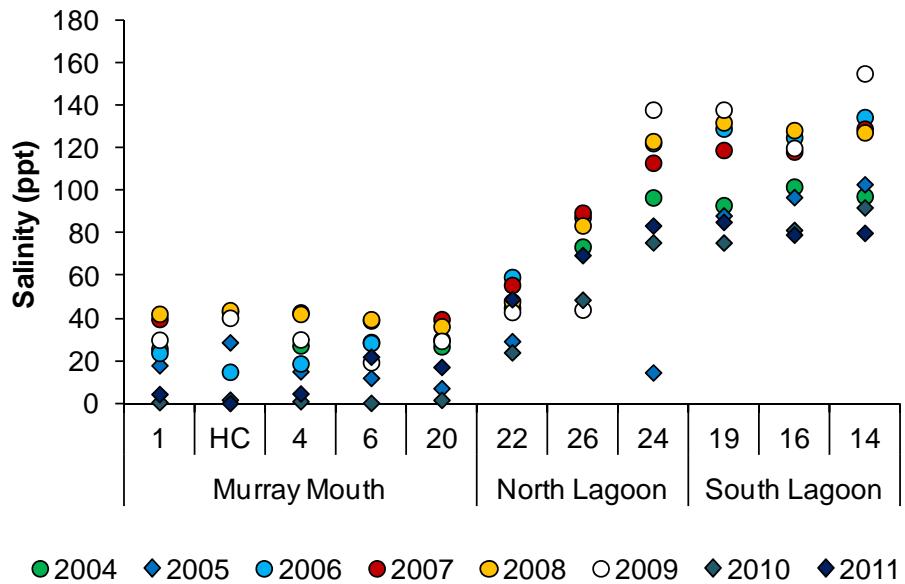


- signs of recovery of benthic abundances, yet renewed decline
- beware: no continuous data
- ❖ Return to reference dynamic?

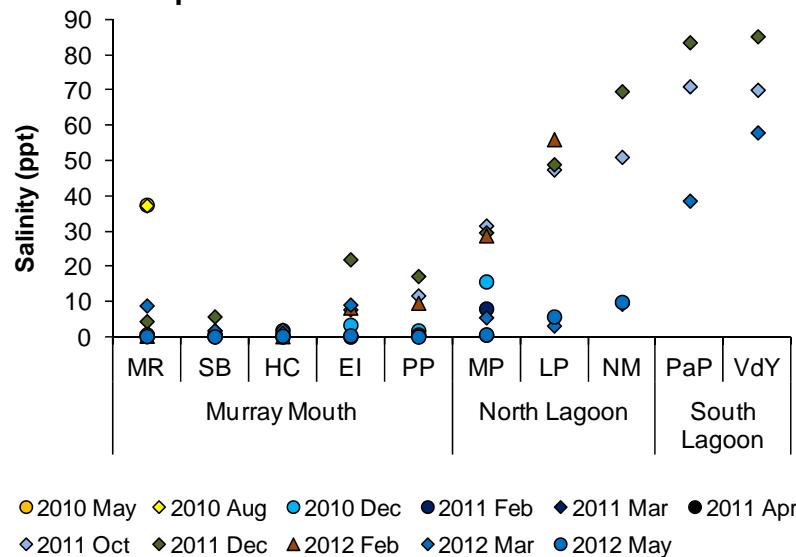
Dominance of amphipods

Salinity profiles

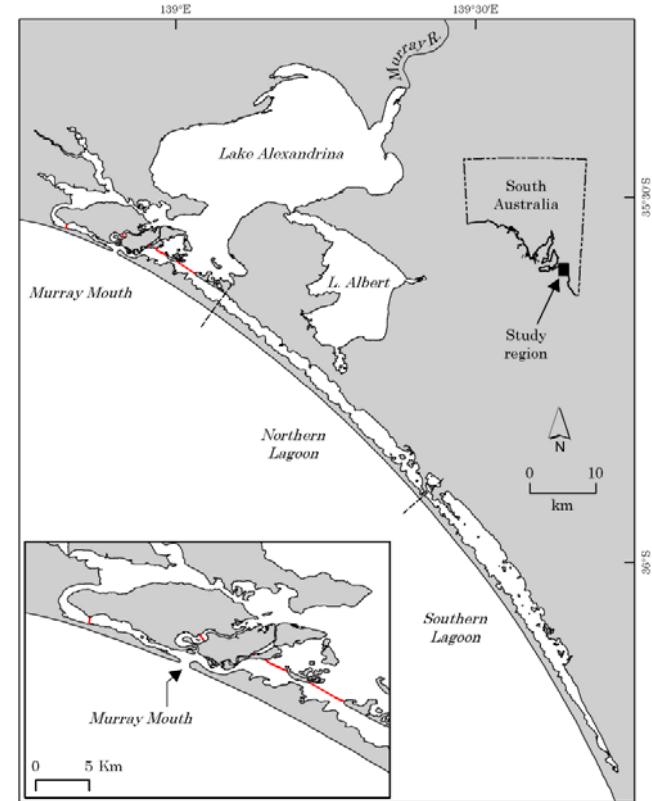
...over the years



...over the water release period



Note: not all sites sampled every time



➤ Concentration on
Murray Mouth (MM) &
North Lagoon (NL)