Project Rationale

- Human dimensions of climate change less developed...
  - Compared to the climate system

- Adaptation crucial to prevent further future impacts

- Difficult for cultures & lifestyles due to:
  - Irreversible losses of ‘things’ we value
  - Impacts will not be felt uniformly (spatially & socially)
  - Uncertainty in exact impacts

- How do we (the public) perceive these risks in Australia?
  - We’re mostly a coastal population
  - Increasing coastal development!
Case Studies

Rockingham, W.A.

Yorke Peninsula, S.A.

Source: Google Images

Life Impact The University of Adelaide
Risk Perceptions

- Help us understand behavioural intentions & expectations
  - E.g.: How safe is safe enough?

- Risk perceptions inform public policy
  - We need to manage resources sustainably
  - Management needs to be socially accepted

- How do we judge the risks imposed on all those coastal properties & livelihoods?
Heuristics & Biases

- 3 general purpose heuristics:
  - 1. Availability; 2. Representativeness; 3. Anchoring and Adjustment
  - Represent hidden rationality in judgement under uncertainty

- E.g.: Availability:
  - We often use the memorable past to help us make decisions about future
  - Can lead to inaccurate assessments (or complete neglecting) of probability

- Different hazards reveal different biases (so, what about climate change?)
Are You **Concerned** About Climate Change?

**Yes or No**

**Rockingham**

- Yes: 80%
- No: 20%

* n=161

**Yorke Peninsula**

- Yes: 81%
- No: 19%

* n=189
Is Climate Change Taking Place Now? (in the region where you own that property) 

Yes, No or Unsure

Rockingham

- Yes: 51%
- No: 15%
- Unsure: 34%

* n=161

Yorke Peninsula

- Yes: 42%
- No: 12%
- Unsure: 46%

* n=187

Risk Perception & Adaptation to Climate Change: Comparative Case Studies
Perceived likelihood of climatic changes to occur over the next 25 years?

- Increased temperature
- Decreased rainfall
- Increased storm surges
- Increased sea-level

Likelihood:
- Extremely
- Very
- Moderately
- Slightly
- Not likely
Perceived Climate Change disruption to the following elements of life?

- Income
- Health
- Home
- Quality of Life
- Community

Disruption
- Very High
- High
- Moderate
- Minor
- Nil
Perceived storm surge impact on the following community elements?
## Community vulnerability to negative Climate Change impacts?

<table>
<thead>
<tr>
<th></th>
<th>Yorke Peninsula N=184</th>
<th>Rockingham N=162</th>
<th>TOTAL % N= 346</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not vulnerable</td>
<td>3.3</td>
<td>8.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Slightly</td>
<td>21.2</td>
<td>21.0</td>
<td>21.1</td>
</tr>
<tr>
<td>Moderately</td>
<td>46.7</td>
<td>39.5</td>
<td><strong>43.4</strong></td>
</tr>
<tr>
<td>Highly</td>
<td>18.5</td>
<td>24.7</td>
<td><strong>21.4</strong></td>
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<tr>
<td>I don’t know</td>
<td>10.3</td>
<td>6.8</td>
<td>8.7</td>
</tr>
</tbody>
</table>
### Community vulnerability to Sea-level Rise?

<table>
<thead>
<tr>
<th></th>
<th>Yorke Peninsula N=187</th>
<th>Rockingham N=158</th>
<th>TOTAL % N= 345</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not vulnerable</td>
<td>6.4</td>
<td>10.1</td>
<td>8.1</td>
</tr>
<tr>
<td>Slightly</td>
<td>29.9</td>
<td>20.3</td>
<td>25.5</td>
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<tr>
<td>Moderately</td>
<td>38.0</td>
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<td><strong>39.1</strong></td>
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<tr>
<td>Highly</td>
<td>18.7</td>
<td>22.8</td>
<td><strong>20.6</strong></td>
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<tr>
<td>I don’t know</td>
<td>6.9</td>
<td>6.3</td>
<td>6.7</td>
</tr>
</tbody>
</table>
Perceived personal capability to adapt to Climate Change vs. Sea-level Rise?
Discussion

- Risk is a tricky concept (Different risks & contexts)

- People are aware & concerned about climate change
  - They considered the community as quite vulnerable
  - They considered significant disruption to specific components
  - They considered the likelihood of change as high

- But people considered personal risk as less than that faced by the ‘community’
  - High levels of optimism & self-efficacy (this is good, but…)

![Image of a house in a stormy sea](image-url)
Discussion, cont…

- What if people think they are exempt from future risk?
  - What will this mean for adaptation?
  - Are people going to be willing to change lifestyle habits (Adapt)?

- People will make judgements based on multiple factors
  - Communicating risks will require a careful approach (Emotion? Trust?)

- Can we turn that confidence and perceived capability into appropriate adaptation...
Thankyou for your attention

Questions?