CoastAdapt

Snapshot

The social values at risk from sea-level rise in Kingston Beach

Summary

A study was conducted at Kingston Beach, Tasmania, comparing 'lived values' and 'landscape values mapping' approaches to understand the social risks of sea-level rise. The study pinpointed a number of important social values and was able to identify groupings of community members that might be impacted differently by adaptation measures or failure to adapt. The study considered whether either or both approaches were likely to meet the local adaptation planning needs of the council.

Keywords

Coastal flooding, local communities, place values, public participation, GIS, vulnerability

Planning for sea-level rise often focuses on the physical impacts (e.g. erosion, flooding, loss of housing). But there are also social impacts (on lifestyle and wellbeing). Not considering the social impacts can overlook non-material consequences that are important to the everyday lives of residents. 'Values-based' approaches have been developed in an effort to shift the balance of adaptation planning from physical impacts, by putting the lifestyle and wellbeing attributes that matter most to communities at the centre of adaptation analyses (O'Brien and Wolf, 2010).

The aim of this study was to evaluate the potential usefulness of two values-based approaches, to understand whether either or both could inform more socially oriented adaptation responses. The two approaches tested were:

- the **lived values** approach - which looks at what aspects of people's everyday lives are important (e.g. Graham et al., 2014)
- the **landscape values** approach which looks at where certain values are associated with coastal landscapes (e.g. Novaczek et al., 2011).

The study was undertaken in the coastal suburb of Kingston Beach, Tasmania, to identify the lived and landscape values that exist within the community and how these could be affected by sea-level rise. The landscapes considered in the study are shown in Figure 1.

The study was undertaken in six steps:

1. **Place-based observations:** Eight place-based observations were undertaken to reveal residents' social values.
2. **Semi-structured interviews:** Ten semi-structured interviews were completed to capture the diversity of residents' values.
3. **Mail-out survey:** Place-based observations and semi-structured interviews helped refine the questions in the mail-out survey. Surveys were distributed and a total of 322 responses received.
4. **Analysis of lived values:** Lived-value responses were collated and ranked based on the survey results in terms of importance to the community.
5. **Analysis of landscape values:** The relationship between residents' values and landscapes was assessed.
6. **Analysis of groups within the community:** The community was grouped based upon life characteristics such as gender, employment status and community group membership. A statistical test was then used to evaluate whether there were significant differences between the groups with regard to their identified lived and landscape values.

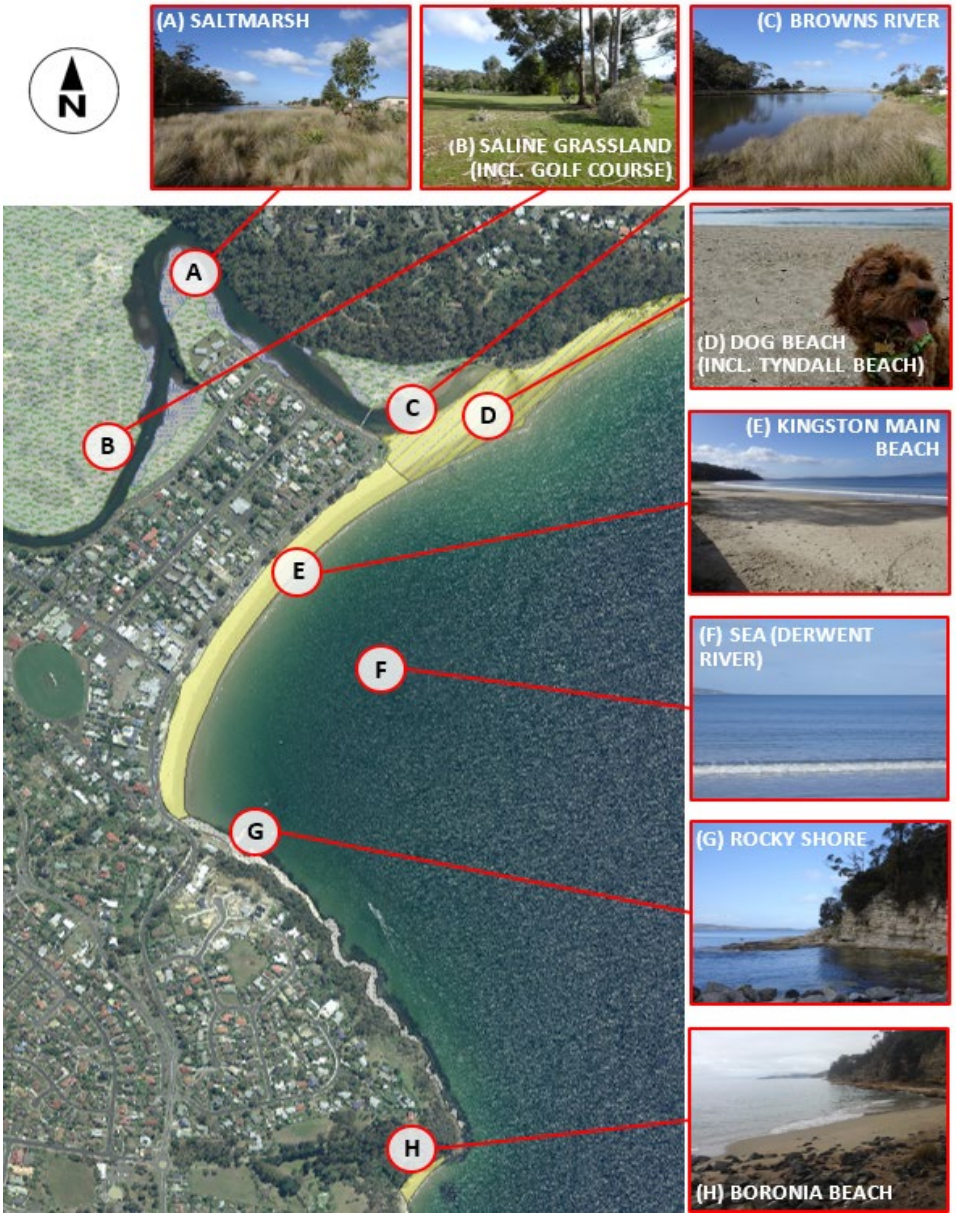

Figure 1: Photographs of the low-lying coastal landscapes at Kingston Beach. © Tim Ramm.

Key findings and lessons learned

1. The top lived values that were important to the everyday lives of residents in Kingston Beach were consistent with those identified in other south-eastern Australian studies (see Figure 2).
2. Respondents assigned specific values to different low-lying coastal landscapes. For example, the beach was most strongly associated with values relating to recreational opportunities, no access restrictions and providing a sense of identity.
3. Respondents were classified into six groups based upon life stage, lifestyle and unique social values. This helped to understand *how* people in the community might be affected differently by sea-level rise. For example, the study found that while the local beach was highly important for recreational value to families and active younger residents, for others (e.g. community-minded volunteers or retirees) man-made features such as community halls and sports facilities were likely to be of greater importance as they facilitate important social interactions.
4. The non-material social impacts of sea-level rise are often overlooked in physical or economic risk assessments. The study suggests that lived values and landscape values methods provide complementary information for adaptation planning to better understand *which* aspects of people's everyday lives are important, *where* certain values are associated with coastal landscapes, and *who* (i.e. which groups of people) is likely to be most disadvantaged by sea-level rise.

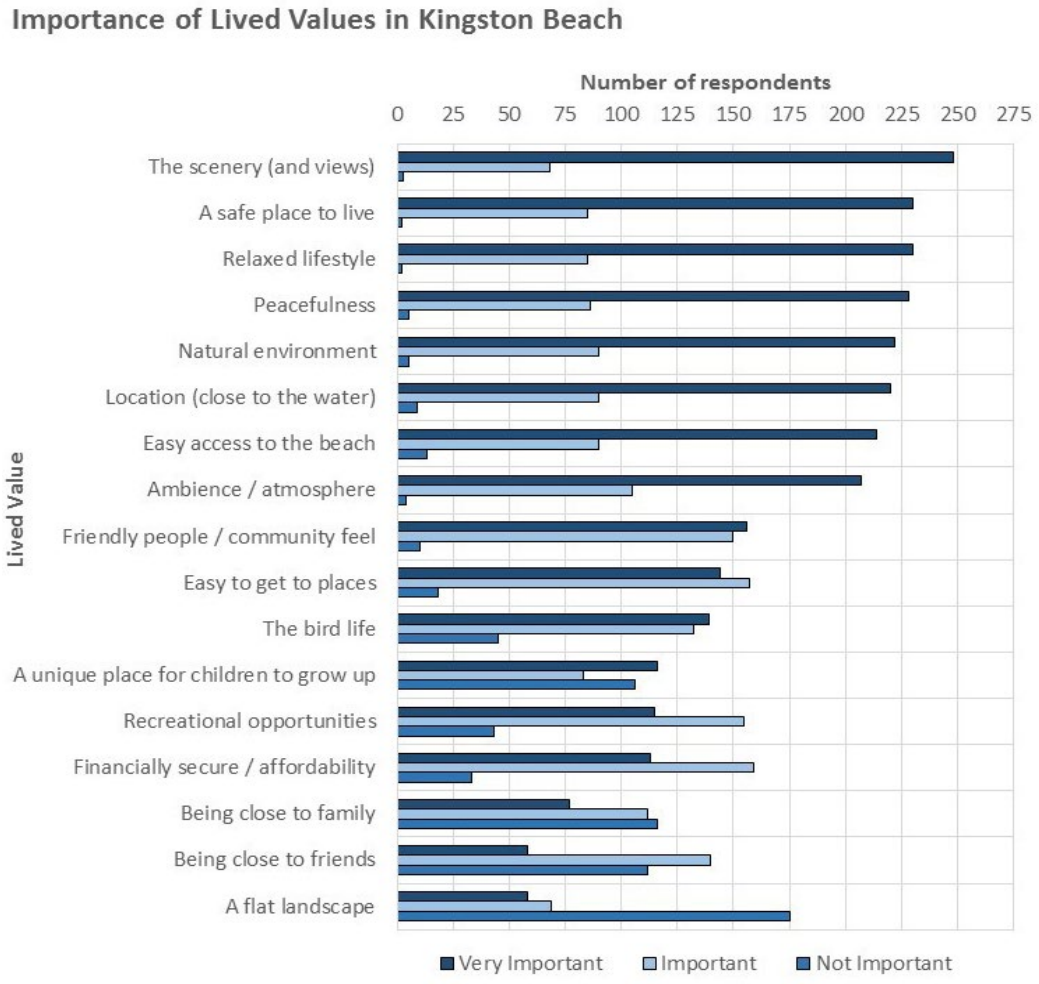

Figure 2: Importance of lived values. Bars refer to the number of respondents who ranked each lived value as 'very important', 'important' or 'not important'. Where bars sum to less than 322, this was because the remaining individuals stated that the lived value was not applicable or that they did not believe it existed in their community. © Tim Ramm.

Conclusion

The study found that values-based approaches are useful to practitioners involved in public decision-making to:

- avoid underestimating climate change impacts
- identify groups of people who might be most disadvantaged by adaptation or failure to adapt (in order to further engage with these groups)
- guide adaptation policies towards preservation of important lifestyle attributes in the community.

References

Graham, S., J. Barnett, R. Fincher, A. Hurlimann and C. Mortreux, 2014: Local values for fairer adaptation to sea-level rise: A typology of residents and their lived values in Lakes Entrance, Australia. Global Environmental Change. **29**, 41-52. Accessed 15 June 2018. [Available online at: http://dx.doi.org/10.1016/j.gloenvcha.2014.07.013].

Novaczek, I., J. MacFadyen, D. Bardati and K. MacEachern, 2011: *Social and Cultural Values Mapping as a Decision-Support Tool for Climate Change Adaptation.* The Institute of Island Studies, University of Prince Edward Island, Charlottetown, Canada.

O'Brien, K.L., J. Wolf, 2010: A values-based approach to vulnerability and adaptation to climate change. WIREs Climate Change, **1**, 232-242. Accessed 15 June 2018. [Available online at: http://dx.doi.org/10.1002/wcc.30].

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Further information

Ramm, T., S. Graham, C. White and C. Watson, 2018: Advancing values-based approaches to climate change adaptation: a case study from Australia. Environmental Science and Policy. **76**, 113-123. Accessed 15 June 2018. [Available online at: https://doi.org/10.1016/j.envsci.2017.06.014].

Online supplementary material used to undertake this study can be found here. Accessed 15 June 2018. [Available online at: https://doi.org/10.1016/j.envsci.2017.06.014].

WeAdapt, 2017: Steering local government in Australia towards better informed long-term coastal adaptation decisions. Accessed 15 June 2018. [Available online at: https://www.weadapt.org/knowledge-base/adaptation-decision-making/long-term-coastal-adaptation-in-australia].

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