



# Barwon Coast Coastal Management and Beach Usage Research

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## A partnership between Federation University Australia and the Barwon Coast Committee of Management

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## EXECUTIVE SUMMARY

### Introduction

This is the Barwon Coast Coastal Management and Beach Usage research report for the Barwon Coast Committee of Management (BCCM), funded in 2017 as a research partnership with Centre for eResearch and Digital Innovation (CeRDI) at Federation University Australia.

The research project, and the approach taken within it, was driven by a recognition of the shifts occurring within the coastal community of the Barwon Coast region and, specifically, in the area managed by the BCCM that includes the coastal reserves of Ocean Grove and Barwon Heads. Research planning was committed to developing informed insights into key ongoing and emergent issues impacting on coastal management, and on the maintenance of valued attributes needed for a sense of community and a sense of place. The research was underpinned by key principles, supported by national and international literature, that:

1. *There needs to be community involvement in issues exploration and problem resolution for sustainable change and development.*
2. *Inclusive community-based strategy development allows for the identification and classification of a range of characteristics for sustainable coastal communities. These characteristics, in turn, provide a framework for working with communities in issues exploration and problem resolution.*

The research, guided by these principles, used a social research approach to explore a range of community perspectives on issues ranging from community identity to domestic animals on beaches, infrastructure demands, ecosystem protection and sustained recreational beach usage.

### Research study design and questions

A mixed methods approach, using a range of data collection tools, was chosen to shape the study design, with the following research questions driving data collection and analysis:

1. What is the knowledge base and attitude of beach users, residents and other relevant stakeholders around the key issues (such as recreational usage, the control of domestic animals and environmental protection) in the coastal community and how does this correlate to actions and behaviours for equitable community use of beaches and coastal areas?

2. What are the similarities and differences in how complex coastal issues are perceived by community members and management agencies?
3. How effective are current strategies for coastal management in meeting the needs of diverse members of the coastal population?
4. To what extent has the community been mobilised to engage, promote, adopt and advocate for the effective management of complex coastal community and environmental issues within the context of local identity? What are the key strategies to extend and strengthen this mobilisation into the future?

### Data collection methods

A range of data collection methods were used to collect data from research participants. These methods comprised:

- *Survey.* A 15-minute survey, available in online and hard copy versions, was used to examine community perspectives on a range of coastal management issues. A range of recruitment techniques were used to maximise respondent numbers including direct email, the manning of data collection points, social and traditional media and the use of mailing lists. Surveys were completed by a total of 1636 respondents between December 2017 and April 2018. Additional survey responses (n=79) were collected as part of the ShareOurShores campaign launch in November 2017 where full responses were consolidated with the online survey taking the total number of survey respondents to 1715. Data from this survey were analysed using Excel and cross referenced with interview and focus group data, as appropriate.
- *Focus group interviews and written submissions.* Focus group interviews were used to gain targeted individual and subjective insights into user perceptions of issues such as environmental values, community and identity and issues of concern. Individual/focus group interviews were conducted with a total of 102 participants during late April 2018. An additional 13 written submissions for those who were not able to be part of the focus group process. Participants for this data collection methods included BCCM staff, organisational staff and community members. Data were analysed using thematic analysis and coding techniques and cross referenced with survey data, as appropriate.
- *Document and demographic analysis.* Program documentation was used to provide insights on organisational factors, coastal management approaches and educational and planning strategies in the region. Available population and population profile data and data relating to domestic dogs in the area was examined for data mapping. This data were used to support and validate data collected through the survey and the focus group interviews. Data were analysed using content and statistical analysis techniques.
- *Site visits.* A series of site visits were undertaken by FedUni researchers on January 24<sup>th</sup>, 25<sup>th</sup> and 26<sup>th</sup>, February 27<sup>th</sup> and April 13<sup>th</sup>, 14<sup>th</sup> and 15<sup>h</sup> in 2018 to observe movement and population levels on the beach at diverse timeframes, to view signage and to gain an understanding of similarities, differences and characteristics of the different beaches included within the parameters of the research study. Data were analysed using researcher collaboration on points of observation.

- *Email and telephone feedback.* Feedback provided by community members around coastal management issues and including personal narratives was collected across the life of the research study. Twenty-five contacts were analysed using content analysis techniques.

Ethical clearance for research involving humans was provided by the Human Research Ethics Committee with guidelines for ethical research practice shaping all stages of the research process (Ethics Approval Number A17-162).

## Research study findings

### Section 3 - Population and tourism

The key findings for section 3 relating to population and tourism were that:

- The Barwon Coast region is experiencing similar phenomenon relating to coastal suburbanisation and amenities migration as other coastal communities across the state and nationally. Overall, however, the growth rates being experienced in the region are lower than non-coastal locations such as Ballarat and Geelong.
- The projected growth for the region is predicted to be lower than for coastal communities such as Torquay, Portarlington and Indented Heads however both Ocean Grove and Barwon Heads will experience population growth from 2018 to 2036 of 17.4% and 4.55% respectively. The large increase expected for Armstrong Creek (281.49%) and Mount Duneed (504.77%) is likely to impact on the region due to close locational proximity and high capacity for development.
- There will continue to be an outward migration of young adults aged 18 to 24 from both Barwon Heads and Ocean Grove although it is projected that there will be an increase in young families (25-39 years) seeking lifestyle changes. The age cohorts between 0 and 14 and 40 and 69 remain the key age groups within the region.
- Availability of housing stock is higher in Ocean Grove than Barwon Heads, subsequently having a small impact on population growth capacity in the short to medium term.
- Tourism remains a significant factor in seasonal population growth, with projections indicating there will be an increase, by 2030, from the current level of 5 million annually to 7 million visitors a year to the region. Population growth due to tourism has been tracked at reaching peaks of more than double the permanent resident population. Tourism was identified as having both positive and negative influences on the social, cultural, economic and environmental features of the townships.
- Data on beach usage trends found a close alignment between the nature of beach usage for both temporary residents/visitors to the region and local residents. Assessment of reasons for beach usage found that beaches were primarily used for dog walking, recreation with family, swimming and exercise. The main beach of Ocean Grove (10W-20W) was the most used beach by both permanent residents and temporary residents/visitors, followed by Collendina (7W-10W) and the Barwon River estuary. East of Collendina beach (east of 7W) was ranked lowest in terms of use but was used more frequently by permanent residents than temporary residents/visitors.

- A major finding of the research study was the importance placed by research participants on decision-makers understanding and valuing the attributes and amenities that define the Barwon Coast region. This aligns closely with existing evidence bases that have found that effective coastal management is dependent on linking with community and building an understanding of the factors that are valued attributes of that location.

The key characteristics that were consistently identified as central to place, space and community identity for the Barwon Coast region were:

- A sense of place and community
- Enjoyment and recreation in the natural environment
- Access to metropolitan centres and proximity to health and education services
- A positive family environment and holiday destination
- Small town (village) feel with relatively low congestion and urbanisation
- Opportunities for recreation and healthy lifestyles e.g. surfing, swimming, dog walking, bird watching
- A sense of freedom

Feedback specific to working to address issues of concern and accommodate changes brought about by tourism, population growth and migration in and out of the region consistently reinforced the importance of ensuring that these defining characteristics form part of the discussions when developing coastal management response strategies.

#### Section 4 – Coastal living challenges and management issues

The key findings for section 4 relating to coastal living and management were that:

- On issues of beach enjoyment being compromised as a result of coastal management challenges approximately 45% (n=789) of respondents responded affirmatively, while 54% (n=899) indicated that they had not been negatively impacted in any way on their enjoyment of their coastal environment. It was more common for permanent residents to report that their capacity to enjoy the beach had been compromised than it was for temporary residents/visitors, 45.3% and 34.7%, respectively.
- ‘Dogs off-leash’ was the predominant issue for those reporting a compromised capacity to enjoy the beach areas. Other significant challenges included human impacts on coastal environments, such as littering, sand dune damage, and threats to wildlife, and beach overcrowding. Differences in responses from temporary residents/visitors and permanent residents were not highly divergent on most issues.
- Population shifts, particularly those caused by tourism were assessed as fundamental causal factors that influence and exacerbate coastal management issues. While the ebb and flow of population numbers is a normative feature of coastal living, these shifts exert a strong influence on the lived experience of individuals.

- The identification of coastal living and management issues by research participants was largely correlated with participant desire to maintain the valued attributes that underpin their sense of place and community. While the focus for research participants was often on identifying and seeking a resolution to a specific and tangible coastal management challenge (such as dogs off-leash) it was closely interrelated to concerns that highly valued concepts of a sense of place and sense of community were ultimately at risk.
- The issue of dog management and dog access to beach areas emerged as the leading management challenge in the BCCM area. It is a finding which may have been influenced by the high level of survey responses, a majority of 72.9% from dog owners. Findings revealed a high level of dog ownership among respondents, with 72.6% (n=1245) dog owners, 20.9% (n=358) non-dog owners and 6.5% (n=112) declining to answer. This high level of representation of dog owners in the survey respondent pool is flagged as statistically anomalous when compared to the percentage of people who are dog owners in the broader population.
- Research participants possess complex and competing perceptions on dog management. Predominant issues in relation to dog management are impacts on community safety and well-being, environmental protection and conservation, individual rights and freedom and conflicts among beach users. Dog access to beaches in the region is highly valued by community members and temporary residents/visitors to the region, indicating that dog access is a crucial feature that contributes to a range of individual- and community-level effects.
- Alternatively, research findings show that, for many community members in favour of dog friendly beach areas, they perceive the dog management issue to be overstated. The assessment was that reported dog incidents are infrequent, caused by a minority of irresponsible beach users, or that issues in the community are more complex, numerous and urgent than solely dogs off-leashes. These messages were bound together with comments reflecting a fear of losing individual rights and freedom, i.e. dog walking access. Despite general opposition to increasing restrictions on dog access to shared beach areas, many dog owners recognised that there was a problem that needed to be addressed and were open to fair and consistent management strategies.
- With respect to dog management in the region, analysis of research data shows that management challenges are impacted on by two separate, but linked issues:
  1. *Different perspectives on what constitutes needed regulation.* There was distinct divergence between dog owners and non-dog owners in relation to attitudes towards coastal management staff presence, laws controlling dogs on beaches, compliance management, and enforcement of dogs on beaches. However, some commonality between dog owners and non-dog owners is revealed in attitudes to less complicated regulations about dog access, and mutual desire for stronger laws relating to beach use generally.
  2. *Shortfalls in monitoring and enforcement of existing regulations.* A consistent message emerging in the focus group discussions was a desire by both dog owners and non-dog owners for an increase in the level of management staff or park ranger presence patrolling the beaches and, to ensure individual compliance.

- A summary of recommendations most commonly reported by community member in relation to dogs on beaches were the following:
  - Separate areas for different beach users;
  - Ability to walk dog on beaches before ~8am and after ~6pm during summer months;
  - A complete ban on dogs between 9am and 5pm;
  - Additional dog off-leash areas, including parks inland;
  - No changes to current regulations;
  - No dogs on beaches during summer months;
  - Education campaigns.

However, gaining consensus on the implementation of a number of these strategies will remain a significant challenge.

- Overcrowding was raised as a significant issue by 35% of survey respondents, impacting on user enjoyment of coastal areas. This management challenge is placing pressure on public facilities, local infrastructure, traffic movement and car parking. Additionally, overcrowding can cause an alteration to normal individual behaviour, increase probability of negative beach user interactions and limit the enjoyment of, and access to, dog friendly areas. However, many research participants were adjusted to this aspect of coastal living and visitation and viewed it as an expected, but seasonal, phenomenon in the region. An area which participants identified as a future potential action was the provision of additional recreational and dog walking space inland. Future investment in collecting more precise and up to date data on beach and car parking capacity is needed if forward planning capacity on these issues is to be maximised.
- Coastal area cleanliness and waste management is an issue of common community and management concern. Many research participants expressed frustration with the amount of rubbish in the environment, and, at times, dissatisfaction with the number of bins provided in the coastal areas. Rubbish and waste management is a key priority for the BCCM and their work in this area was mostly highly regarded in the community. Coastal area cleanliness is helped significantly by the active involvement of community members collecting rubbish along the beach on their regular walks. Such community involvement is indicative of a strong sense of community and a willingness to protect valued area.
- Research participants offered additional management strategies to deal with the issues of rubbish in coastal environments. Suggestions made to supplement educative processes were:
  - Providing more bins
  - Increasing frequency of rubbish collection during busy times
  - Developing a rubbish depot for tourists to reduce risks of illegal dumping.

Education and information sharing on rubbish and waste management for coastal protection remains the primary management strategy for addressing this issue into the longer term.

- Car parking was rated as the most significant infrastructure issue in the region across all data collection phases. Other frequently mentioned infrastructure issues related to

improving walking and cycling trials in the region. Such infrastructure development is dependent on resourcing and strategic social and environmental targets identified through formal planning processes. Community members showed a general aversion to large scale infrastructure development, fearing a potential loss of town character that may come with such changes. Community members and management agencies showed a shared desire to provide long-term and sustainable solutions to infrastructure problems in the region.

- Environmental and wildlife impacts are issues of common concern among both community members and management agencies. Significant environmental issues in the region are: sand dune degradation and threats to Hooded Plover populations. Balancing the recreational pursuits of residents and visitors with environment conservation is a complex management challenge. Temporary exclusion zones are considered an effective management strategy (if properly enforced), and these generally have the support of community members.
- Coastal living and management challenges have, in some cases, created conflicts and tension between different beach users due to divergent uses of the beach area and the way in which issues are being managed. The emergence of divisions between different beach users is something that needs to be proactively countered in the management approach adopted to address points of contention within this community.
- Signage in the region was considered in the survey research as being largely effective at engaging and informing residents about coastal management issues. Approximately, 73% of respondents considered signage easy to understand and 56.6% of respondents agreed or strongly agreed that there is enough signage around the beaches. The focus group discussion were in slight contrast to the survey findings, revealing community members to have the following issues associated with signage in the region:
  - Confusing and lacking clarity
  - Inconsistent messaging
  - A lack of signage, particularly at beach access points
  - Old and dilapidated signage that made it difficult to read messaging
  - 'Effective control' not clearly defined

Participants also identified that there was capacity for signage to use language that was inclusive rather than directive and that work needed to be undertaken to review how messages were presented

- A variety of other issues were raised across the range of data collection methods however they were not raised by large numbers of participants and could not be considered dominant, representative or generalisable themes. These include:
  - Cycling and cycling behaviour
  - Jet skis
  - Horses on beaches
  - Alcohol on the beach
  - Fox (1080) bait.



- Coastal management and governance challenges included jurisdictional issues, information gaps and the need for better communication of agency roles and responsibilities to the public. There was evident frustration and confusion among both community members and management agencies regarding the roles and responsibilities of agencies operating in the region.

## Research conclusion and recommendations

This social research project sought to build insights into community and management perspectives relating to key coastal issues in the area managed by BCCM. The range of issues explored provide valuable insights into place and community and highlight the importance of implementing a response strategy that addresses the delicate management balance of ensuring community safety and reducing risk, protecting environmental values, maintaining recreation and lifestyle opportunities and encouraging social cohesion and community respect.

The following recommendations provide some direction for action into the future, while the conceptual model provided below is presented as a suggested planning approach for working to resolve challenges and points of conflict in coastal management for this community

### Recommendation 1

That work be undertaken within BCCM, involving both management and program staff to discuss concepts of community attributes and the role they play in the development of sense of place and community. This will provide the opportunity to build greater levels of understanding of the close links that exist between key coastal management challenges, the way in which they are resolved and perceived threats to characteristic attributes of community.

### Recommendation 2

That consideration be given to the adoption of the conceptual model provided within this research report to encourage public participation and collaboration between stakeholders in planning decisions.

### Recommendation 3

That the current commitment within BCCM to communication and marketing within and across community be continued and expanded. This is an important strategy for building the knowledge and understanding of the work of BCCM and strengthening the potential for public participation in planning for effective and inclusive coastal management. Areas that need to be a focus within that communication and marketing approach include:

- Information sharing relating to the jurisdiction, authority and roles and responsibilities of BCCM, and of agencies working in the region in order to increase understanding and knowledge relating to compliance, opportunities for shared input and long term planning in the region.
- Marketing of the opportunities for education and community engagement offered by BCCM.
- The development of a structured communication plan with community to maximise community involvement in, and understanding of, a range of management and strategic priorities for the region into the future.

### Recommendation 4

That a mapping process be undertaken, using the data captured in this social research study, to identify and document priority areas for action. These should be classified into areas identified by community as viable solutions to identified problems, areas with potential for development and/or adoption into the future, and areas that are unlikely to be successful within the community without significant loss of community support and risk to the characteristic attributes of community. This mapping process will provide a resource for forward planning on key challenges in the region.

#### Recommendation 5

That current signage stock be reviewed to determine the extent to which the signage is meeting the community goals of:

- Clarity and consistency
- Use of positive messaging
- Use of inclusive language
- Being in good repair

#### Recommendation 6

That a strategy be developed for the capture and review of empirical data collection on issues such as car park demands at key points in time and measures of beach capacity across time points and locations.

#### Recommendation 7

That the current commitment of BCCM to the use of inclusive educative strategies on a range of issues be maintained and/or expanded to ensure that a range of issues of relevance to the community be addressed. These include wildlife protection, rubbish management and dog regulations. It is acknowledged that significant work has been undertaken in this area and feedback on this has been positive. More work is needed on ensuring that the reach of this educative work is extended across the community. Consideration should also be given to strategies to better engage new residents and temporary residents/visitors to the region.

#### Recommendation 8

That a strategy be developed to explore avenues to increase enforcement of regulations and strengthen levels of compliance. In line with community feedback this approach should not explore, as a first option, an increase in regulation. Rather there needs to be a strategy that increases capacity for a series of enforcement cycles, using existing compliance tools such as fines, to shift current culture relating to non-compliance. This approach will need to take into consideration strategies for achieving a balance between compliance and the maintenance of flexibility and community connection and engagement, as outlined within the body of this report.

#### Recommendation 9

That the longitudinal research plan with FedUni ensure that consideration be given to the following study areas:

- Building an understanding which factors reinforce or might alter existing beach user behaviour to ensure compliance with coastal management regulations
- Investigating the impacts of urbanisation on social and environmental values in the context of place, space and community



- Investigating the community-level factors that lead to positive development in coastal communities in the face of change.
- Investigating the impact of domestic animals on environment and strategies to engage community in working to meet coastal management challenges.