



5th Western Australian State

COASTAL CONFERENCE 2009

*Whose Coast Is It?
adapting for the future*

14A:
Coastal
Recreation:
3.25–3.55pm
Friday 9th
October 2009
Pleiades Room

Staking a Claim With Beach Towels: Recreational Usage of the Western Australian Coast

PRESENTER:

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Introduction

More than 80% of Australians live near the coast and all capital cities, except Canberra, are located along the seaboard of the continent. As part of this coastal lifestyle, recreational use of the coast is very important to a large proportion of the population. In Western Australia, nearly the whole coastline is in public ownership and is essentially a common property resource with various government agencies and local authorities as designated custodians responsible for different aspects of its management. Installation of appropriate coastal infrastructure, effective management of natural coastal assets or efficient conservation of marine and coastal biodiversity all rely on an understanding of where, when and how many people use the coast.

Commercial marine activities are reasonably well documented in Western Australian waters through mandatory reporting such as vessel monitoring systems and logbooks for commercial fisheries. However, coastal recreation and tourism activities are poorly quantified in terms of numbers of people involved or their spatial and temporal distribution. To date, the chief means of estimating coastal usage have been ticket sales, vehicle counters, and questionnaire surveys with users of the coast and providers of recreational/tourist activities. Collection of primary data through shore-based, boat-based or aerial surveys has been infrequent although, in recent years, there have been some efforts to improve the situation. In this paper, four case studies of human use at Perth Metro beaches, Rottnest Island, Blackwood Estuary and Ningaloo Reef will be presented to highlight the importance of the coast for recreation by the general public of Western Australia.

Case studies

In the Perth Metro area, aerial patrols to spot sharks were conducted from November 2003 to January 2004 and this enabled concurrent counts to be made of the numbers of people engaged in a range of activities at 43 beaches along 140 km of coastline. Clear temporal patterns were revealed with some activities specific to the physical conditions at particular beaches (Blackweir & Beckley 2005). These data have been used to support the Perth Coastal Planning Strategy.

At Rottnest Island, spatial data were collected over 12 months during a roving creel survey of shore anglers and indicated concentration of fishing effort in the vicinity of the settlement area (Smallwood, Beckley & Sumner 2006). In addition, temporal and spatial data (numbers per viewshed) were also obtained for visitors engaged in snorkelling, diving, surfing, crayfishing and boat-based recreational fishing (Smallwood & Beckley 2009). Together with marine habitat information, these data were used to support decision making by Rottnest Island Authority about location of new sanctuary zones.

Concurrent with a year-long creel survey of recreational fishing in the Blackwood Estuary, spatial and temporal data on all other recreational activities undertaken in the system (e.g., water-skiing, sailing and kayaking) were also collected (Prior & Beckley 2007, Beckley & Prior in prep.). Using these data, appropriate location of infrastructure or proposed sanctuary zones could be examined.

In Ningaloo Marine Park, the Wealth from Oceans Collaborative Cluster has involved an intensive study throughout 2007 of the spatial and temporal distribution of human use along the 300 km fringing reef. Synoptic aerial surveys of the entire study area have revealed clear seasonality in the distribution of people and camping along the coast as well as seasonal expansion of the area used for boat-based activities such as wild-life interactions and fishing. In addition, 4WD-based coastal surveys using a laser range-finder and a series of geo-referenced coastal vantage points enabled detailed information to be obtained about the wide range of activities conducted by visitors to the Ningaloo Marine Park. Currently, hypotheses about use patterns relative to marine and coastal habitats, geomorphology, access points, infrastructure and the marine park zoning scheme are being investigated.

Conclusions

The extensive, and often remote, nature of the Western Australian coast make surveys of human use costly. A nested sampling design incorporating aerial surveys has proved to be particularly effective over large areas and care should be taken with stratification and/or randomisation of surveys. Matching spatial and temporal resolution of data with monitoring requirements and management needs by designated custodians is particularly important for maintenance and sustainable use of our valuable coastal assets.

References

- Blackweir, D.G. & Beckley, L.E. 2004. Beach usage patterns along the Perth metropolitan coastline during shark surveillance in summer 2003/04. Report for Western Australian Department for Planning & Infrastructure. 122pp.
- Prior, S.P. & Beckley, L.E. 2007. Characteristics of recreational anglers in the Blackwood Estuary, a popular tourist destination in south-western Australia. *Tourism in Marine Environments* 4(1):15–28.
- Smallwood, C.B. Beckley, L.E. & Sumner, N.R. 2006. Shore-based recreational angling in the Rottneest Island Reserve, Western Australia: Spatial and temporal distribution of catch and fishing effort. *Pacific Conservation Biology* 12(3):238–251.
- Smallwood, C.B. & Beckley, L.E. 2009. Benchmarking recreational boating pressure in the Rottneest Island Reserve, Western Australia. *Tourism in Marine Environments* 5(4):301–318.