

The Value Of Coastal Recreational Resources: A Case Study Approach To Examine The Value Of Recreational Surfing To Specific Locales

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Keywords: coastal management, social science, recreation, human impacts, surfing

INTRODUCTION

Surfing is a major recreational and economic activity involving intimate human interaction with diverse coastal environments. The value of surfing to the economy has grown significantly over the past three decades. This combined with the significant growth in participation and rising popularity of surfing in many countries, illustrates the importance of understanding the economic value of surfing to local communities and to society. At present there is little research on the value of recreational surfing even in traditional locations such as the east coast of Australia and California, where it is estimated that over three million people surf on a regular basis.

This paper presents findings from a detailed investigation using economic valuation techniques to collect data on the market value of surfing at Trestles Beach in California and the market and non-market value of surfing at South Stradbroke Island in Queensland. The findings demonstrate the significant economic, social, environmental and cultural importance of surfing amenity to specific locales, supporting the need to consider any negative impacts on surf breaks that may occur as a result of coastal development.

BACKGROUND

People throughout world have aggregated on the coastal margins of continents for a variety of reasons, including access to food, transport, generally milder climates and in more recent years for lifestyle reasons. In California and on the east coast of Australia, the modification of our coastal resources is a direct result of coastal population growth in the coastal zone. Currently, 86% of Australia's population (Australian Bureau of Statistics 1998) lives within 30 minute drive of the beach and 11-15 million Australians are predicted by the middle of the century to move near the coast (Davis and Weller 1993). Similarly, in the United States it is predicted that over 75% of the US population will live within 80 miles of the

coast (U.S. Commission on Ocean Policy 2004). The southern California coastal population is projected to reach almost 24 million by 2015 (NOAA 1998).

Surfing has its origins deep in the roots of a number of Pacific cultures including Hawaii, Polynesia and Peru and recorded surfing events date back many hundreds of years. Today, it is estimated that the global surfing population is close to 20 million, with over two million surfers in Australia (Kampion 2003) and over two million in California (Pendleton 2007).

Dolnicar and Fluker (2003) and Carroll (2004) write that surfing is now worth an estimated \$8 billion dollars per annum. Current investigations by the authors indicate that while this amount includes the clothing and retail arms of the major surf apparel companies, it is likely to significantly under account for the total economic value of recreational surfing. There can be no doubt that surfing represents a very profitable market, a growing industry, a reason people move to areas and surfing plays a major part in the recreation and tourism strategies for many coastal locations in America and Australia. Yet there has been little formal investigation into the value of recreational surfing at major surf destinations (by weight of numbers of surfers) around the world and the socio-economic value of surfing to some communities is believed to be significant. Any negative impact to the surfing amenity in these locations may have serious consequences for the resident surfing population, visitors, the surf industry and local economies.

CASE STUDY LOCATIONS

South Stradbroke Island is located at the northern end of the Gold Coast, a city of 450,000 people, approximately 75kms south of Brisbane in Queensland's south east. On average, the Gold Coast tourism region hosts over 75,000 visitors everyday (Gold Coast City Council 2003). As well as high levels of tourist visitation to beaches, the Gold Coast is said to boast the second largest resident surfing population in Australia and is home to some of the best-known surf breaks in the world, including Snapper Rocks, Kirra, Currumbin Alley and Burleigh Heads. In 2004, the Queensland Government declared their intentions to develop a cruise ship terminal and superyacht marina. Chief amongst the arguments for the development of this facility was the economic windfall that would benefit the Gold Coast business community. Initial estimates by the Queensland government (Qld Government 2004a, Qld Government 2004b) were for a return on investment of between \$AUS 7-8 million per year. Independent advice sought by Surfrider Foundation Australia (Surfrider Foundation 2005) as well as that confirmed by the P. Helman (personal communication, November 26, 2005) was that the project would result in a significant deterioration in surf quality at South Stradbroke Island. Surfrider

Foundation as well as many in the surfing community (Save the Waves 2005, Save our Spit 2005) believed that the government was not adequately considering the consequences of the proposal on the quality of the surfing amenity at South Stradbroke Island.

Trestles Beach straddles the border of San Diego and Orange County in Southern California and boasts some of the best waves in Southern California. Trestles is the only site in the continental United States to host a World Champion Tour surfing contest. The area includes a tidal saltwater estuary that is fed by San Mateo Creek. San Mateo Creek is one of the last undammed streams in southern California and flows from its headwaters in the Cleveland National Forest to the Pacific Ocean. The beach is part of San Onofre State Park and has three primary surfing breaks (Uppers, Loweres and Cottons) that are collectively called Trestles. The Transportation Corridor Agency, quasi-public agency, is seeking to build an extension to the existing 241 Toll Road. The proposed Foothill Transportation Corridor South is a sixteen-mile long toll road highway that is planned to run directly through and along San Mateo Creek. If constructed, not only would this project directly threaten the world class surf break at and around Trestles, the project would also impact Southern California's last remaining healthy coastal watershed.

STUDY DESIGN

The purpose of these investigations was to use a range of disciplines and techniques to collect site specific data on the socio-economic value of surfing to specific locales in the hope that the results would be able to add some value to discussions and decision-making process surrounding the reduction in wave quality and potential degradation or loss of these surf breaks. The range of information being sought was not available through any particular technique so the approach to these investigations was to use techniques from the social sciences using the disciplines of economics, anthropology and political science. Table 1 below describes the disciplines and specific techniques used in this investigation.

Table 1: Social science disciplines and techniques used in this investigation		
Economics	Anthropology	Political Science
Gross market expenditure / Travel Cost Methodology	Participant observation	Key stakeholder interviews
Non-Market Value	Interviews	Literature review
Literature review	Literature review	Web-based survey
Web-based survey	Web-based survey	

Primary data sets were collected using face-to-face and online surveys at South Stradbroke Island and online surveys for Trestles and followed up by detailed interviews with key stakeholders.

RESULTS

Economic data for South Stradbroke Island is reported as Gross Market Expenditure and as economic impacts for the Trestles survey. Table 2 provides a summary of information collected from surfers' visitation to South Stradbroke Island. It is not uncommon for there to be over 300 surfers per day at South Stradbroke Island on days when the surf conditions are favourable.

Number of surfers per year	11,500 approx
Number of surf visits per year	64,000 approx
Average amount spent per surfer on surfing per year	\$4365
Average amount spent per surfer at specific surf break / beach per year	\$1775
Total amount spent by surfers on surfing at South Stradbroke Island per year	\$20,000,000 approx

Table 3 provides some preliminary information on the economics of surfing at Trestles. It is not uncommon for over 600 surfers to use Trestles per day when the surf conditions are favourable.

Number of surfers interviewed	974
Number of surf visits per year for the surveyed population	~100,000
Average amount spent per visit	\$40.16
Average distance travelled to visit Trestles	54 miles
Percent of surfers from outside San Clemente	83%

The non-market impacts of potential loss of surf breaks are also significant. Common concerns raised by those interviewed across the both case studies include:

- Possible reduction in access;
- Possible reduction in amenity (surf quality, experience);
- Likely increase in water quality problems, environmental quality and pollution risks to people and marine life; and
- Reduction in public space along the coast.

DISCUSSION

These two case studies demonstrate surfing has both significant economic and social benefits to communities, albeit in different ways. Surfing at both

Trestles and South Stradbroke Island allows a surfer to escape a urban environment and surf in a largely undeveloped area. This aesthetic is part of what makes the surfing experience so special at both locations. In the case of South Stradbroke Island, this research demonstrates the significant economic value of the surf break to the Gold Coast, a factor that was largely ignored in discussions about the efficacy of the proposed cruise ship terminal.

CONCLUSION

We know little about the full value of surfing to individuals and to communities in any formal sense. These social values combined with the not-insubstantial value of the surf break should be taken into account in the decision-making process. By using a range of techniques from the social sciences, the authors have attempted to work towards the development of a framework for this type of investigation that will hopefully lend itself to the development of an accepted standard for further studies and work.

TAKE HOME MESSAGES

- Local knowledge must be incorporated into the decision-making process;
- Surfing has significant economic and social benefits and this needs to be taken into account;
- Valuing coastal resources can assist in the ICM process;
- This type of analysis has potential commercial application;
- Market and non-market values can be measured - there is no excuse for not doing so;
- 'Play' must be valued and taken into account in the decision-making process eg; and
- We need to develop accepted standards for measuring the value and quality of coastal recreation.

LITERATURE CITED

- Australian Bureau of Statistics, 1998. Pocket Yearbook Australia. Commonwealth of Australia, Canberra.
- Carroll, N., 2004. Course notes for Bachelor of Surf Science and Technology Degree, Edith Cowan University, Bunbury.
- Davis, G. and Weller, P., 1993. Strategic Management in the Public Sector: Managing the Coastal Zone, Resource Assessment Commission, Canberra.
- Dolnicar, S. and Fluker, M., 2003. Who's Riding the Wave? An Investigation Into Demographic and Psychographic Characteristics of Surf Tourists, CAUTHE Conference, Coffs Harbour, Australia.

- Dutton, G., 1985. Sun, sea, surf and sand - the myth of the beach
Melbourne, Oxford University Press.
- Gold Coast City Council, 2003. Nature-Based Tourism
http://www.goldcoastcity.com.au/t_standard2.aspx?pid=5069,
Accessed 5 September, 2006.
- Kampion, D., 2003. Stoked! A history of surf culture. Utah, Gibbs Smith.
National Oceanic and Atmospheric Administration (NOAA). 1998 (on-line).
"Population: Distribution, Density and Growth" by Thomas J.
Culliton. NOAA's State of the Coast Report. Silver Spring, MD:
NOAA.
- Pendleton, L., 2007 How will climate change affect our coasts?,
<http://noep.mbari.org/> accessed 12 April 2007.
- Queensland Government 2004a Initial Advice Statement Gold Coast
Marine Precinct Development. Coordinator General's Office,
Queensland.
- Queensland Government 2004b Terms of Reference Gold Coast Marine
Precinct Development Coordinator General's Office, Queensland.
- Save Our Spit. 2005 No terminal at Straddie. Save Our Spit Alliance
Incorporated. Available from www.saveourspit.com, accessed 25
November, 2005.
- Save the Waves. 2005. Save the Waves Coalition 2005 Annual Report.
Available at www.savethewaves.org, accessed 21 October 2006.
- U.S. Commission on Ocean Policy. An Ocean Blueprint for the 21st
Century. Final Report. Washington, DC 2004.