

CAN WE PRICE VALUES? SOCIAL AND CULTURAL VALUES IN DECISION-MAKING FOR INTEGRATED COASTAL MANAGEMENT

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Scope of presentation

1. Why is the coast valued?
2. What kinds of values do we associate with the coast?
3. Can we measure some or all of these values?
4. What happens when different value sets collide?
5. Are there any risks associated with this approach?
6. Some opportunities for coastal management and climate change adaptation

Value of the coast

- The coastal zone contains a wide range of climatic, geographical and oceanographic regions, which accommodate a rich store of biological diversity:

- Good source of food
- Rainfall
- Land is suitable for a wide range of uses
- Climate
- Demand for coastal real estate
- Transport
- Leisure

- Types of coast: primary or secondary

- 86% of Australia's population lives within 50km of the coast
- 15 million more people on the coast by 2050
- Close to half the world's population live on or near the coast

- Managing the coast:

- Littoral or catchment boundary
- Cadastral
- Values based
- Non-human

Here's some context

NSW Coastal Policy - Section B Implementation

The principles can be used to guide decision making and clarify the basic philosophy of the goals and objectives of the policy. They should be read within the broader vision for the coast, being a coastal environment which is conserved and enhanced for its *natural and cultural values while also providing for the economic, social and spiritual well-being of the community* (NSW Coastal Policy 1997, p 75).

What do we mean by 'value'?

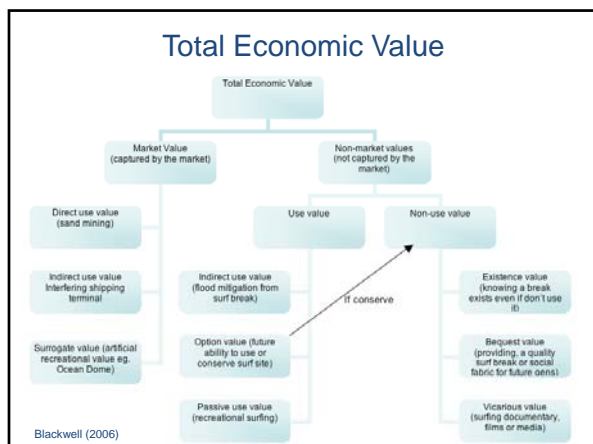
Everyone thinks they understand value; value is part of everyday life. There are spiritual values, religious and moral values, good values on used cars, and the list goes on. When most people talk about the value of the coast, they might be talking about any of these values.

When economists speak of values, however, the definition is much more narrow. For economists, value represents how much the use of a resource improves the economic wellbeing of one person or of society at large (Pendleton, 2009, p. 4).

This is best described by the amalgam of values known as Total Economic Value.

Valuing environmental goods and services

- Environmental goods and services have both market and non-market values.
- Some uses are viewed in market terms even though a market for these goods and services does not really exist.
- Some goods and services do not have a market value or have a value to society that cannot be adequately expressed in market terms.
- Some of these are crucial to the maintenance of a healthy society and its economy.
- Even where an individual may not directly interact with the coast in any way, he or she may see the benefits to others, to society and to future generations from doing so.



Garnaut Climate Change Review 2011

- Four types of benefits of CC mitigation
 1. Currently measurable market benefits
 2. Market benefits non-readily measurable
 3. Insurance value of mitigation **Type 3 & 4 benefits may be more valuable than measurable Type 1 and 2 effects alone**
 4. Non-market benefits
 - '...benefits that are generally excluded from conventional economic measures because they are difficult, if not impossible, to value'. They are of great importance and include 'environmental amenity, longevity, health (beyond its purely financial effects), the heritage value of established patterns of social and economic life, and also the welfare of non-Australians.'
- "...The environment sustains life, supports our physical and mental health and provides psychic enjoyment. Constitutively, Australia's unique biodiversity is integral to our cultural identity (Henry 2010)."
- Garnaut suggests that because we value such non-market services most Australians would sacrifice some consumption of goods and services into the future.
 - Challenging because the natural estate is contested.

Some frameworks used in Australia

Monetised

- Aquatic Value Identification and Risk Assessment (AVIRA)
- Cost Benefit Analysis
- EIA
- Investment Framework for Environmental Resources (INFFERR)
- Natural Resource Damage Assessment
- Real Options / Options
- Risk return

Non-monetised

- Deliberative processes (e.g. citizen jury)
- Multi Criteria analysis
- Triple Bottom Line

Tools

- Market valuations - generally measured by examining how much people contribute to a particular sector of the economy through spending related to access, equipment, goods and services
- Non-market valuations - generally collected through revealed or stated preference (also known as contingent valuation method) e.g.
 - Travel Cost Method
 - Choice modelling
 - Willingness to pay

Contested values

- Infrastructure and engineering
 - Resource quality
 - Resource modification
 - Preferential use
- Environmental issues
 - Reef health
 - Water quality
 - Ecosystem health
- Economics
 - Economic impact
 - Non-market value
- Culture
 - Coastal 'community' culture
 - Social capital
 - Aesthetics
 - Significance
- Legislative and management issues
 - Public access
 - Recreation
 - Tourism
 - Stewardship
 - Attachment to place

Some real world examples

Bastion Point

Bastion Point, Mallacoota. Source Lazarow (2006)

- Council response to an identified risk issue.
- Plan is to create an all weather access boat ramp.
- Independent review sought by community finds that the preferred option "will place the groyne across the end of the outer break, imposing an additional hazard to surfers as well as destroying part of the break."
- EES states that there are "opposing views about the impact that the breakwater walls will have on surf further out..... The 'region then becomes a more attractive place for the type of visitor who is family orientated and with young children, or teenagers who are interested in taking up surfing as a sport."

Bastion Point, Vic

Environment Effects Statement - Ocean Access Boat Ramp, Bastion Point, Victoria

Non-economic information

Bastion Point

- The proposed development increases risk to surfers of being hit by a boat
- Bastion Point is the only surf break that those without vehicles (eg school children) can access relatively safely and quickly
- Intergenerational experience & significant mentoring experience
- A blight on the otherwise 'pristine' environment
- The loss of local sovereignty
- Majority population unsupportive
- Deficiencies and errors in the economic, biophysical and social values reports

Bastion Point circa 1970. Photo Lindsay

Challenges

(including maladaptation)

Palm Beach, Qld

Figure 1: Erosion at Palm Beach in 1989 Clearly Exposes Sea Wall (GCCM)

Figure 2: Erosion at Palm Beach in 1996 (GCCM)

Figure 3: Beach fill at Palm Beach, December 2007 (Noriega)

Figure 4: Erosion at Palm Beach, May 2009

Palm Beach remains vulnerable to complete loss of beaches and severe property damage as a result of severe short-term storm erosion.

Over time, climate change will only increase this risk (Tomlinson, et al. 2007).



Chronology of events

1999	July: GCCM commissioned to prepare PBPS.
2000	October: Stage 1 design commences. December: GCCC adopts PBPS Masterplan concept. PBPS submitted to Beach Protection Authority (BPA) for approval.
2002	April: Application to state government for approval of PBPS.
2003	March: PBPS approved by BPA; approves in September. December: Tender awarded. Contracts signed; materials orders placed. Details of/breakwater reef proposal publicised. Opposition to proposal by surfing community.
2004	January: Opposition to proposal by surfing community intensifies. 23 January: GCCC orders bag placement at Palm Beach to be aborted. 26 January: Australia Day march and protest by surfers. February: PBPS Consultative Committee formed. Independent review of PBPS commences. 12 February: Works stops on breakwater/reef. 18 March: First meeting of the PBPS Consultative Committee. May: Independent review of PBPS commissioned by Save Our Surf Inc. is finalised. Report highly critical of reef design. July: Independent review finalised. August: PBPS Consultative Committee resolves to delete submerged coastal structure/reef in present form from the PBPS. November: GCCC deletes 19th Avenue reef from PBPS. GCCC CEO writes to EPA to request whether a reef should form part of a future beach protection strategy at Palm Beach.
2007	August: GCCC prepares update on recommendations for PBPS for GCCC – determines that offshore control structure/multifunctional reef breakwater be included in the PBPS.

Community opposition

Reef an option to fight erosion

Daphne blames uni in surf reef backflip

Reef U-Day arrives

Locals move to sink artificial reef hopes

No reef for Palm

'never built a reef'

Reef design team hits back at critics

Council wants help on local beach study

NO REEF @ PALM BEACH

SURFERS UNITE

"Have a say Australia day"

BEACH RALLY

Australia Day 9am 19TH AVE PALM BEACH

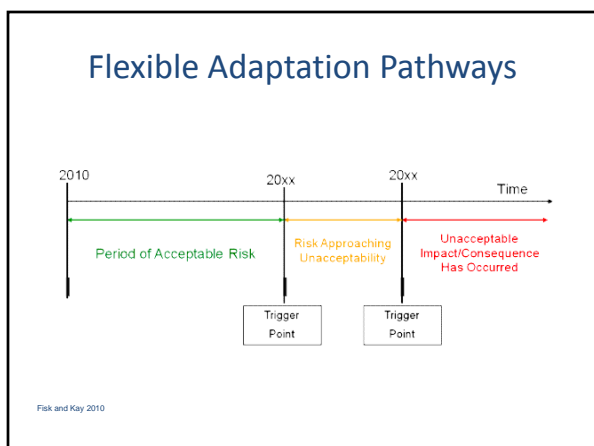
No reef for Palmy

Save Our Surf group is certain Palm Beach reef project is sunk

The GCCM technical reports relating to the design and impact assessment of the proposed reef(s) at Palm Beach are of a very poor standard and unsupported by data, numerical modelling predictions or evidence of any sort (Hoad, et al., 2004, p. 2).

Outcome / response

- Cost to Municipality \$\$
- Integrity
- Significant delay to coastal management program [underfunded, inexperience, lack of insider knowledge, poor understanding of demographics/community issues]
- The Council CEO was directed to write to the QLD EPA to request whether a reef should form part of a future beach protection strategy for Palm Beach.
- Under direction, GCCM reviewed the PBPS in light of the independent review and prepared a report for GCCC.
 - Gap analysis of physical and socio-economic issues
 - Progression of a whole of council coastal planning strategy



ICM / Adaptation Accounting

- Consistency
- Transparency
- (Social) limits to adaptation - links between place, stewardship and specialisation
- Decision Support Systems
- Legacy - built private, built public, natural,... but no history of social and cultural

Pathways to adaptation (metrics)

1. Every community is special
2. Cheap and nasty gets you cheap and nasty [underfunding, inexperience, poor understanding of community]
3. Benefits of a partnership approach
4. Clear articulation of goals
5. Social and economic studies
6. Science to community
7. Professional development
8. Effective policy requires champions
9. Persistence [purposeful and sustained effort, monitoring and evaluation, corporate knowledge]
10. Systems approach



Useful references

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