

The economic value of Marine Protected Areas along the Garden Route Coast, South Africa, and implications of changes in size and management



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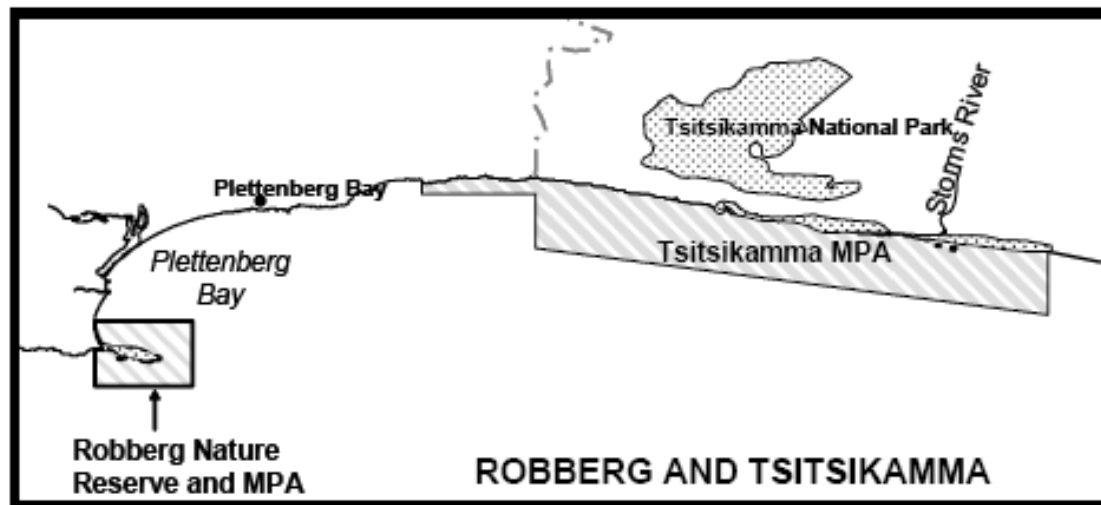
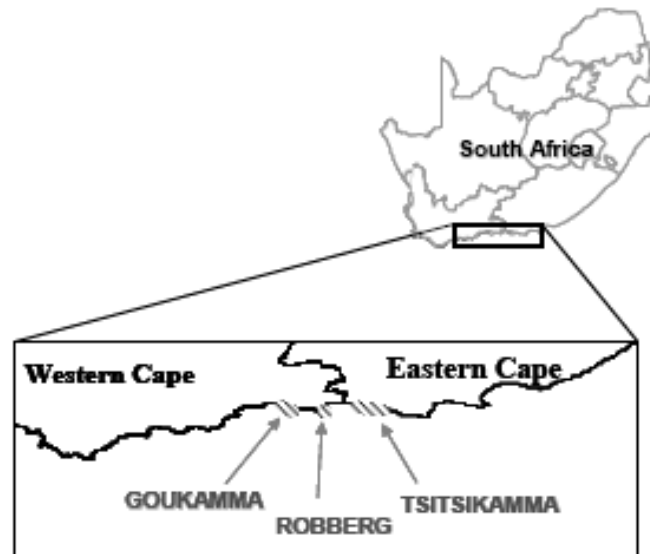
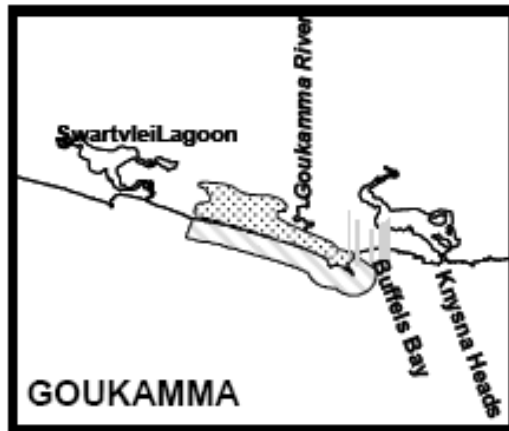


Anchor
Environmental
Consultants



Background

- **Proposal by government to open up parts of Africa's oldest MPA to recreational fishing**
- **Decision made to appease a highly vociferous local lobby**
 - **Highly political**
 - **Threat of non-compliance**
- **WWF commissioned valuation report**



MPA



Protected Area

Background



- **Africa's oldest MPA**
- **70 km coastline**
- **>200,000 visitors per year**
- **Attracts more than R10 million/year to area**
- **Fisheries benefits well studied**

How would an economic valuation help?



WWF felt that:

- **Narrow stakeholder consultation = narrow perception of values**
- **Little understanding of the total value and services being provided**
- **Lack of rational holistic decision making based on best available information**
- **Leadership vacuum**

Audience

- **Government decision makers**
- **Local stakeholders**
- **General public**



Approach

1. Total Economic evaluation

- Direct Use
- Indirect Use
- Non-use values

2. Cost benefit assessment of different scenario's (including opening parts)



Total Economic Valuation

Direct Use Value

- **Recreational use value**
 - **On-site costs**
 - Revenue generated by park = R10 M
 - **Off-site costs**
 - Travel expenditure attributable to MPA = R20 M
 - **Consumer surplus**
 - Demand curve using the Travel Cost Method = R10 M

Total Economic Valuation

Indirect values

- **Fish exports**
 - Known value of commercial fish species
 - Known migration rates from tagging studies
 - Estimated dispersal rates of larvae
- **Total value of fish exports = R33 M**

Option and Existence Value

- Willingness to pay to prevent total loss of protection for the MPA
- Existence value = R238 M

Monthly income category	EC + WC households	n	% WTP to prevent B	Ave WTP (R)	Total WTP (R millions)
under 1000	1 067 296	22	50	142	76.0
1000 - 3000	353 668	17	82	165	48.0
3000 - 6000	281 270	37	65	205	37.4
6000 – 12 000	206 223	38	61	205	25.6
12 000 – 24 000	112 831	68	71	364	29.0
24 000 – 48 000	34 792	50	66	492	11.3
above 48 000	20 450	25	52	995	10.6
TOTAL					237.8



Total Economic Value

- For three MPAs = R421 M
- Wow number?
- **Or are the components and process more important?**
- Other non-commercial values –
Scientific
- 5 books; 92 papers; 3 PhDs; 13 MSc's



Cost Benefit of allowing fishing

Direct methods

- **16% decrease in visitation**
- **R4.7 M loss in revenue per annum**
- **Total value of fish caught by opening = once value of R4 M**
- **ca 33 angling days (10 fishers) to deplete stocks to levels outside MPA**

Cost Benefit of allowing fishing

Indirect methods

- Willingness data to rate 4 scenario's
 - A. Status quo
 - B. No protection (prevent)
 - C. Maximum protection
 - D. Limited fishing allowed (as proposed)

Scenario	B (20%) No protection	D (50%) Status quo + allow fishing in Tsitsikamma	A (60%) Status quo	C (75%) Maximum protection
Estimated value (R millions)	41.4	206.6	237.8	272.0
Change in value (R millions)	-196.4	-31.2	0.0	34.2

Conclusions

- **MPAs are of high value and importance**
- **Understanding of the relative components of that value**
- **Numbers to management scenario's**
- **Allow for more informed decision making**



How did we take this forward?

1. Official correspondence with Minister and other decision makers
2. Engaged local stakeholders
3. Media campaign

Content:

1. Did not take an strong protectionist position
2. Underlined the value importance
3. Need for national consultation
4. Call for rational decision making based on best available information
5. Made the contents of the valuation report available

Outcomes

- **Massive media uptake**
 - Public looking for leadership on a controversial issue
- **Broad involvement of local stakeholders**
- **Direct correspondence from the Minister**
- **Proposal to open MPA was rejected**



