



environmental affairs

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Environmental Affairs
REPUBLIC OF SOUTH AFRICA

20 Years of Marine Science

Department of Environmental Affairs
April 2014

Policy

Management
Developments

Research
Infrastructure

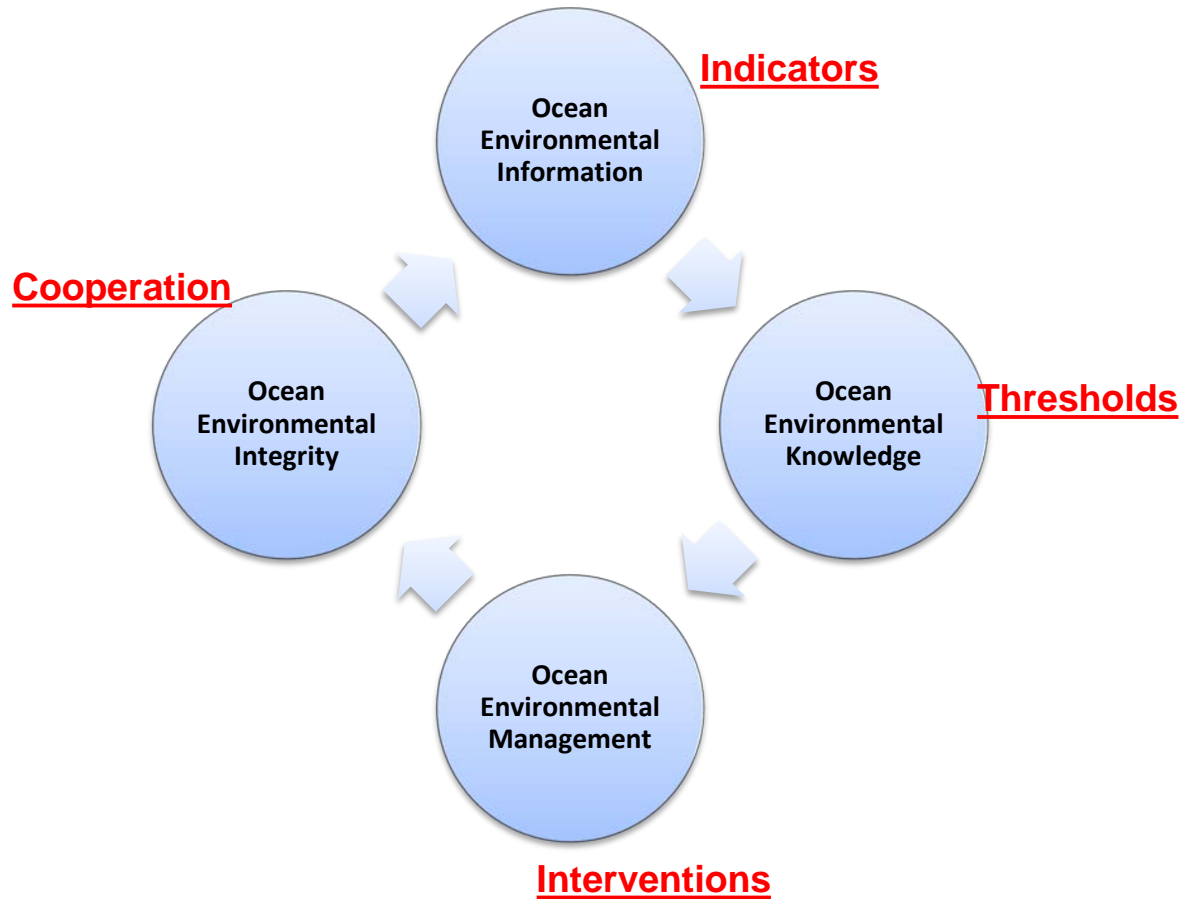
People
Management

The next 20 years

- Environmental management in South Africa
 - Constitution
 - National Environmental Management Act (1998)
 - Protected Areas Act (1998)
 - Biodiversity Act (2004)
 - Integrated Coastal Management Act (2009)
 - White Paper on National Environmental Management of the Oceans* (2013)
- International Agreements (Biodiversity Conservation & Sustainable Use
 - Convention on Biological Diversity; Intergovernmental Oceanographic Commission
- Regional Agreement & Cooperation
 - Nairobi Convention; Abidjan Convention; CCAMLR
 - Large Marine Ecosystem Programmes (LMEs)
 - Agulhas Somali Current LME & Benguela Current Large Marine Ecosystem



Ocean Policy Strategy



Two Decisions by Cabinet in December 2013:

- DEA lead Ocean Governance Regime Development
- Presidency and DEA coordinate development of the SA Blue Economy Concept



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- New dispensation for long term fishery rights
- Increased ambition for Ecosystem Approach to fisheries
- Increased marine Protected Areas – Prince Edward Island - offshore protected area
- Estuarine Management Protocol and Plans
- Species Management Plans – Penguin
- Regional Cooperation – good progress on implementing research programmes on East & West Coasts



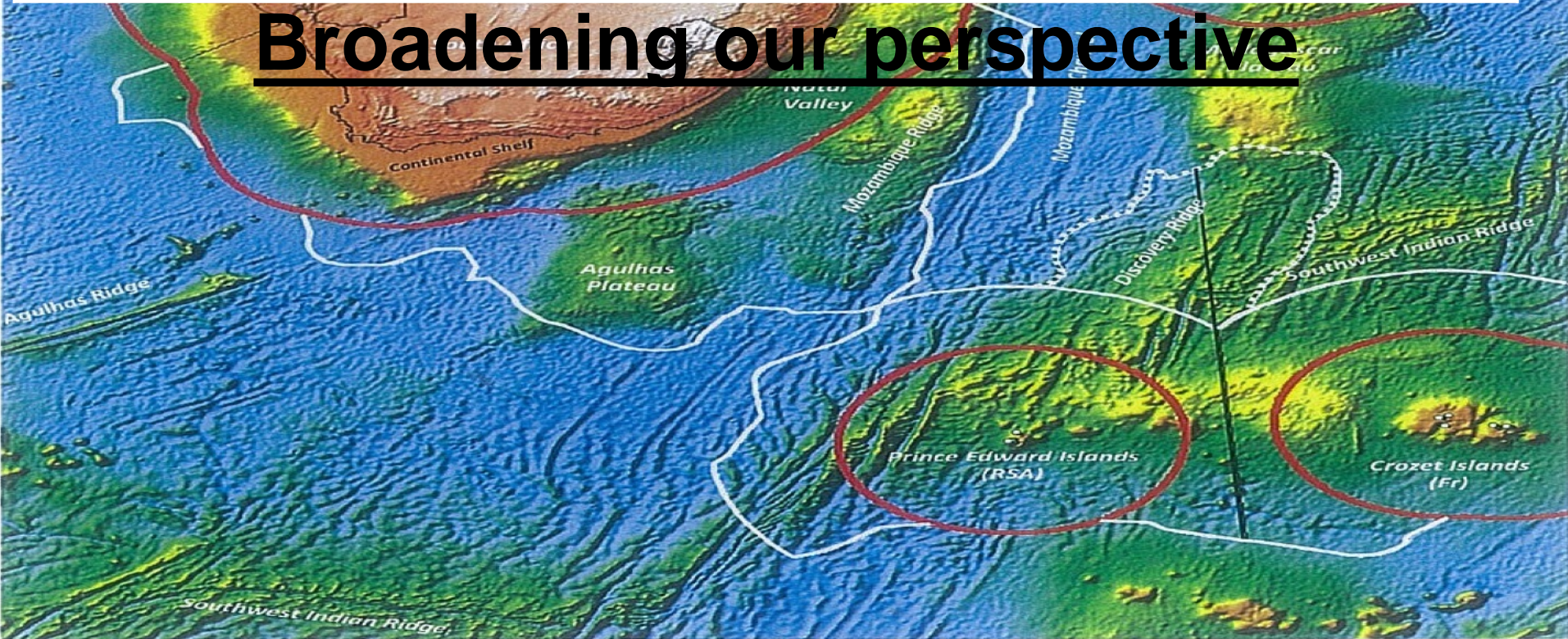
- Marion Island new base
- SA Agulhas II
- Ocean Monitoring System (4 deployments)
- DST – CSIR investment in ocean glider technology
- **Pollution Assessment Laboratories – grow this as a National Competence**



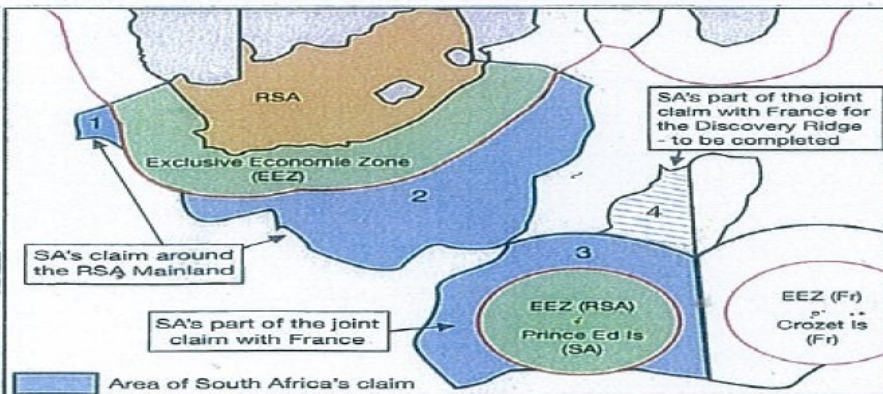
- The negotiation of the **Occupational Salary Dispensation** for scientists and engineers working in government departments.
 - Stemmed high turnover rate of staff
 - Beginning to address the bi-modal distribution of research staff evident in the 1990s, which had a missing cohort of middle career scientists.



Broadening our perspective



The landscape of the ocean floor as revealed by satellite imagery. The blue areas depict the deep ocean floor (6000m deep) which is a vast plain cut by trenches and ridges which follow fault lines. The green and yellow areas depict enormous underwater plateaus and mountain ranges. South Africa's remote and tiny Prince Edward Islands are seen to be the peaks of underwater volcanoes on the flank of the SW Indian Ridge.

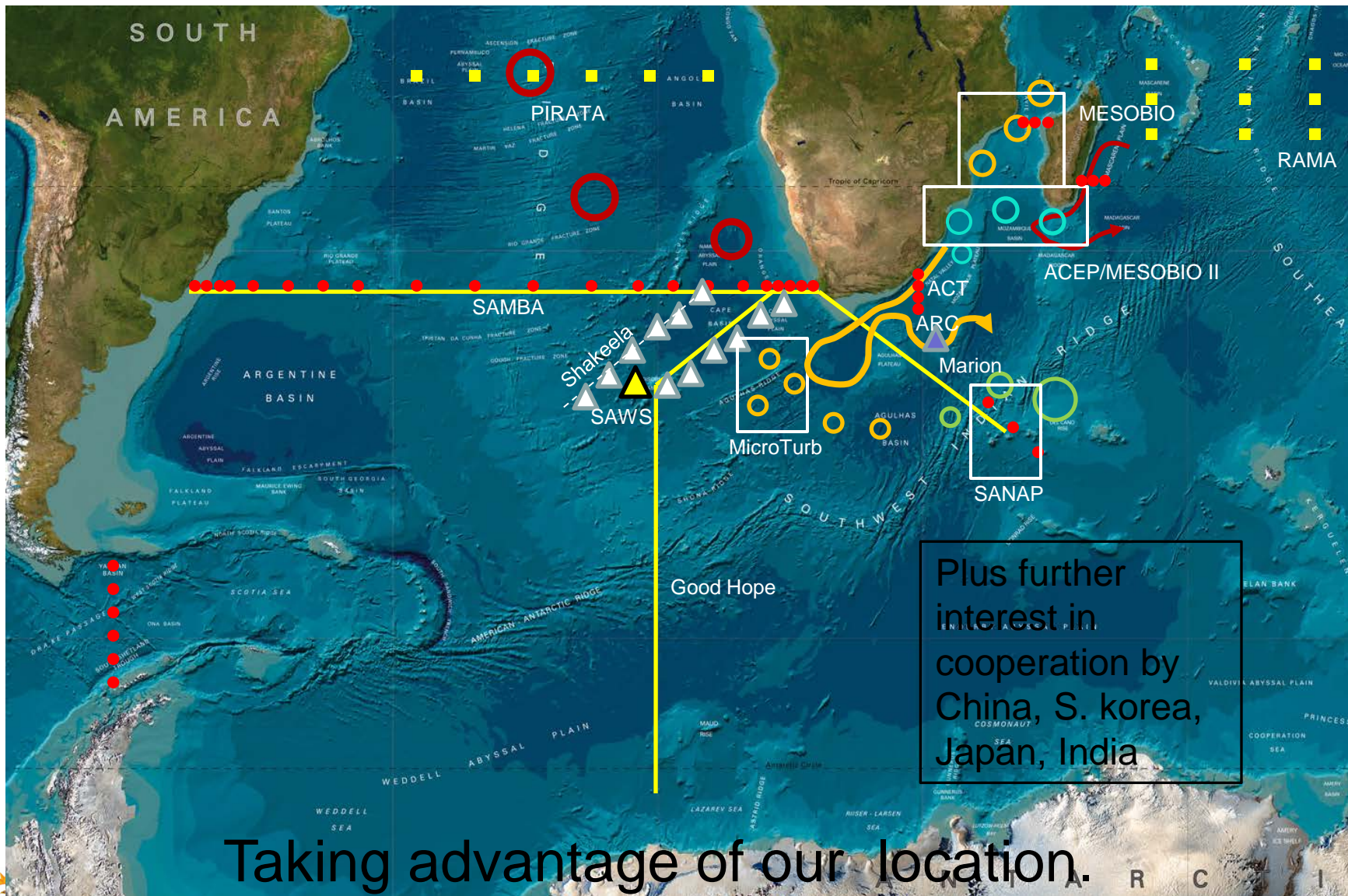


KEY	
	National boundary or maritime median line
	200 nautical mile Exclusive Economic Zone
	Boundary of the Extended Continental Shelf (Still to be confirmed by UN Committee)

SOUTH AFRICA'S EXISTING TERRITORY	
Land – RSA Mainland	Area (sq kms) 1,220,000
Sea – EEZ of RSA Mainland and Prince Edward Islands	1,540,000

NEW EXTENDED CONTINENTAL SHELF	
1. West Coast	45,000
2. East and South Coast	1,075,000
3. Prince Edward Islands	560,000
4. Discovery Ridge (yet to be submitted) - SA's part (50%)	~190,000
Total Area of Claim	1,870,000





Taking advantage of our location.



- Research into the next twenty years:
 - Must invest in demonstrating relevance to societal needs and planning
 - Bridging the contexts between society and the science it pays for, must be incorporated into the proposals drafted
 - Work on the full suite of research areas required: human impact (pollution); ecosystem & species conservation and sustainable use of marine living & non-living resources



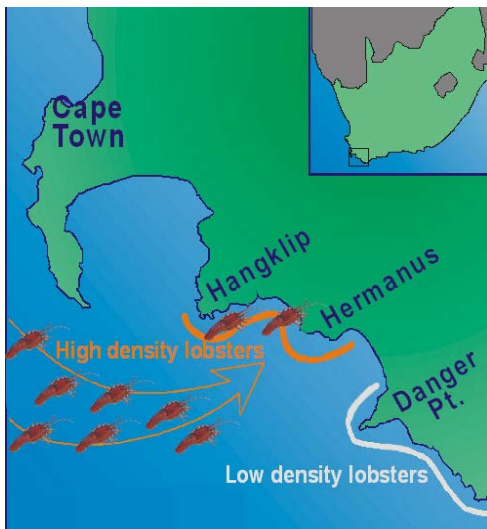
- Using regional programmes to supplement our work and deploy or employ SA capacity.
- SA leads or will lead Abidjan; Nairobi; CCAMLRL in the next 5 years;
- There are five large marine ecosystems around Africa – all these attract global funders
- South Africans must realise the opportunities to produce technical scientific capacity to support these programmes
 - » E.g. of upcoming funding cycles of BCC, ASLME, Nairobi Convention Wio-Lab pollution monitoring project and CCAMLRL]



- The Environmental Management of relevance to citizens to really brought our when research moves beyond the traditional / silo disciplines
 - The rock lobster migration around Cape Point
 - The Sea Bird distribution and fishery interactions in the Southern Ocean

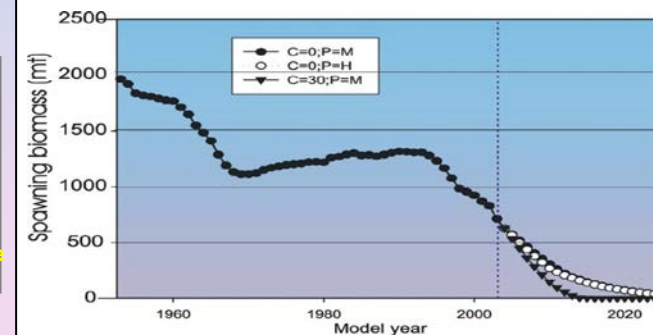
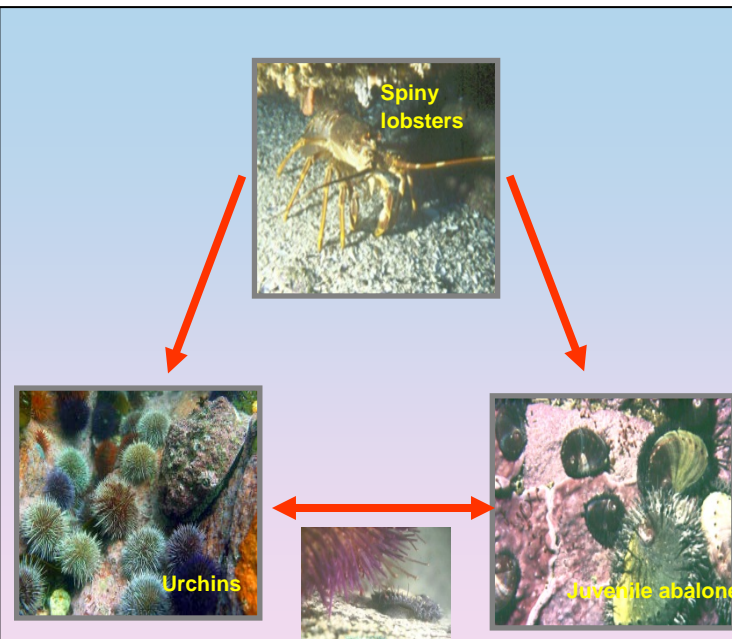


- The Rock Lobster – Sea Urchin – Abalone Epic
 - Since the early 1990's lobsters started moving into the region east of Cape Hanglip: Zones C&D
 - Led to the demise of sea urchin population and severe reduction in recruitment of juvenile abalone
 - Zones A and B - no significant lobster - both sea urchins and juvenile abalone are still prevalent



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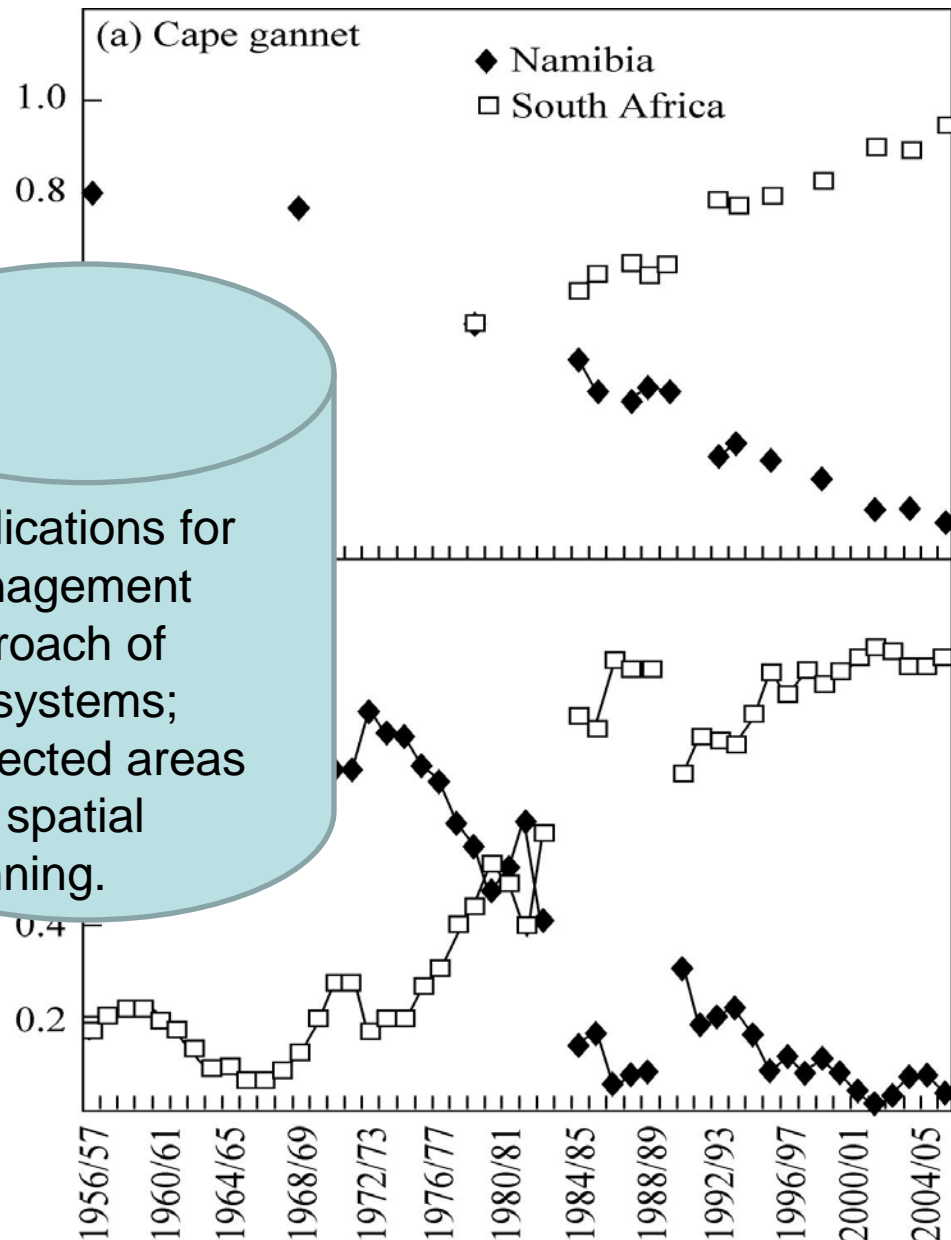
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Cape Gannet and food, Namibia and South Africa (Crawford et al. 2007)



Implications for management approach of ecosystems; protected areas and spatial planning.



Thank you



Ocean Policy – Guiding Principles

- Sustainable use and management of ocean resources and ecosystem services in order to benefit present & future generations
- Protection of biodiversity in the ocean environment and the conservation of marine ecosystems
- Application of the precautionary approach to sustainable use & conservation
- Prevention, avoidance and mitigation of pollution and adherence to the polluter pays principle
- Strengthening of human capacity to deal with a changing environment, including the impacts of climate change (e.g. sea-surface temperature, sea-level rise & ocean acidification)
- Identification of opportunities which contribute to the development needs of the poor & vulnerable within the population thus ensuring human dignity
- Promotion of collaboration & cooperative governance
- Promotion of an ecosystem & earth system approach to ocean management

