



*for a living planet*

# Long Term Management Plans and the Implementation of the Ecosystem Approach.

An international overview, working with  
NGOs and a case study from Australia.

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# 3 Parts

**Part 1:** Having a Vision, Long Term Management and Ecosystem-based Management

**Part 2:** Case Study - the Australian South Eastern Scalefish and Shark Fishery (SESSF)

**Part 3:** Where to from here for RACs and EBM





# Key Messages

- EBM and RACs are the right path to take.
- Success takes:
  - time to build trust, trust, innovation
  - integrated, multi-disciplinary and multi-sectoral approaches
- Results can be:
  - born out of consensus
  - more secure (less prone to challenge and over-rule by politicians/courts)
  - more strategic (long term)





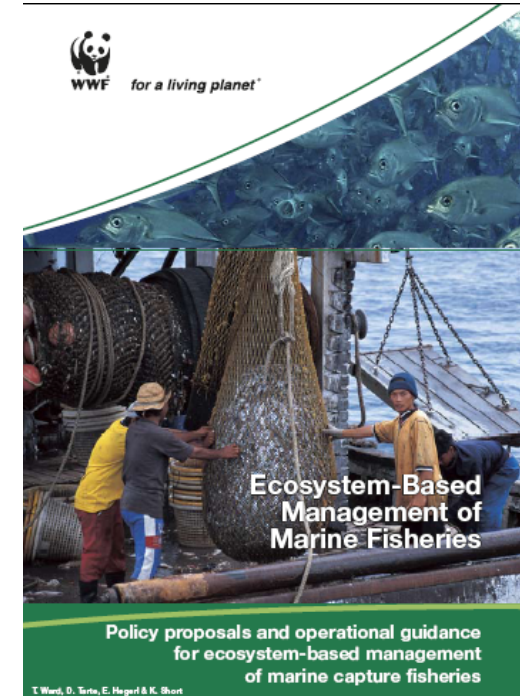
# Part 1: Having a Vision Long-Term Management & Ecosystem-Based Management





# WWF's EBM Policy Framework?

- Ward et al 2002.
- Used FAO Code of Conduct, contributed to FAO Ecosystem – Approach to Fisheries 2002
- UNESCO Ecosystem Indicators Conf. April 2004 – ‘WWF....valid guidance alongside FAO's Guidelines’ - Serge Garcia, FAO
- Implementation case studies on [www.panda.org](http://www.panda.org)
- Communicating EBM....





# Principles

Ecosystem-based management (*Ward et al, 2002*) has objectives and targets that:

1. Focus on maintaining the natural structure and function of ecosystems and their productivity.
2. Incorporate human use and values of ecosystems in managing the resource.
3. Recognise that ecosystems are dynamic and constantly changing.
4. Are based on a shared vision of all stakeholders.
5. Are based on scientific knowledge, adapted by continual learning and monitoring.

## SIX ELEMENTS FOR SUCCESSFUL EBM IN FISHERIES:

- 1 Operate within a policy framework designed to incorporate EBM principles
- 2 Recognise economic, social and cultural interests
- 3 Recognise the risk of the impacts of resource exploitation on ecological values
- 4 Incorporate adequate information on exploited species
- 5 Ensure the fishery management system is adequate for EBM to be effective
- 6 Consider externalities that may affect the resource





# EBM – realistic AND holistic!

- More than managing target stock(s).
- Predatory fish, seabirds, marine mammals & habitats, affect or affected by fisheries.
- EBM not for manipulating ecosystems to lowest common denominator by removing predators.
- EBM restores ecosystem health.
- EBM's core is maintaining natural structure, health and function of all levels and components of ecosystems.
- A system for delivering integration.





# The Twelve Steps...

1. Identify **stakeholder** community.
2. Prepare a **map** of ecoregions and habitats.
3. Identify **partners** and their interests/responsibilities.
4. Establish **ecosystem values**.
5. Determine major **factors influencing** ecosystem values.
6. Conduct Ecological **Risk Assessment (ERA)**.
7. Establish **objectives** and targets.
8. Establish **strategies** for achieving targets.
9. Design **information** system, including monitoring.
10. Establish **research** and information needs and priorities.
11. Design **performance** assessment and review processes.
12. Prepare **education** and training package for fishers.







# WWF's EBM Framework Online

[http://panda.org/about\\_wwf/what\\_we\\_do/marine/publications/index.cfm?uNewsID=71920](http://panda.org/about_wwf/what_we_do/marine/publications/index.cfm?uNewsID=71920)





# Doing It! WWF & Partners

- Using multi-sectoral approaches e.g. an Oceans view  
WWF using EBM for biodiversity, climate change, fisheries, coastal zone management, shipping....
- International partners.
- The Oceans agenda is growing.
- WWF case studies
- SmartGear
- You and your partners?

the David & Lucile Packard FOUNDATION



Mustad 

The Nature Conservancy 

SAVING THE LAST GREAT PLACES ON EARTH



SMART THE INTERNATIONAL GEAR COMPETITION

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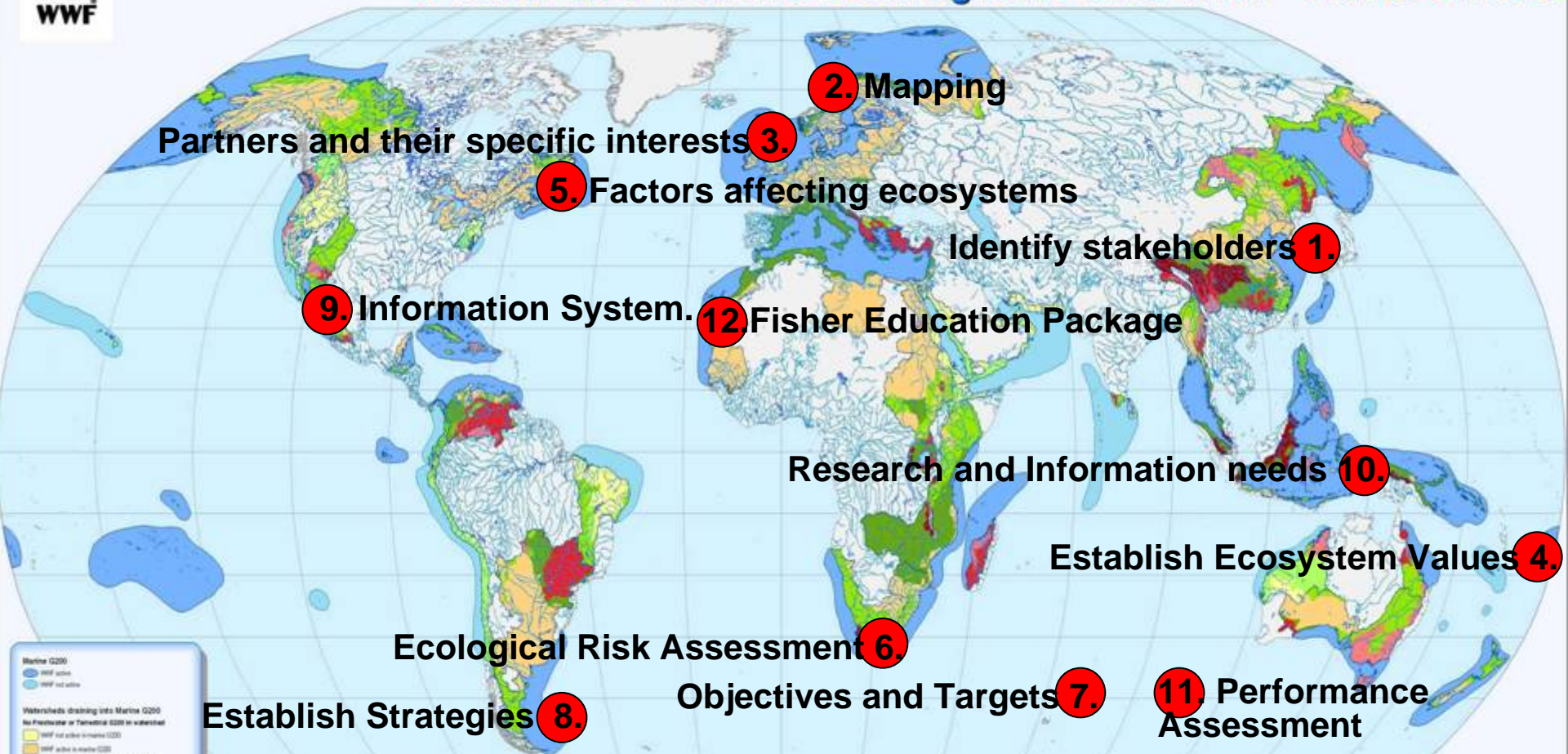
# EBM Case Studies





# Marine Headwaters

## Global 200 Marine Ecoregions and their Watersheds



**Marine G200**

- WWF action
- WWF not action

**Watersheds draining into Marine G200**

- No freshwater or Terrestrial G200 in watershed
- WWF not action in marine G200
- WWF action in marine G200

**Freshwater OR Terrestrial G200 in watershed**

- WWF not action in any G200
- WWF action in one G200 (freshwater or terrestrial)
- WWF action in both G200 (freshwater and terrestrial)

**Freshwater AND Terrestrial G200 overlap in watershed**

- WWF not action in any G200
- WWF action in one G200 (freshwater or terrestrial)
- WWF action in both G200 (freshwater and terrestrial)
- WWF action in all G200 (freshwater, freshwater and terrestrial)

# WWF's EBM 12 Step Operational Case Studies





# Challenges Internationally...

- Terminology! Acronym Soup!
  - EBM, EBFM, EAF, EA, EAM, EM, EAFM!
- Commonalities most important!
  1. managing fisheries within a more spatially based or 'whole ocean' view, that considers cumulative impacts of all human activities,
  2. mitigating the ecological effects of fishing activity and,
  3. restoring degraded marine ecosystems including fished populations.
- *Restoration AND Recovery.*
- *Evolution – fisheries management AND Revolution*
  - – multi-agency evolution AND integration.
- Fostering and motivating the seafood sector.
- Too late for some ecosystems, social change?





# Terminology

**Ecosystem-Based Management** - Management of the uses and values of ecosystems in conjunction with *stakeholders* to ensure *ecological integrity* is maintained, and recognising that ecosystems are dynamic and inherently uncertain. (Ward et al 2002)

**Ecosystem Management** - A synonym for *Ecosystem-Based Management*, often interpreted incorrectly to imply management of ecosystems, but more correctly interpreted to mean management of human activities that affect ecosystems, often detrimentally. (Ward et al 2002)

**Ecosystem Based Fisheries Management** - a new direction for fishery management, essentially reversing the order of management priorities to start with the ecosystem rather than the target species. *Pikitch et al July 04.*

IUCN....

**Ecosystem Approach to Management** - An *ecosystem* is a *geographically specified* system of organisms (including humans), the environment, and the processes that control its dynamics. Characteristics of EAM are: adaptive, incremental, takes account of ecosystem knowledge and uncertainties, considers multiple external influences, strives to balance diverse social objectives, and geographically specified. NOAA working definition in *Murawski, 2005.*

**Ecosystem Approach to Fisheries** - strives to balance diverse societal objectives, by taking account of the knowledge and uncertainties of biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries. *FAO 2002*





# Current Operational Reality

- Oceans Governance → EBM → Marine Spatial Planning → Practical Steps and Tools....
- Case studies - WWF, Compass, Packard, others?
  - [www.compass.org](http://www.compass.org)
- Different management agencies - no integration?
- Marine Stewardship Council - mitigating impacts of fishing
- An international toolkit is needed
  - Suites of case studies – operational, science application, industry engagement
  - Policy and legislation e.g.s including incentives and enforcement
  - Minimum suite of agreed indicators
  - Social, ecological, economic
  - Industry voluntary Codes of Conduct and supportive testimonials
- Communications elements are being developed by SeaWeb in the US [www.seaweb.org](http://www.seaweb.org). Market research etc





# Big picture marine conservation

Norway - Barents Management Plan – challenges

Canada Oceans Act  
- gradual going  
anywhere?

EU – Maritime Policy - new

US – 2 Oceans'  
Commissions – now  
JOCI

UK – Marine Act  
- proposed

Japan – society  
moving.....informal Ocean's  
Declaration – Japan  
Oceans' Foundation

Pacific Islands  
Regional Oceans  
Process – stalled?

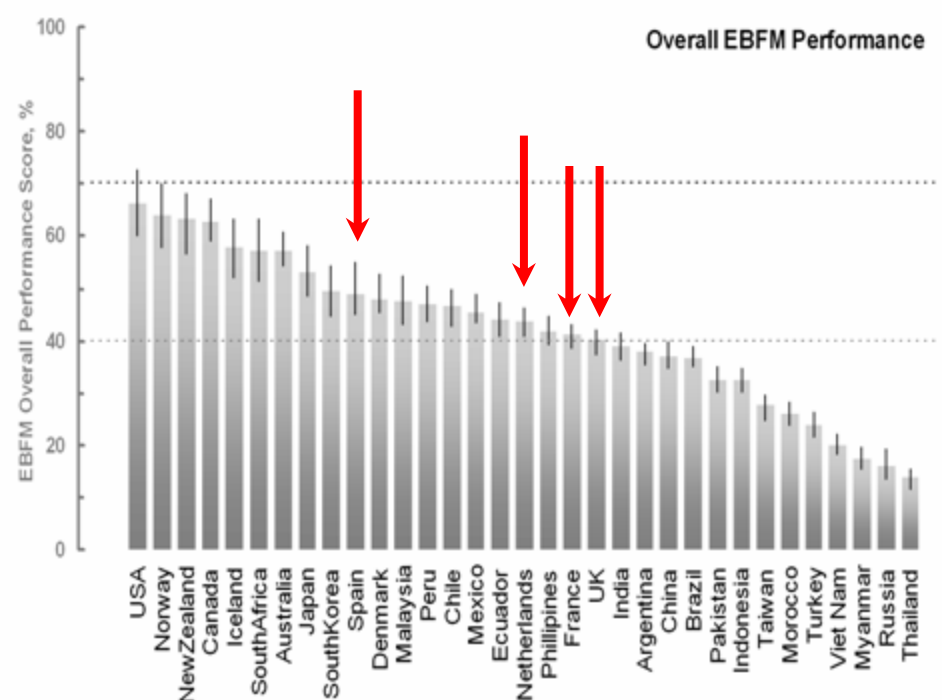
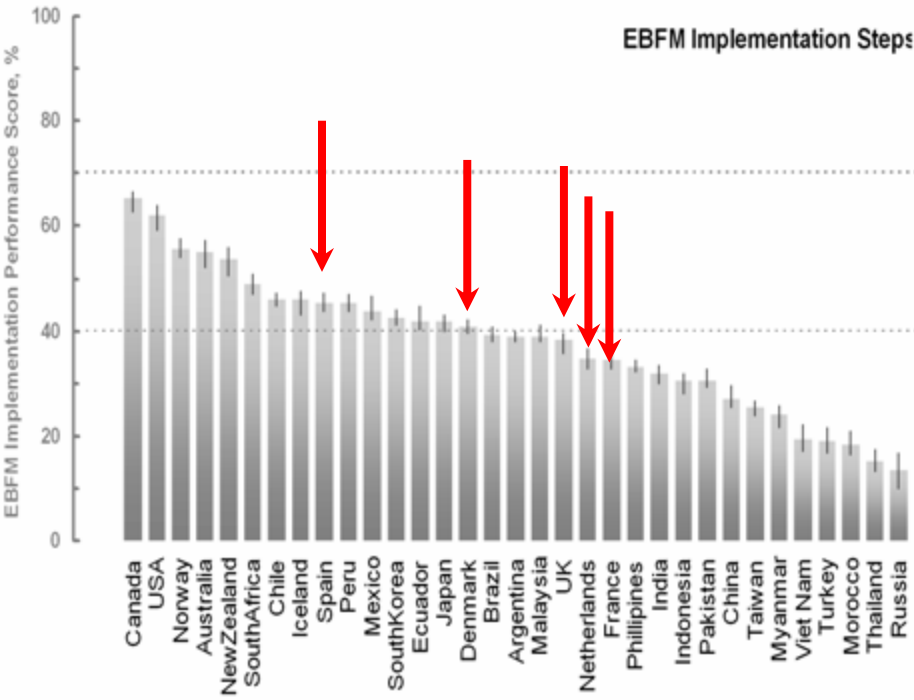
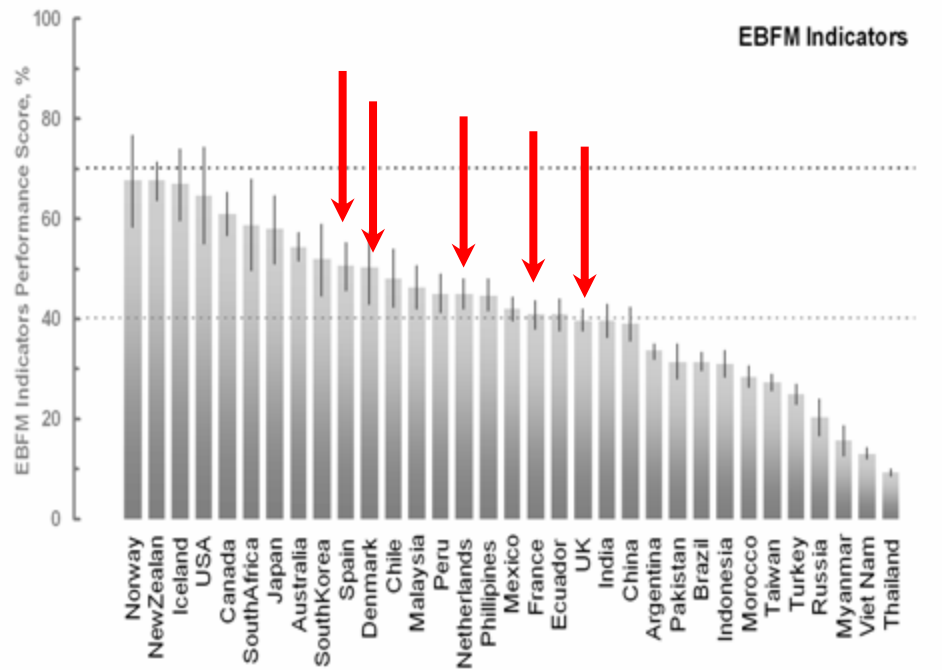
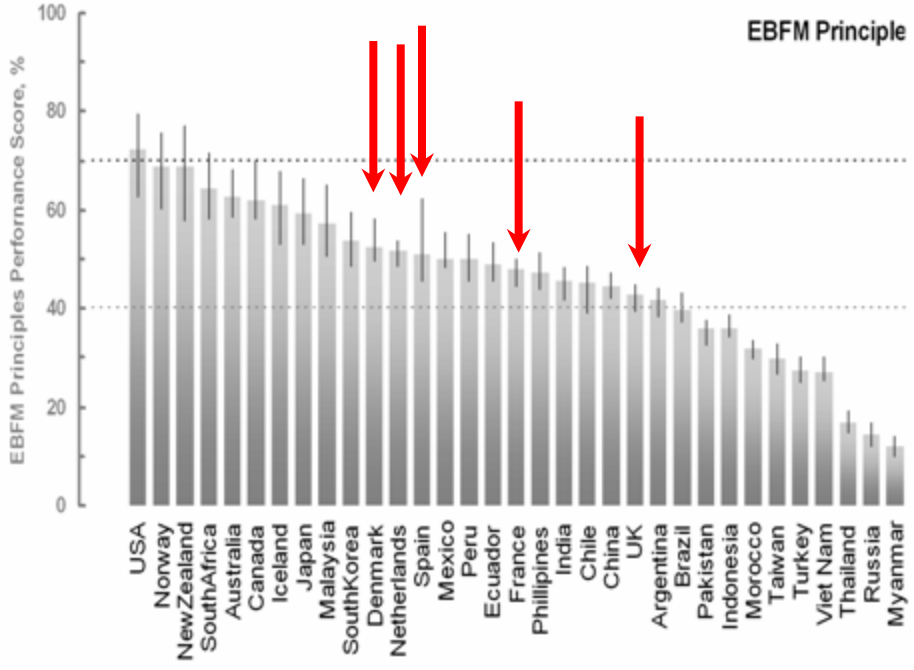
Australia Ocean's Policy –  
gradual but steady

APEC – Ministerial  
conferences – any  
operational  
change?

NZ Oceans Taskforce —  
stalled....new technical  
approach









# Part 2: RAC/MAC Case Study

## The Australian South Eastern Scalefish and Shark Fishery





## Case Study

# Multi-Everything!

- 6 States & Commonwealth
- ~30 species
- 4 Sectors - 3 trawl and one traps, hook, long-line
- Diverse communities - geographically and scale
- AUD\$59mio, 25,000T ~80 boats
- Management plan in 2003
- ITQs for 34 species & Statutory Fishing Rights

# Management Advisory Committees

- SESSMAC (Scalefish and Sharks)
- SETMAC (South East Trawl - Commonwealth and Victorian Coastal Waters Sectors),
- GABMAC (Great Australian Bight)
- GHATMAC (Scalefish Hook, Shark Hook, Gillnet, Tasmanian Rock Lobster and Coastal Waters Sectors)
- The Australian MAC system is ~15 years old
- Advising an expertise based Board of a Statutory Authority.





# Science with integrity

- Find and work with really good scientists that care....about the fish AND industry....
- Scientists & managers who are committed to including the industry in the science process
  - including enabling independent studies, design of research programs & strategies, data gathering, giving scientists access to vessels on-the-water, review and analysis of results
- Scientists who have the integrity to care but who are also compromised by the industry or government
- Involving fishermen - Integrated Strategic Monitoring Programme





# NGO involvement

- Australian fisheries management, particularly the SESSF, would not have advanced so far without consistent NGO involvement and inclusion in many of the processes.
- NGO's have driven many of the top topics into the spot light of managers and industry alike, such as bycatch issues and interactions with Threatened, Endangered and Protected (TEP) species.



- It is an essential requirement for industry to have very strong respectful and respected leadership from within which can be assisted or complimented by equally strong NGO representation.
- Without strong industry leadership positive change is extremely hard to achieve and maintain.

**GREENPEACE**



**HUMANE SOCIETY  
INTERNATIONAL**





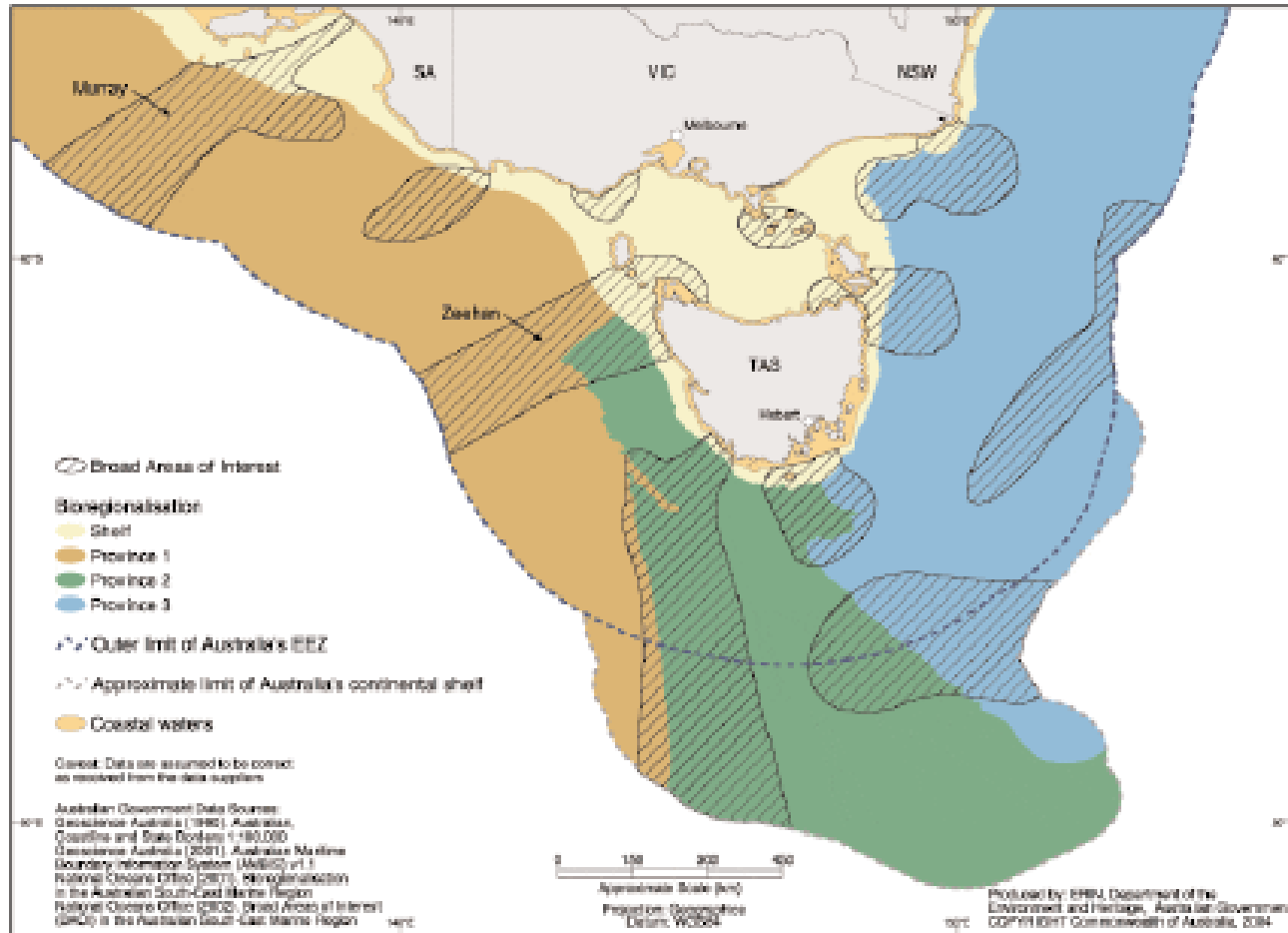
# The South East MPA Network

- first temperate deep sea network of marine reserves in the world.
- large network covering 226,458 km<sup>2</sup>,
- striking features such as underwater canyons and mountains, and the diverse marine life associated with them, some of which is new to science and found nowhere else in the world.





# Proposed MPA Network...



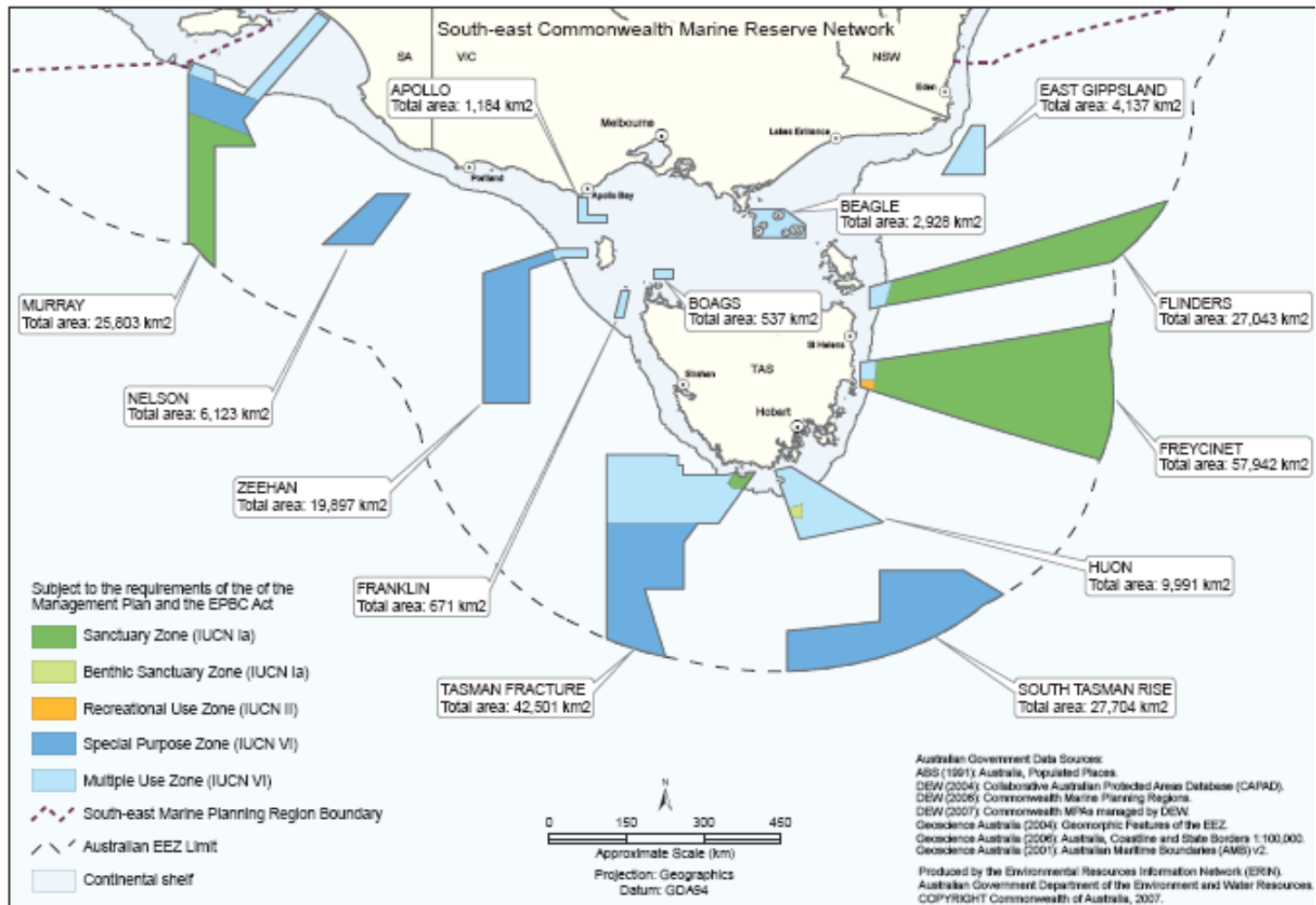
Source: Report 9, Figure 2: Development of marine bioregions in the South-Eastern Australian Region







# Final Network (2007)





# Impacts on fishing communities...policy

- Statutory Fishing Rights (SFRs) are given for all major Commonwealth fisheries management plans are finalised.
- Minimize impacts on existing fishing activities while still maintaining scientific credibility and achieving conservation objectives through careful design
- Adjustment assistance decided on case-by-case basis upon assessment.
- AUD\$228 million since Nov 2005.
- ....greater co-management....





# Today...

- South East Regional Marine Plan.
- AUD\$220mio restructuring package
- Introduced formal
  - ecological risk assessment
  - harvest strategies
    - 6 spp quotas ↓, 7↑, overall volume↓ BUT
      - Reduced TAC decision making time and costs from 1 week to 1 day
      - Dramatically reduced stress and increased certainty
  - rebuilding strategies for a number of species (orange roughy, eastern gemfish, school shark)
  - extensive closures (some via MPAs but most via fishery agreed closures - 35)
- Significant gear changes (larger mesh etc)
- Trawling nomination as a Key threatening Process currently under review for Harrison's Dogfish and Eastern Gemfish.
- + (like most fisheries worldwide) some fairly severe cost pressures associated particularly with fuel costs.





## Part 3: Where to from here for RACs and EBM in Europe?

- Build trust through projects between RAC members.
  - E.g. the new PISCES project....
- Seek and promote science with integrity & inclusion
- You know yourselves the weaknesses of the CFP.
  - Collaborate to improve them!
- Precautionary management through the Maritime Policy
- ....recognise it's early days in RAC implementation and evolution....





# Where to from here cont'd...

- Everything WWF does consistent with meaningful implementation of the basic Principles and Regulations of the CFP, as agreed in 2002.
  - Long term management
  - Stakeholder engagement
  - EBM
    - » ...e.g. good fisheries management through the RAC system....and for example the Cod Recovery Plan
- WWF only NGO in every operational RAC.
  - Baltic (Ewa), NW (Helen), SW (Charles), North Sea (Giles), Pelagic (Carol), Long Distance (Raul).
- On Executive Committees of all and Vice-Chair of NW and Long Distance RACs.





# Lastly.....find allies in unconventional places....

- Involve the market through campaigns, supply chain engagement and the MSC.
- Latest news:
  - Russian Far Eastern Pollock
  - Norwegian Arctic Cod
- Growth of MSC...



# Progress on the demand Side: *Europe*

- 100% MSC or other sustainable sources

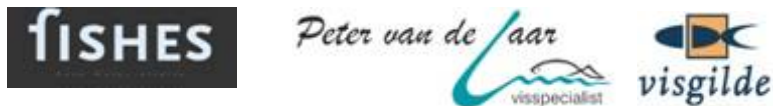
Private Labels committed



- Certified fresh fish counters



- The Netherlands: 48 fishmongers certified



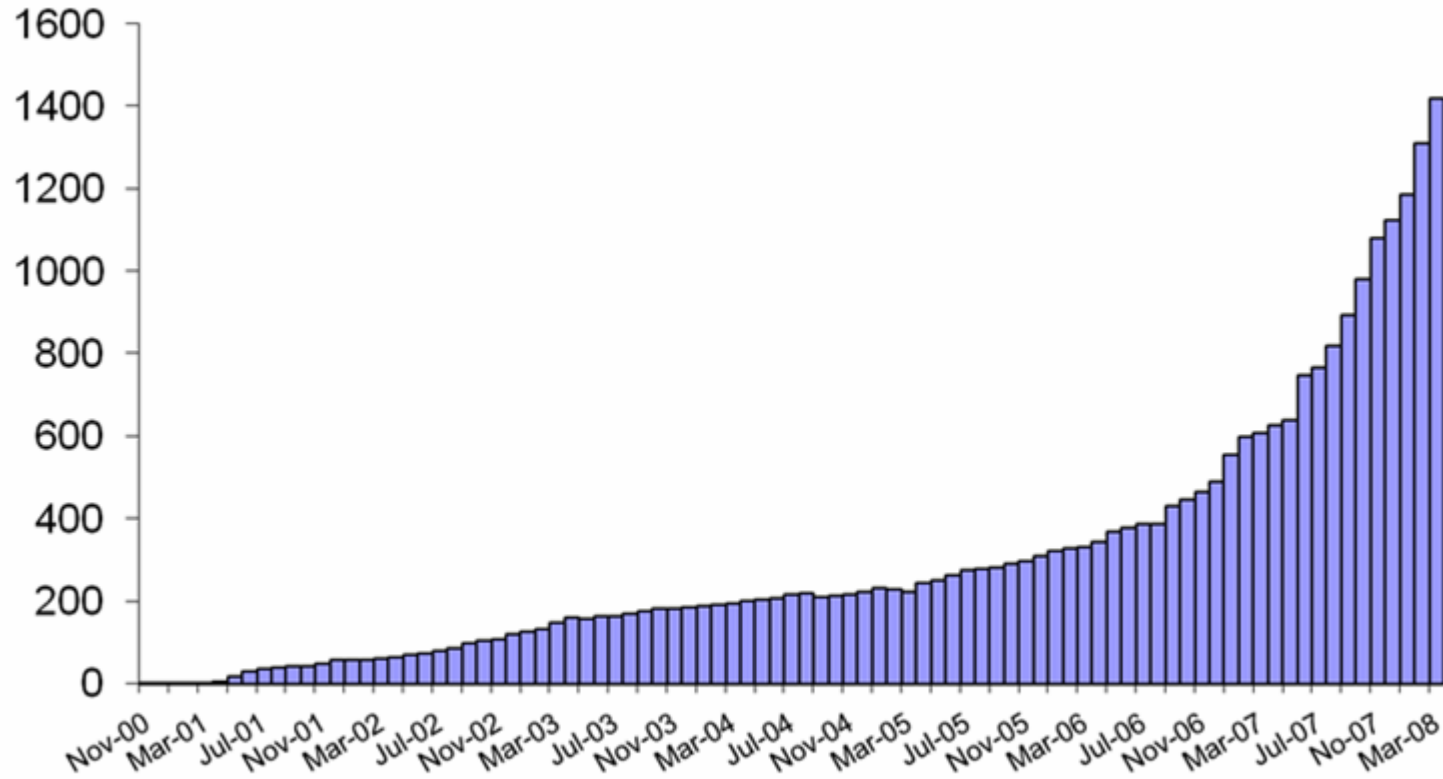
- MSC increasingly at the heart of procurement strategies



YOUNG'S BLUECREST SEAFOOD LIMITED



## MSC-labelled products as at 31st March 2008



**7 Years to Reach 700 Products**  
**7 Months to go from 700 to 1,400 Products**



and....just possibly the **Result**  
could be....

= **Rights**

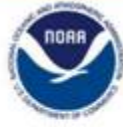
= **Responsibility**

= **Reassurance and security**

= **Risks reduced**

= **Recognition for doing the right  
thing!**





Partners

not all partners included.

# The greatest asset!



# TRUST





Give me a  
future, get  
me certified!

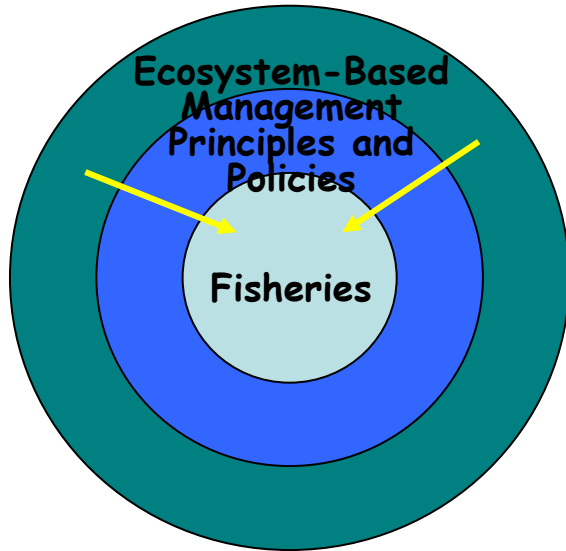




# Two Important BUT Different technical terms

## Ecosystem-Based Management of Fisheries

- Holistic approach to managing all human activities on and in the oceans and applies those principles to managing fisheries.



## Ecosystem-based Fisheries Management

- Management of fisheries holistic, yes, fish, birds, turtles, related in ecosystems but focused on mitigating or minimising impacts.

