World Oceans Day

Does marine legislation actually protect the marine environment?

7 June 2012

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Marine Protected Areas

What the science tells us

- For biodiversity protection we need to protect at least 20% of all marine waters in sanctuary zones
- IUCN World Parks Congress: Greatly increase the marine and coastal area managed in marine protected areas by 2012; these networks should be extensive and include strictly protected areas that amount to at least 20-30% of each habitat
- Up to 50% of marine waters should be protected in sanctuaries for sustainable fisheries management

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Commonwealth marine reserves

- Marine bioregional planning is focused on building knowledge of Australia's oceans and improving conservation and sustainable use of our marine resources.
- Prepared under section 176 of the EPBC Act.
- Commonwealth Environment Minister is required to have regard to a bioregional plan in making any decision under the EPBC Act for which the plan has relevance.
- As part of the planning process a system of marine reserves are being implemented.
- These reserves will meet Australia's international and national commitments to establish a National Representative System of Marine Protected Areas (NRSMPA) by 2012.

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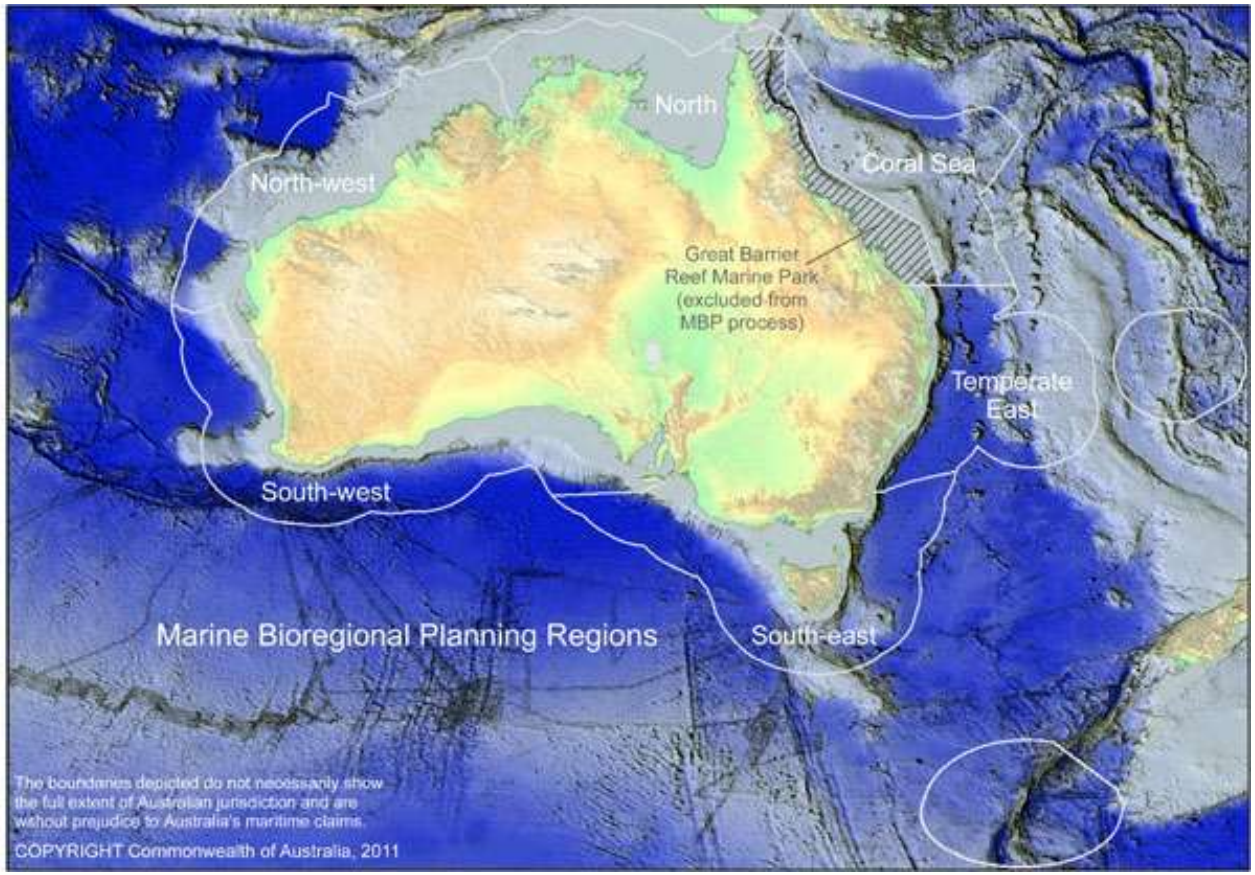
Commonwealth marine reserves



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NSW marine parks

- 6 marine bioregions
- NSW system of marine protected areas:
  - six multiple use marine parks (Marine Parks Act)
  - 12 aquatic reserves (Fisheries Management Act)
  - 62 national parks and reserves with marine components (National Parks and Wildlife Act)
- Marine protected areas cover 36% of NSW waters but only 6% is included in marine sanctuaries
- Currently no active process for increasing areas of marine protection

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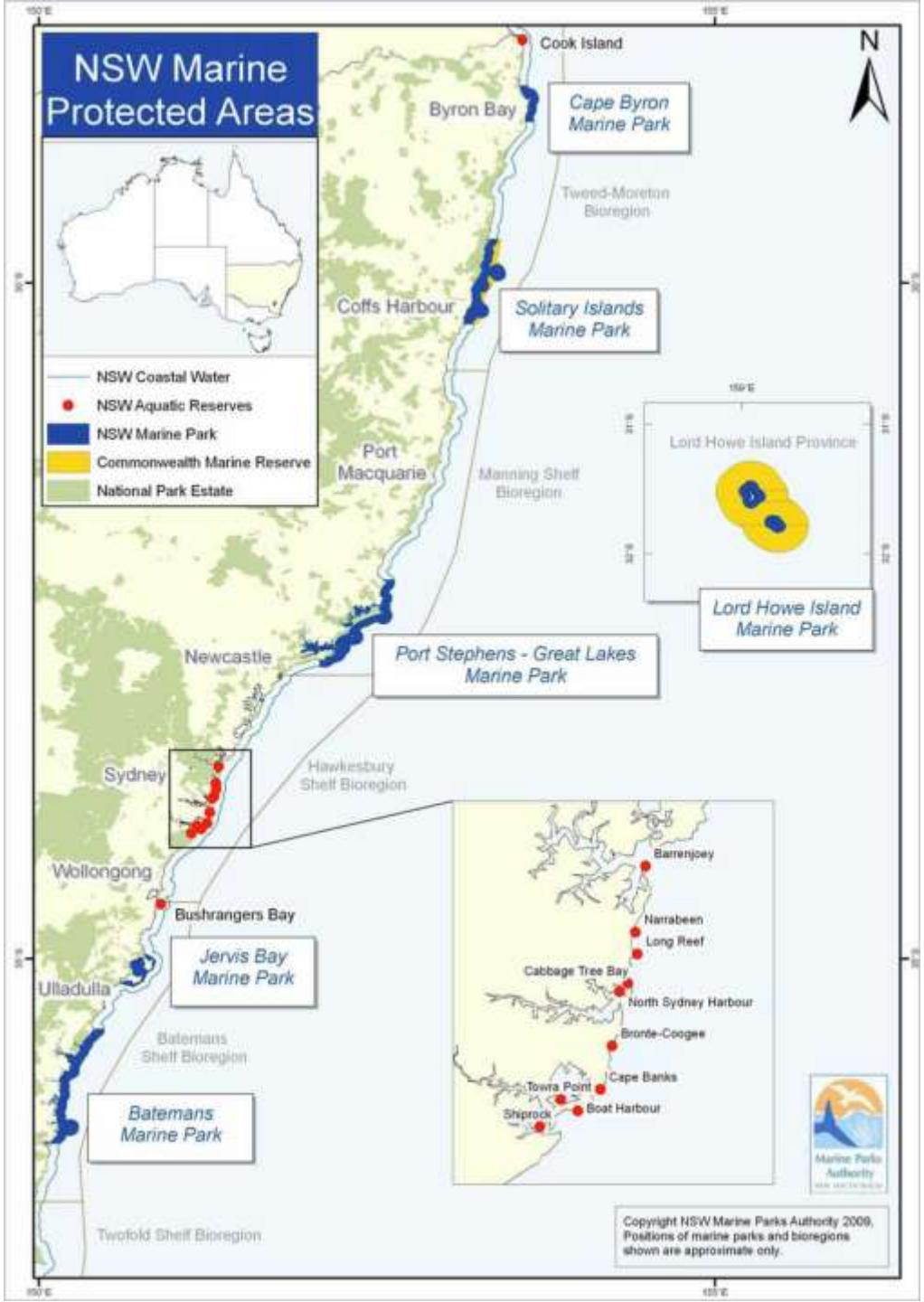
NSW Marine Protected Areas
NSW Coastal Water
NSW Aquatic Reserves
NSW Marine Park
Commonwealth Marine Reserve
National Park Estate
N
Cook Island
Byron Bay
Cape Byron Marine Park
Tweed-Moreton Bioregion
Coffs Harbour
Solitary Islands Marine Park
Port Macquarie
Manning Shelf Bioregion
Lord Howe Island Province
Lord Howe Island Marine Park
Newcastle
Port Stephens - Great Lakes Marine Park
Sydney
Hawkesbury Shelf Bioregion
Wollongong
Bushrangers Bay
Jervis Bay Marine Park
Ulladulla
Batemans Shelf Bioregion
Batemans Marine Park
Twofold Shelf Bioregion
Barrenjoey
Narrabeen
Long Reef
Cabbage Tree Bay
North Sydney Harbour
Bronte-Coogee
Cape Banks
Towra Point
Boat Harbour
Shiprock
Marine Parks Authority
Copyright NSW Marine Parks Authority 2009. Positions of marine parks and bioregions shown are approximate only.

Independent Scientific Audit of Marine Parks

- The two principal recommendations of the Panel are:
  - That the governance of the NSW Marine Estate be reorganised by bringing the entire estate under one legislative and administrative structure that is closely aligned with the five catchment management authorities covering the NSW coastal drainage systems. This will require the creation of a new entity, the Coastal and Marine Management Authority, incorporating the NSW Marine Parks Authority, NSW Coastal Panel, NSW Fisheries and any other relevant bodies.
  - That science for the NSW Marine Estate be reorganised under an independent Scientific Committee. The Audit Panel makes recommendations about the organisational approach that this Committee should take and suggests a number of research priorities. In particular, these priorities call for greater emphasis on research in the social and economic sciences and the application of these findings to management.

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Fisheries Management

What the science tells us

- If present fishing practices are allowed to continue, there will be no viable ocean fishing in another 40 to 50 years*.
- Australia wide 13 of 96 fish stocks are classified as overfished or subject to overfishing.
- In NSW 6 species are considered overfished but the status of 50% of species caught commercially is unknown.
- All NSW commercial fisheries were assessed for sustainability between 2001 and 2009 and none were found to be sustainable with current management practices. No assessment for recreational fishing.

* Worm, B., Barbier, E. B., Beaumont, N., Duffy, J. E., Folke, C., Halpern, B. S., Jackson, J. B. C., Lotze, H. K., Micheli, F., Palumbi, S. R., Sala, E., Selkoe, K. A., Stachowicz, J. J. & Watson, R. 2006. Impacts of Biodiversity Loss on Ocean Ecosystem Services. *Science,* 314**,** 787 - 790.

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Commonwealth fisheries management

- Ecological Risk Assessments for 15 fisheries implemented through 13 harvest strategies
- Wildlife Trade Operations for export fisheries
  - Humane Society International and Minister for the Environment and Heritage [2006] AATA 298
  - HSI sought merits review of the decision to declare fishing operations in the Southern Bluefin Tuna (SBT) Fishery to be an approved wildlife trade operation (WTO) pursuant to s 303FN of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).
  - The SBT is a highly endangered species, whose numbers have been severely depleted due to overfishing. The Tribunal found that the approval of the SBT fishery would not be detrimental to the survival and conservation of the species and upheld the decision of the Minister to approve the SBT fishery as a WTO.

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NSW fisheries management

- 9 commercial fisheries managed by share management, i.e. fishers have been allowed a right to fish in the form of shares.
- 2 commercial fisheries have total allowable catches, remaining fisheries have input controls
- May 2012 “Independent Review of Commercial Fisheries Policy, Management and Administration”. Recommended approach to dealing with current fisheries management problems:
  - A comprehensive structural adjustment program;
  - Governance processes be reformed to achieve a proper balance of responsibilities and accountabilities within Government and industry to restore confidence in decision making; and
  - Consultation be reformed to provide for effective processes and structures to facilitate co-ordinated advice, communication and feedback between Government and industry.

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Threatened Species

What the science tells us

- IUCN 2011 – “high risk of entering a phase of extinction of marine species unprecedented in human history.”
- NSW threatened marine species
  - 4 species presumed extinct
  - 3 critically endangered species
  - 2 endangered species
  - 4 vulnerable species
  - 4 key threatening processes
- All species of whales and dolphins protected
- All species of syngnathids (seahorses, seadragons etc.) protected
- Many species of seabird at risk

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Management Responsibility

- NSW - responsibility split between Industry and Investment NSW (Fisheries) and Office of Environment and Heritage
  - I&I NSW is responsible for all species of fish and marine vegetation (Fisheries Management Act).
  - OEH is responsible for all other types of animals, including whales, dolphins, seals and waterbirds (National Parks and Wildlife Act).
- Commonwealth – responsibility under the EPBC Act.

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Case Study – Grey Nurse Shark

- Approximately 1,000 remaining off east coast of Australia
- Minimum 3,500 need to ensure population survival
- Critically endangered under Fisheries Management Act and EPBC Act.
- Protected since 1981, listed since 1984
- 10 critical habitat areas
- Draft recovery plan since 2002
- Major sources of impact – commercial and recreational fisheries bycatch, beach netting

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Case Study – Grey Nurse Shark

- Fisheries Management
  - Nature Conservation Council of NSW Inc. v. Minister for the Environment and Water Resources and Ors. [2007] AATA 1876
  - “There is no doubt that the population of grey nurse sharks off the east coast of Australia is critically endangered… We are, however, in no doubt that if grey nurse sharks are to survive off the east coast of Australia, further urgent steps need to be taken. Nothing in our decision suggests that this is not so. It is just that this Tribunal is not the body to carry out the task.”
- Marine Protected Areas
  - Increased protection in Solitary Islands and Jervis Bay Marine Parks and South West Rocks revoked by new Liberal Government pending outcome of marine parks audit.
- Key Threatening Processes
  - Current shark meshing program in NSW waters
  - Hook and line fishing in areas important for the survival of threatened fish species

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Climate Change

Climate change and marine biodiversity

- Key Threats
  - Ocean acidification
  - Changes to water temperature and circulation
  - Seal level rise
- Key Impacts
  - Changes to geographic range
  - Changes to abundance
  - Changes to reproduction and feeding ability
  - Changes to community composition and ecological relationships

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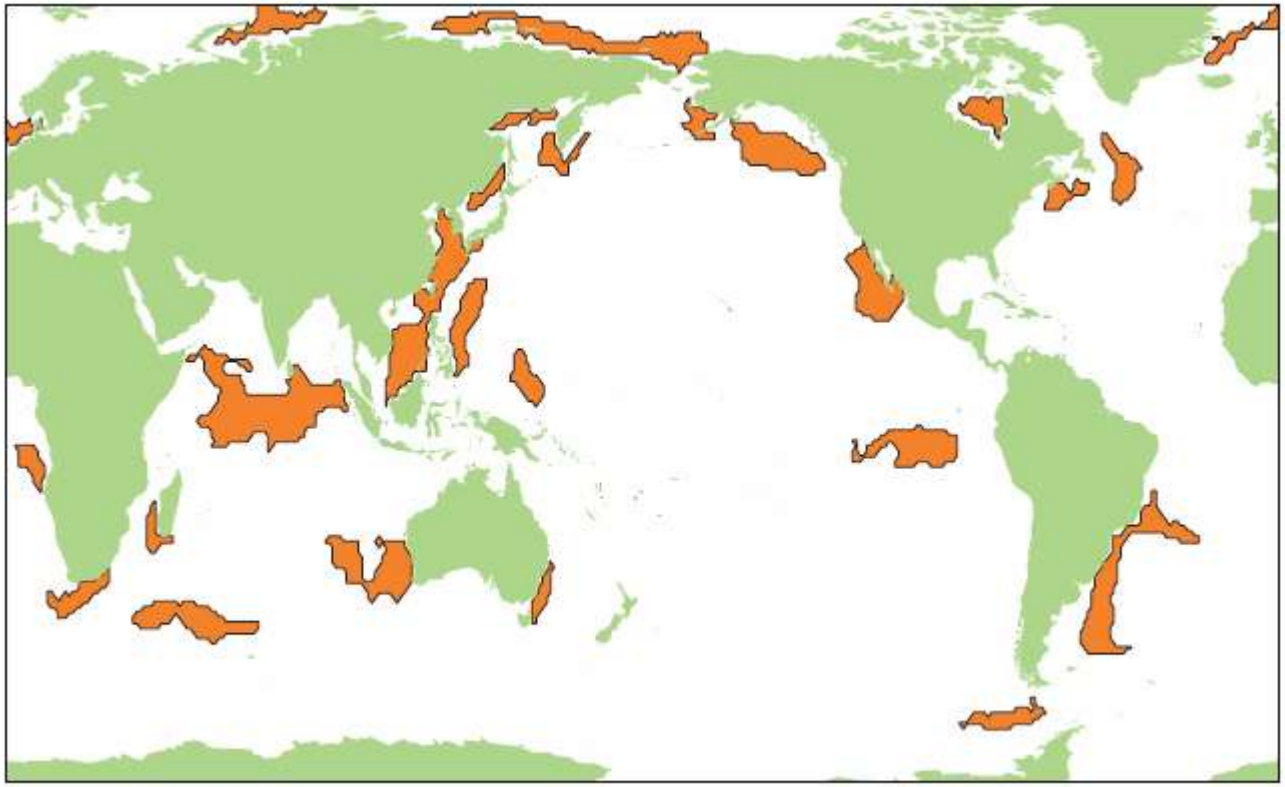
What the science tells us



Global marine hotspots.

- Frusher, S. Pecl, G. Hobday, A. Sauer, W. (2011) A global network of marine hotspots

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