



**UiO** : **Department of Public and International Law**  
University of Oslo

**The Marine Environment, Marine Living Resources and  
Marine Biodiversity**

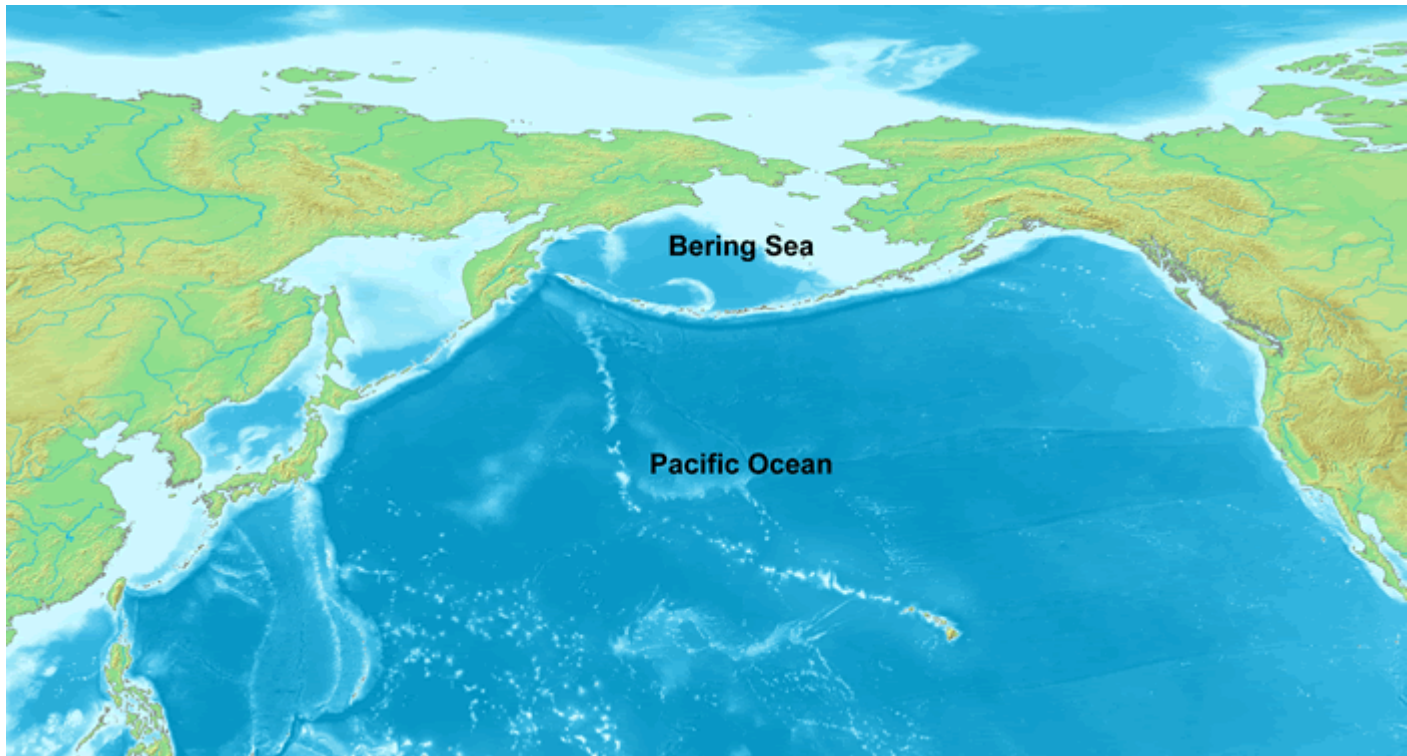
International Environmental Law

JUS 5520



Dina Townsend  
[dina.townsend@jus.uio.no](mailto:dina.townsend@jus.uio.no)

# Pacific Fur Seal Case



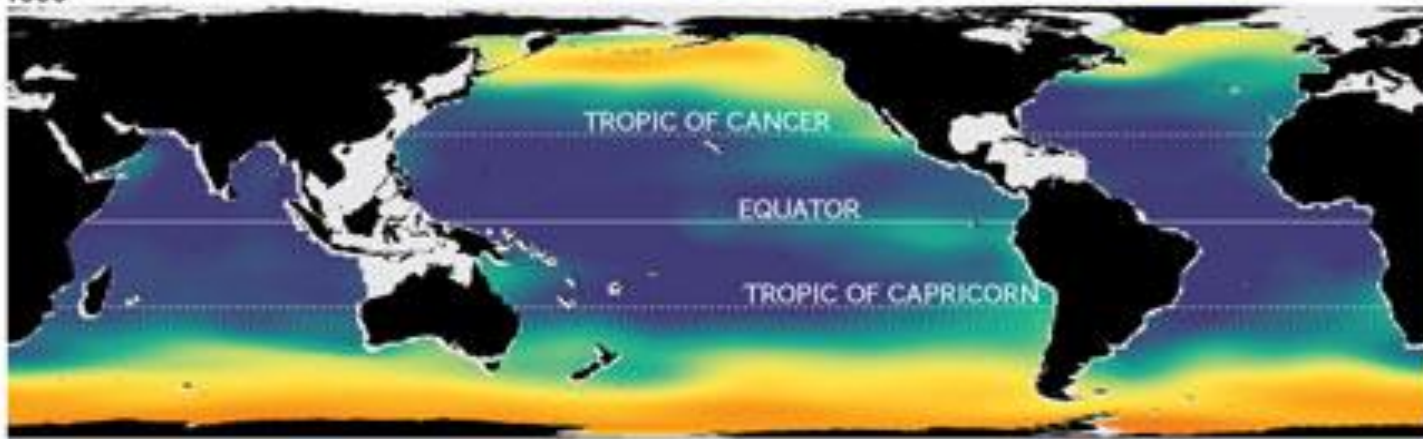
# Regulating the marine environment

What are the **key challenges** facing the Marine Environment?

- Unsustainable fishing
- Pollution – from different sources
- Habitat destruction
- Climate Change
- Invasive species

The marine environment puzzle - Bugge.

1995

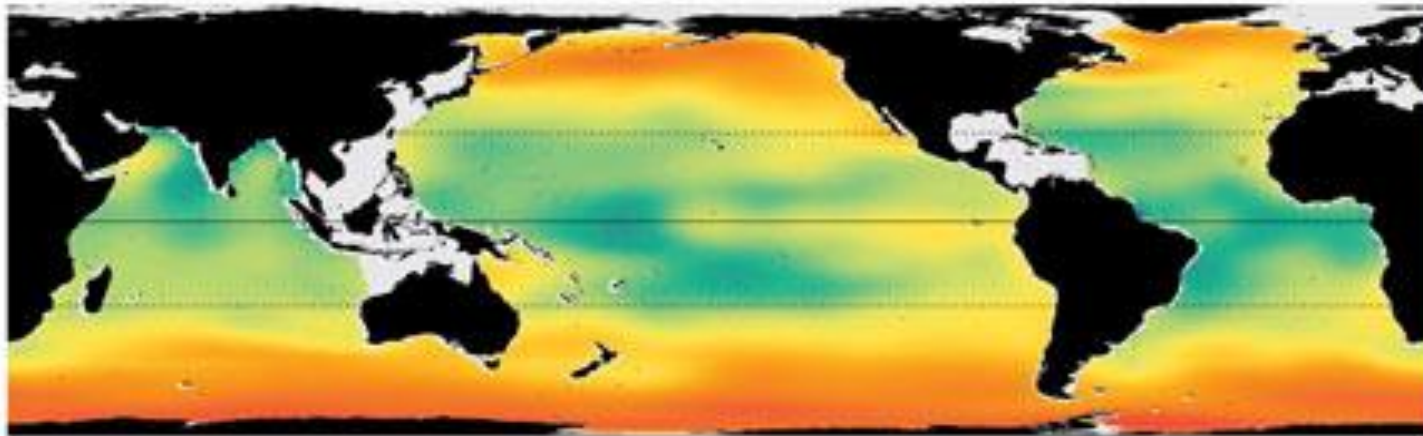


Not  
corrosive

More  
corrosive

No data

2100



DAY 0



DAY 2



DAY 16



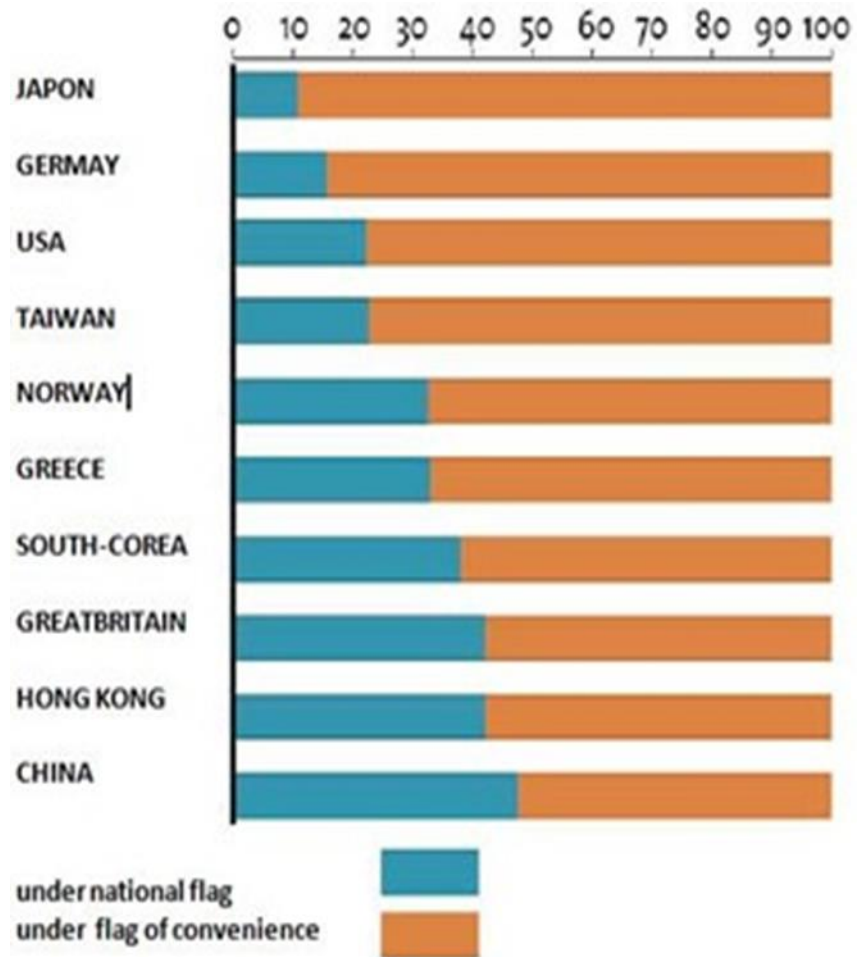
DAY 26



DAY 45

# Regulation of the marine environment

- **QUESTION:** How do we regulate the use of resources and the protection of the environment on the high seas outside of the jurisdiction of states?
  - Extensive international regulation of common resources?
  - Extended jurisdiction of states?
  - Greater liability for flag states? Conflict between coastal and flag states? (Exclusive jurisdiction of flag states – UNCLOS art 92, Arctic Sunrise Case)



# A brief history

- 1893 - Pacific Fur Seal Arbitration - dispute between the UK and the US as to the circumstances in which a coastal State could interfere with British fishing activities on the high seas.
- 1926 – Preliminary Conference on Oil Pollution of Navigable Waters
- 1954 – Oil Pollution Convention
- 1958 – High Seas Fishing & Conservation Convention, Convention on the Continental Shelf, Convention on the High Seas
- 1958 - International Maritime Organisation (IMO) came into existence  
Development of law given impetus by the Torrey Canyon 1968, Amoco Cadiz 1978 and Exxon Valdez 1989.
- 1969 – Intervention Convention
- 1971 – Oil Pollution Fund Convention

- 1972 – Stockholm Convention - marked the beginning of a distinctive area of international law – international environmental law – and raised concerns about the marine environment.
- 1972 - Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter (the London Convention),  
Convention on the Prevention of Marine Pollution by Dumping by Ships and Aircraft (Oslo Dumping Convention)
- 1973 – International Convention for the Prevention of Pollution from Ships (MARPOL)
- 1982 – UNCLOS (entered into force 1994) – oceans are the common heritage of mankind.
- 1992 – Convention of the Protection of the Baltic (Helsinki Convention), Convention on the Protection of the Marine Environment of the North East Atlantic (OSPAR), Convention on the Protection of the Black Sea (Bucharest Convention)
- 1995 – Convention on the Protection of the Mediterranean (Barcelona Convention)



# Evolution of marine environment regulation

- Need for law to respond to the decline in fish stocks
- Law on pollution has largely developed in response to accidents

Eg. **Torrey Canyon** incident in 1968 (oil spill off UK), the **Amoco Cadiz** incident in 1978 (oil tanker ran aground off the coast of France) and **Exxon Valdez** in 1989 (oil tanker spill off the coast of Alaska).  
(But ... **BP**)



# United Nations Convention on the Law of the Sea (UNCLOS)

- Completed in **1982** but only entered into force in **1994**
- Widely supported – over a 160 parties
- **Main objective:**  
establishment of a **legal order for the seas and oceans of the world**, to facilitate **international communication** and promote **peaceful uses** of the seas and oceans, the **equitable and efficient utilization of their resources**, the **conservation of their living resources**, and the study, **protection and preservation of the marine environment**.

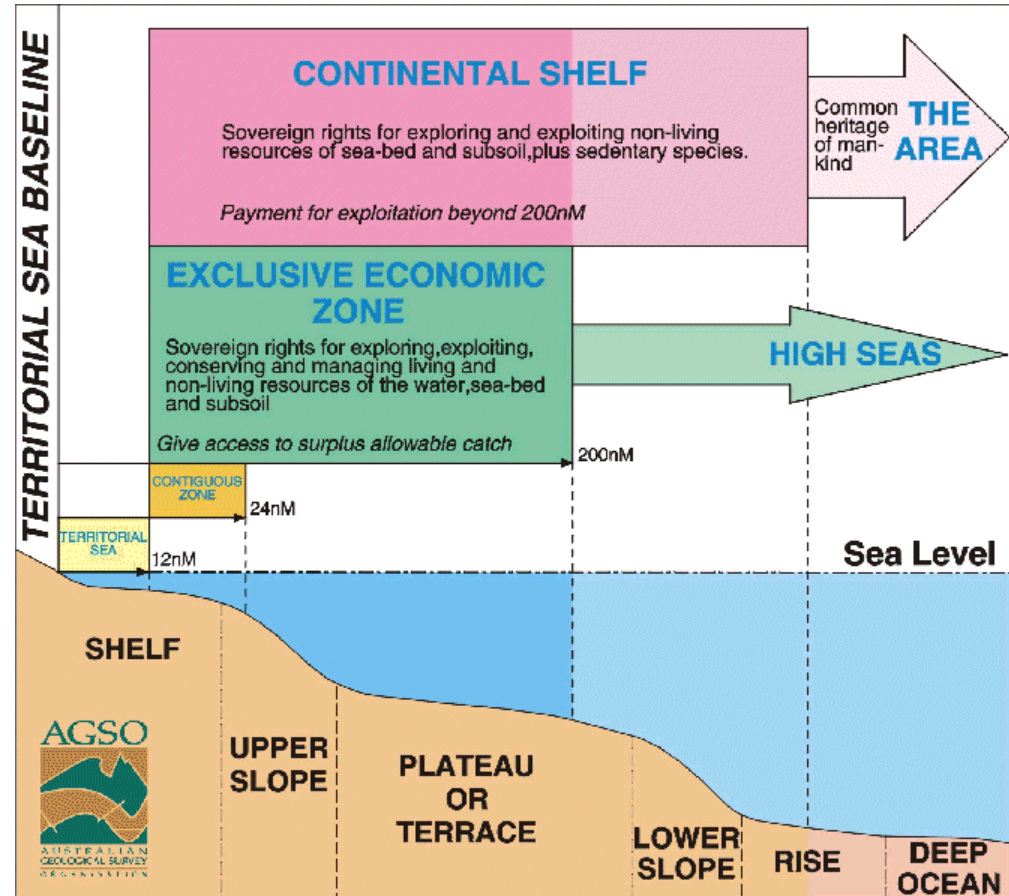
## UNCLOS cont

- Umbrella treaty in international law of the sea
- Creates a framework for issues of jurisdiction, fisheries and exploitation of resources. *Does it create a framework for marine protection? Marine protected areas? Incorporation of environmental principles?*
- Created the International Tribunal for the Law of the Sea (ITLOS) with jurisdiction over any dispute on UNCLOS.
- Criticised for its **fragmented approach** and failure to protect resources outside of national jurisdiction
- Freedom of the seas (Fur Seals – but modified by the Icelandic case in 1974 – coastal states and cooperation)

# Maritime zones under UNCLOS

UNCLOS creates different kinds of obligations in these different zones: In territorial (innocent passage art 21) and archipelagic waters coastal states exercise exclusive sovereignty.

In the EEZ coastal states have sovereign rights to explore and exploit but this is limited by obligations in re migratory and straddling stocks, and by conservation obligations (states must establish a management regime)



28/OA/717

# Disputes over the maritime zones

- Anglo Norwegian Fisheries Case (UK vs Norway) 1951
- North Sea Continental Shelf (Federal Republic of Germany/Netherlands) 1968
- Fisheries Jurisdiction (United Kingdom of Great Britain and Northern Ireland v. Iceland) 1974 – **preferential interests of coastal states**
- Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark v. Norway) 1993
- **South China Sea Arbitration (2016)**

# Environmental provisions in UNCLOS

- Part II – Sovereignty of a coastal state extends to territorial sea – 12 nautical miles from the low water line.
  - Art 21 – state can adopt laws relating to innocent passage on marine protection, management of pollution, scientific research
- Art 61 and 62 – coastal states must implement management and conservation policies for the EEZ – includes reference to an ecosystem approach (in very limited terms – only ref to associated and dependant species)
- Primary environmental obligations contained in Part XII

# Part XII UNCLOS: Protection and preservation of marine environment

- 46 articles elaborate on the primary obligation of states to ‘protect and preserve the marine environment’
- Distinguishes between the duty to protect the environment and the responsibility not to cause damage to other states by pollution
- Significant emphasis on the avoidance of pollution

- **Article 192** General obligation –

States have the obligation to **protect** and **preserve** the marine environment. (See **South China Sea Arbitration** para 906 -, 939 -).  
Obligation in all maritime areas (sovereign and international). What are these obligations? (SCS para 964- law and enforcement)

- **Article 193** - Sovereign right of States to exploit their natural resources

States have the sovereign right to **exploit their natural resources** pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.

- **Article 194** - Measures to **prevent, reduce and control pollution** of the marine environment incl measures to protect rare or fragile ecosystems and species (Fisheries Advisory Opinion, South China Sea Arbitration para 943 - )

States shall take, individually or jointly as appropriate, **all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source**, using for this purpose the **best practicable means** at their disposal and **in accordance with their capabilities**, and they shall endeavour to harmonize their policies in this connection. (SCS 969 – control over activities)



- Definition of pollution in Art 1(4) - introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.
- Distinction between pollution and damage – Art 194(2) states must “take all measures necessary not to cause damage by pollution to other states and their environment”

- Art 194(5) – special protection for rare or fragile ecosystems and the habitats of vulnerable species (also art 195, 196)
- Art 197 (and 123 on semi-enclosed seas) – Obligation for cooperation on a global or regional basis
- Art 204 – 206 require monitoring and assessment (South China Sea para 947-, 987 – obligation also to communicate findings )
- Art 207 – states must “prevent, reduce and control pollution of the marine environment from land based sources...” (Now recognised as customary rule)
- Art 210 – provisions on dumping at sea – states must adopt laws and regulations (also see London Convention and 1996 Protocol)

# UNCLOS

Little beyond  
general obligations

Living organisms on the  
deep sea bed

Biotech/genetic resource governance

No principles  
(esp sustainability  
and precaution)

## What's missing?

Migratory species

Conservation within  
territorial seas

Ecosystem approach

***Does the CBD address any of these gaps?***

## Filling the gaps left by UNCLOS – sector-specific agreements and implementing agreements, :

- Marpol Agreement 73/78 – regulates pollution from vessels
- 1994 Agreement Relating to the Implementation of Part XI of the 1982 Convention on the Law of the Sea of 10 December 1982 (Sea Bed Mining Agreement) – provides a common heritage of mankind regime – resources cannot be accessed exclusively by one state, but only for the common benefit under the control of the International Seabed Authority
- 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and management of Straddling Fish Stocks and Highly Migratory Fish Stocks (Fish Stocks Agreement) – again some indication of an ecosystem approach – states must take into account the ‘biological unity’ of the stocks - also incorporates precautionary principle and sustainability

# Filling the gaps in UNCLOS

- In the works – UNCLOS only provides very broad duties of states to protect marine env and living resources in ABNJ. (See also the opinion by ITLOS on state responsibilities in the Area 2011) Little on marine genetic resources.
- Important area of growth – Chemicals from marine sponges led to development of leukemia and HIV drugs; antifreeze proteins from cold-water fish are used for improving the quality of ice-cream and other frozen foods; enzymes extracted from the Mid-Atlantic Ridge are used to develop biofuels.  
([Christian Prip](#))

## **Development of an international legally binding instrument on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction**

- 2015 – process towards development of an international legally binding instrument on:
  - **Marine genetic resources and benefit sharing**
  - **Area based management tools and MPAs**
  - **EIAs & SEAs (customary law on transboundary impacts. What about commons impacts?)**
  - **Marine technology, capacity development and sharing (90% of patents from marine genetic resources come from 10 developed countries)**
- **Builds on existing instruments (by the FAO, IMO and International Seabed Authority)**

# Filling the gaps: Regional agreements

- UNCLOS establishes the need for states to cooperate on a regional basis for the protection and preservation of the marine environment (art 197)
- Some programs existed before UNCLOS - [UNEP Regional Seas Programme](#) 1974 – “engaging neighbouring countries in comprehensive and specific actions to protect their shared marine environment.” Comprises more than forty framework Conventions and Protocols in 13 regional areas (see list on pages 354 – 358 Principles)
- Regional measures – move away from UNCLOS focus on pollution to more integrated approaches

# Filling in the gaps – regional example

## 1992 OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic

- Takes stronger measures than those envisioned by UNCLOS – such as the prohibition on dumping at sea
  - New approach - Treats:
    - pollution from land-based sources (one of the central objectives of the treaty)
    - pollution for off-shore installations
    - pollution by dumping and incineration at sea
      - An annex and detailed rules for each of these.



# OSPAR continued

- Preamble: Recognises environmental protection as an end in itself
- General obligation: States “shall ... take all possible steps to prevent and **eliminate** pollution”. Pollution to be eliminated, not just prevented, reduced and controlled. Adopts an ecosystem approach to pollution control
- Principles: the precautionary principle, the polluter pays principle, “**sustainable management**”, “latest technological developments and practices”
- Emphasis on (joint) assessment and sharing of information
- Minimum regulation: States can take stricter measures than agreed pursuant to the convention.
- Creation of the OSPAR Commission – powers to take legally binding decisions, assess compliance, review the condition of the area,

# Marine living resources



# Marine Living Resources

- Challenges of marine living resources management (396-398)
  - Migratory stocks – extended jurisdiction has not led to stabilisation of fish stocks
  - Freedom of the High seas creates a lack of incentive to limit fishing – Hardin's tragedy of the commons
  - New technologies for fishing and extraction leading to over-exploitation
  - Problem of communication between science and policy
  - New discoveries in regard to ocean floor genetic resources
  - Problem of illegal, unreported and unregulated (IUU) fishing (some progress, for example North East Atlantic Fisheries Commission's control and enforcement scheme allows boarding and inspections of vessels in the high seas and high demands on port States)

# Marine Living Resources regulation

- **FAO** established in 1945 to coordinate international approaches to fisheries regulation
- **1958 Convention on the Territorial Sea and the Contiguous Zone and Convention on the Continental Shelf** – sovereignty of the coastal state over rights to living resources in the territorial sea and continental shelf
- **1958 Convention of the High Seas** – Freedom of the high seas including freedom of fishing “to be exercised with reasonable regard to the interests of other states”
- **1958 High Seas Fishing and Conservation Convention** – requires states to adopt measures for the conservation of marine resources

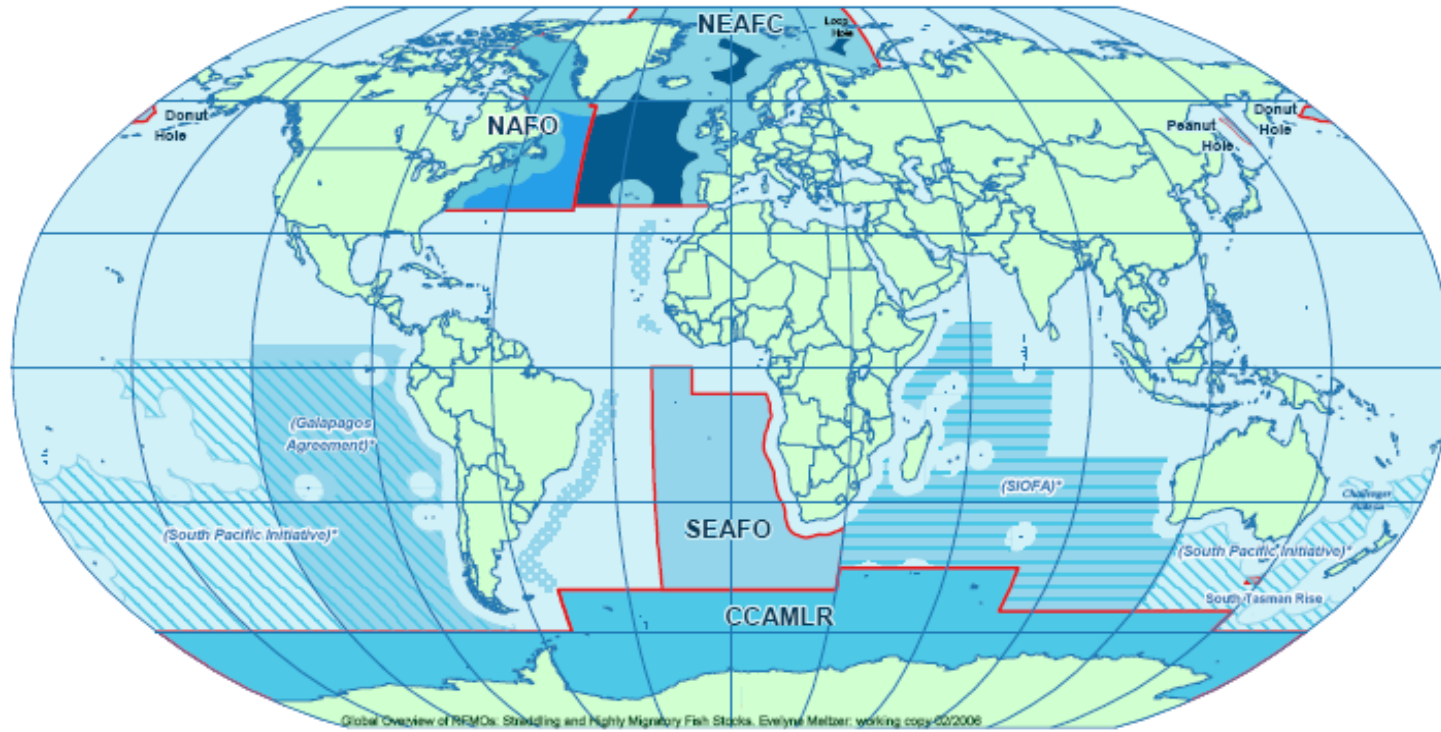
# Marine Living Resources Regulation

## 1982 UNCLOS

- Maritime zones governing marine living resources in and beyond national jurisdiction.
- Extended rights of coastal states by formalising legal status of the EEZ (Art 56) and requiring states to ensure living resources are not over-exploited (Art 61(3) “produce maximum sustainable yield”). States set the TAC.
- TAC must not result in endangerment of living resources “taking into account best scientific evidence available.” (Art 61)
- Provisions on management of fisheries broadly reflect customary international law.
- Some protection for migratory species, straddling stocks and marine mammals, specifically through requirements of co-operation.
- High seas – maintains freedom of all states to fish (Art 87) limited by treaty obligations, rights of coastal states must be respected, provisions concerning conservation must be respected (Art 116).

## 1995 Fish Stock Agreement

- Applies to straddling fish stocks and highly migratory fish beyond areas of national jurisdiction (with limited provision to conservation within areas of national jurisdiction)
- Primary responsibility still falls on the flag state
- Increased international conservation obligations including:
  - Obligations to adopt measures to ensure long term sustainability and promote optimum utilization
  - Use of best scientific evidence to maintain maximum sustainable yield
  - Applies precautionary approach
  - Requires states to assess impacts of fishing and other human activities and environmental factor
  - Requires states to protect biodiversity
  - States are required to collect and share information and engage in monitoring and surveillance
  - Emphasis on regional and sub-regional arrangements – limiting the right to fish in some instances by requiring participation in regional organisations. Affirms and strengthens regional arrangements.



Global Overview of RFMOs: Straddling and Highly Migratory Fish Stocks, Ewlyn Metzner, working copy 02/2006  
For illustration purposes only  
Map Projection: Robinson

— RFMO Boundary

( ) RFMO area under negotiation, not yet adopted or in force.

- |                       |                        |  |
|-----------------------|------------------------|--|
| SEAFO                 | NAFO Convention Area   | (Galapagos Agreement)*   |
| CCAMLR                | NAFO Regulatory Area   | (South Pacific Initiative)*  |
| NEAFC Convention Area | Donut Hole Arrangement | Other Unregulated High Seas Areas where Straddling Fish Stocks occur |
| NEAFC Regulatory Area | (SIOFA)*               |  |

### Global Overview of RFMOs: Straddling Fish Stocks

# Marine living resources case law

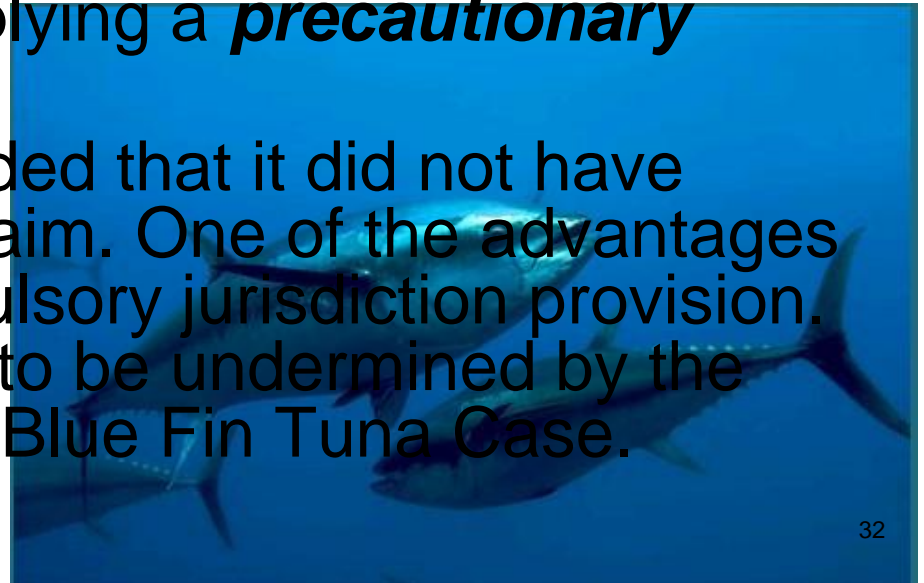
- **Pacific Fur Seal Arbitration 1893** – limits of jurisdiction to protect marine animals and the absolute freedom to fish. Limitations of the ‘flag state’ approach.
- **1972 Fisheries Jurisdiction case (ICJ)** – Iceland decided to extend its exclusive fishing zone to 50 nautical miles. Court denied Iceland’s right to do so but said that Iceland had preferential fishing rights. ICJ found the states must have respect the other’s rights and needs and must have due regard for conservation needs.
- The WTO Appellate Body’s decision in the **Shrimp Turtle case 1998**, concerning the circumstances in which the United States was able to impose conservation measures under its laws on shrimping activities taking place in four Asian countries
- Case concerning **Whaling in the Antarctic**



# Marine living resources case law

International Tribunal for the Law of the Sea's provisional measures order in the **Southern Blue-Fin Tuna** case brought by Australia and New Zealand against Japan, addressing Japan's unilateral scientific experimental fishing (August 1999).

- ITLOS prescribed provisional measures pending the decision of an arbitral tribunal setting the annual allocation at the level last agreed and stopping experimental fishing, applying a **precautionary** approach.
- The arbitral tribunal decided that it did not have jurisdiction to hear the claim. One of the advantages of UNCLOS is the compulsory jurisdiction provision. This provision was seen to be undermined by the decision in the Southern Blue Fin Tuna Case.



# Marine biodiversity



# Marine ecosystems and marine biodiversity

- **UNCLOS – Part XII**
- **Convention on Biological Diversity (CBD)**
  - Extends to marine diversity – not overridden by UNCLOS so long as they are consistent with the general principles
  - Responsibility on states to ensure activities within their jurisdiction do not cause damage to other states or areas beyond their jurisdiction (Art 3)
  - Jakarta Mandate on Marine and Coastal Biological Diversity 1995 – area management, protected areas etc
  - relationship between the CBD and UNCLOS? CBD and Nagoya Protocol govern marine biological diversity on land and marine areas within national jurisdiction. What about ABNJ?
- Regional measures and some species specific interventions

**= A piecemeal approach to marine biodiversity**

# Marine biodiversity

- **A new International Agreement on Marine Biodiversity?**
- Outcome of the Ad Hoc Open-ended Informal Working Group:  
“Decide that negotiations shall address the topics identified in the package agreed in 2011, namely the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, in particular, together and as a whole, marine genetic resources, including questions on the sharing of benefits, measures such as area-based management tools, including marine protected areas, environmental impact assessments and capacity-building and the transfer of marine technology”

# Marine Protected Areas in the High Seas

- No single definition of MPA (although see the CBD) and little international regulation. IUCN definition: “clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.”
- UNCLOS – no legal impediment to establishing MPAs in the high seas given the freedoms of the high seas. States can also create MPAs in their EEZs, subject to the provisions of UNCLOS.
- Some pioneering work to establish MPAs under the OSPAR Convention – identified 8 potential MPA sites – various barriers to this process.
- MPAs on the high seas require high levels of international cooperation
- IWC Whale sanctuary and other examples of limited MPAs.
- Only 3 percent of the oceans are protected by MPAs.
- Johannesburg Plan of Implementation – set goals for 2012 of 10%.

## Summing up: Key questions

- How are we regulating the marine environment in the high seas? Is this regulation adequate? How could it be regulated better?
- Have we moved from a reparative approach to a prevention and precaution approach? (1995 Agreement)
- How are we enforcing state obligations in the high seas? Are courts effective? Do we need more and better enforcement mechanisms?
- Are states co-operating in the management of marine resources and in the preservation of the marine environment? Are the co-operative mechanisms effective?

## Resources

- <http://www.jus.uio.no/english/services/library/treaties/06/6-05/>
- IMO - <http://www.imo.org/Pages/home.aspx>
- FAO - <http://www.fao.org/fishery/en>
- UN Treaties – (for example Intervention Convention - <https://treaties.un.org/doc/Publication/UNTS/Volume%20970/volume-970-I-14049-English.pdf>)
- JCLOS blog - <https://site.uit.no/jclos/>