

Fisheries Management Law & Economics

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International Ocean Law Trade and Fisheries

Lecture 2



Outline

Law of the Sea & International Ocean Law

Tragedy of The Commons

United Nations & UNCOLS

International Regulatory Boundaries

Status of World Fisheries

CCRF

Learning Outcomes

- Describe the role of International Ocean Law, and what type of events and issues it helps to manage and avoid
- Apply the concept of "Tragedy of the Commons" to fisheries management on a global scale
- Describe the role of the United Nations in international fisheries management
- Compare the different types of jurisdictions involved in ocean propriety and resources
- Illustrate the importance of fisheries as a livelihood and food source world wide
- Discuss the principles behind the Code of Conduct for Responsible Fisheries, and the resulting guidelines of the Code

Why do we not have this?



Or this?



Or this?



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What is the Law of the Sea?

- The law of the sea is a body of customs, treaties, and international agreements by which governments maintain order, productivity, and peaceful relations on the sea.



International Ocean Law (IOL)

- IOL developed because there are no boundaries in the ocean.
- Fish and pollution run throughout the ocean.
- We are all connected
- International dogma must exist to govern ocean uses
- IOL developed to formalize issues of:
 - seabed ownership,
 - fisheries resources
 - freedom of seas,
 - balance rights of states and global community



Significance of IOL

- Allows for coordination among states of world
- Allows for advancing political/economic cooperation
 - Alaska and Canada and fisheries issues
- Allows for implementation of ideas such as ecosystem management and habitat protection



Self Check

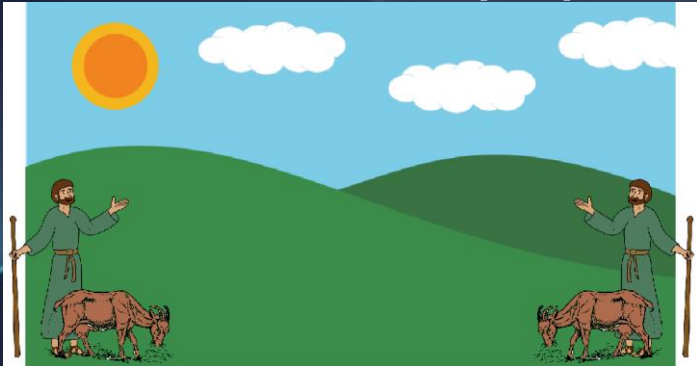
- Identify the primary reason that international ocean law exists
 - A) There are no boundaries in the ocean
 - B) Formalize issues of seabed fisheries ownership
 - C) To establish freedom of the Seas
 - D) There must be some governance of the oceans
 - E) All of the above

Self Check

- The Law of the Sea is a set of customs, treaties, and international agreements that govern the worlds Oceans
 - A) True
 - B) False

Tragedy of the Commons

- Garrett Hardin's "Tragedy of the Commons," written in the 1960's described phenomena of areas with no management
- In general an individual utilizing a common resource will act in own self interest = Bad for resource
 - Written by Economist
 - Made popular by Ecologist/Philosopher



*"Ruin is the destination toward which all men rush, each pursuing **his own best interest** in a society that believes in the **freedom of the commons**. Freedom in a commons brings ruin to all."*
— **Garrett Hardin**



Tragedy?

- Are we there?



The Oceans as Commons

- In ocean, where everyone uses and no one manages, oceans get destroyed because everyone acts in own self interest
- Can be applied to many resources
 - atmosphere, oceans, rivers, fish stocks, national parks, the office refrigerator



How do we use the Sea?

- **Disposal of Waste from Land:** including sewage, non-point sources, carbon dioxide sink
- **Energy:** including conversion of tidal, wave, thermal (OTEC), salinity and wind energy
- **Fisheries and Aquaculture:** including resources, technology, production, processing, utilization, trade, governance
- **Human Settlements on the Coast:** including coastal urbanization and development, destruction of habitats and other physical alterations
- **Marine Biotechnology:** information on pharmaceuticals, other chemicals, genetic resources and products developed from marine living resources using biotechnology



How do we use the Sea 2

- **Non-Consumptive Uses:** including clean water, endangered species, marine reserves, habitats, viewing of nature (ecotourism), aesthetic values and amenities
- **Ocean Dumping and Ship Wastes:** including dredging of ports, voluntary dumping, disused oil platforms, discharges from cargo and passenger ships, nuclear waste disposal
- **Offshore Oil, Gas and Mining:** exploration and extraction of oil and gas; gravel, sand and mineral mining from the coast to deep water
- **Recreation and Tourism:** including fishing, boating, swimming, surfing and other types of recreation and tourism, infrastructure development, management approaches, managing the impact
- **Transportation and Telecommunication:** including maritime transport and telecommunications (pipes, cables), navigation, port infrastructure, shipping rules, safety at sea, routes, congestion, accidents, governance



Self Check

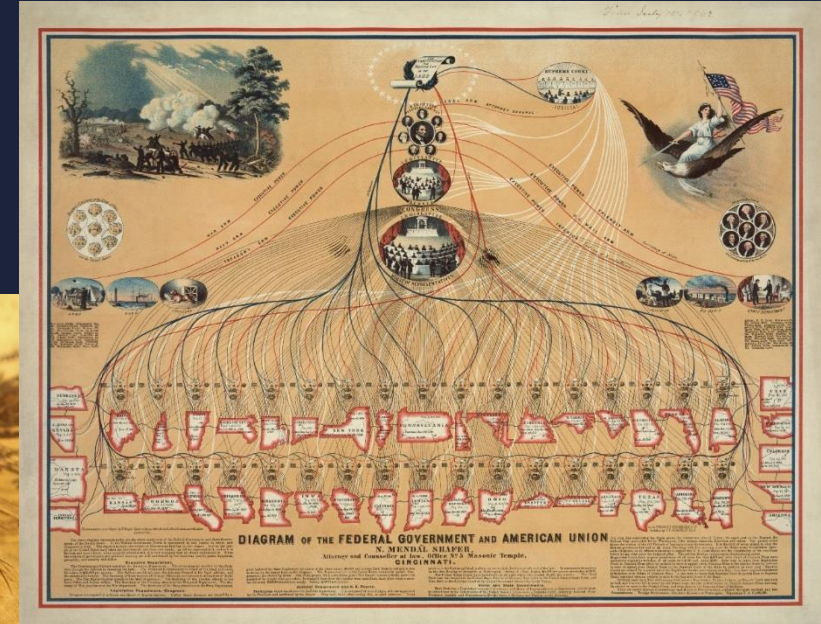
- The tragedy of the commons when applied to the world's oceans can be simplified by saying, when everyone uses and no one manages, oceans get destroyed
 - A) True
 - B) False

Self Check

- Oil and Gas, Transportation, Tourism, Energy, and fisheries are all ways people use the worlds oceans
 - A) True
 - B) False

Domestic Law Making

- Law product of political process (law/politics directly related)
- Much industry input into law-making
 - \$\$\$ at stake.
- Lobbyists
- House
- Senate
- President

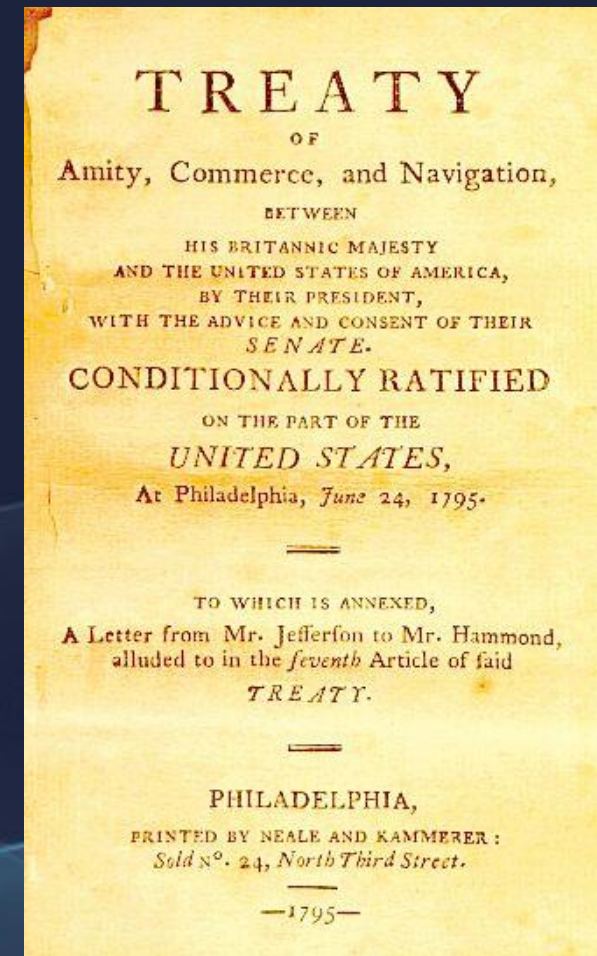


International Ocean Law (IOL)

How does it work

Two Nations (states or countries) can enter into an agreement or 'treaty'

1. Need is perceived
2. Negotiations – language development
 - Very political
 - Consensus
3. Treaty is drafted / provisional acceptance
4. Treaty ratification
(ratification varies among states: in US, 2/3 of Senate must approve; President ratifies treaty).
5. Treaty enters into force



Characteristics of International law

- No international govt. exists to create international law binding other states
- No state can create international law affecting another state
 - In domestic arena, law is passed by majority vote and signature of expectative authority
 - Bound by all – the law of the land
- International law is based on voluntary agreement
- Cooperation is preferred alternative to force
- International law can originate from recognized conventions (rules), customary practices, general principals, judicial decisions,



Enforcement of International Law

- Generally occurs by states themselves
- When law violated, a fact finding exercise occurs to determine what really happened, what was violated and how. US diplomats handle in foreign countries and relay information back to DC
- Do facts justify action taken?
- If no, protest occurs in diplomatic way to inform country of violation of international law



Enforcement 2

- Protests generally correct problem
- If acquiescence occurs regularly without protest, action may be seen as acceptable
- If protests fail, violated country opens negotiations
- Last steps is countermeasures
- Didn't always have court to settle international disputes
 - ICJ – formed in 1945 – 15 members
 - try only 2-3 cases year
 - Contentious case decisions are binding

 - US Withdrew from in 1986
 - Case by case right now



Freedom of the Seas

- Not a given throughout history
- End of 15th century, world's oceans were split between Spain and Portugal with help from Pope.
- 1609 Hugo Grotius – father of modern IOL expressed idea of “mare liberum” freedom of seas
 - “The Sea is free to all and nobody has a right to deny access to it.”
- John Seldin in 1638 expressed other view “mare clausum” – closed seas – felt oceans could be owned for private use
- Mare liberum became dominant position on ocean and has shaped IOL from 1750 – present.

Self Check

- The United Nations is responsible for creating International Ocean Law
 - A) True
 - B) False

Self Check

- NATO is responsible for enforcing all International Ocean Laws
 - A) True
 - B) False

United Nations

- Founded in 1945 with 51 member states
- 193 members in 2011 (same)
- 2016 is 61st year
- \$5.4 Billion annual budget in 2016-2017
- Predecessor was league of nations 1920 – 1946 end of WWII
 - Primarily promote peace and cooperation



United Nations



- Who is Secretary General?
 - A. John Kerry
 - B. Ban Ki-moon
 - C. Tony Blair
 - D. David Cameron
- Where is UN Housed?
 - A. Brussels
 - B. London
 - C. New York
 - D. Zurich



United Nations

- Who is Secretary General?
 - Ban Ki-moon
- Where is UN Housed?
 - New York



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

- This treaty among nations is the overarching International Ocean Law
- It was adopted through the UN in 1982 and has now been in effect for 33 years
- The UN Conference started in 1973 and took 9 years to adoption
- It has wide acceptance in the global community; 167 countries & the EU have agreed to participate
- A 'constitution' for the oceans
- To be a party, the treaty must be accepted in its entirety and no exceptions are allowed

UNCOLS

- Wide range of content— “to regulate all aspects of the resources of the sea and uses of the ocean, and thus bring a stable order to mankind’s very source of life”
- Convention covers: navigation, overflight, protection of marine environment, territorial sea limits, states economic jurisdiction, seabed resources beyond jurisdiction, management of living marine resources, marine research, settlement of disputes

Break



NEVER PUT YE HAND IN A CLAM'S MOUTH

UNCOLS History

- Freedom of-the-seas doctrine advanced in 17th century outside a nation's immediate coastline seas proclaimed to be free to all
- Middle of 20th century concerns for overharvest of coastal fish stocks by distant fleets and increasing claims by states of offshore resources
- 1945 President Truman claims offshore oil, mineral resources of continental shelf
- 1946 Argentina; 1947 Chile, Peru; 1950 Ecuador claim sovereign rights to fish stocks
- After WWII several countries assert 12 mile territorial sea to protect national interests
- Philippines, Indonesia claim seas within archipelagic areas

UNCOLS History 2

- 1960s Oil extraction increased from <1 million tons to 400 million tons
- North sea oil conflicts between Britain, Denmark, Germany
- Cod war—Iceland seizes British fishing ship for violation of fishing rules
- Dawning of nuclear age, ICBMs
- Due to these multiple issues Conference began in NYC in 1973
- Perceived need to resolve these issues was great

Self Check

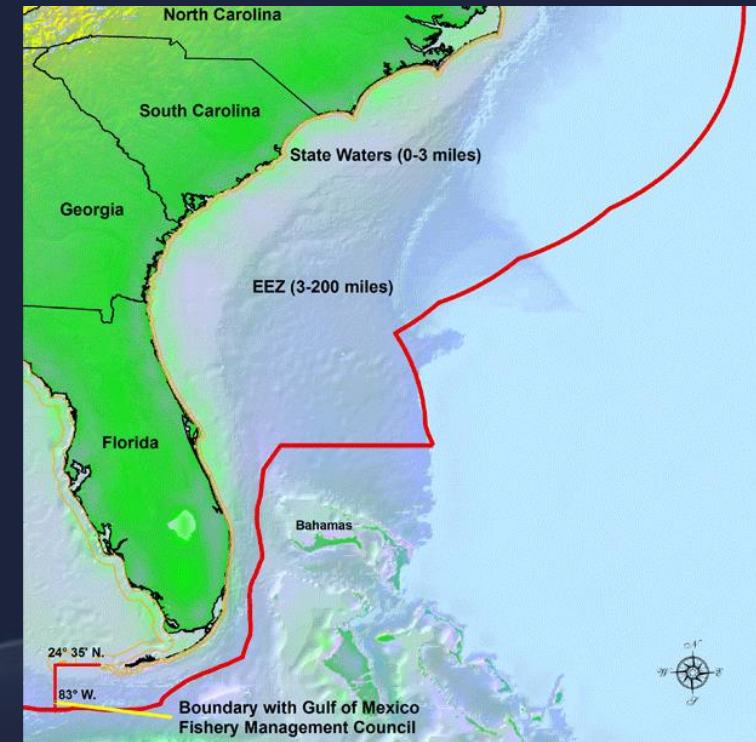
- The United Nations primary role is to promote trade and cooperation
 - A) True
 - B) False

Self Check

- UNCLOS can be said as the primary piece of overarching International Ocean Law
 - A) True
 - B) False

12 Mile Territorial Sea

- UNCLOS set at 12 miles
- Existing 3-mile limit based on 18th century Europe acceptance of cannon shot distance from shore – 1 league (3 miles)
- Debate considered sovereignty of nations controlling narrow straits to navigation, use of nearshore waters by foreign warships, led to compromise allowing “innocent passage” for navigation or overflight, observing regulations, and refraining from any threat.
- UNCLOS has provisions for 12+12 mile enforcement zone
- In US waters 3-mile limit continues as limit of State versus Federal jurisdiction—important concept for Alaska fisheries management

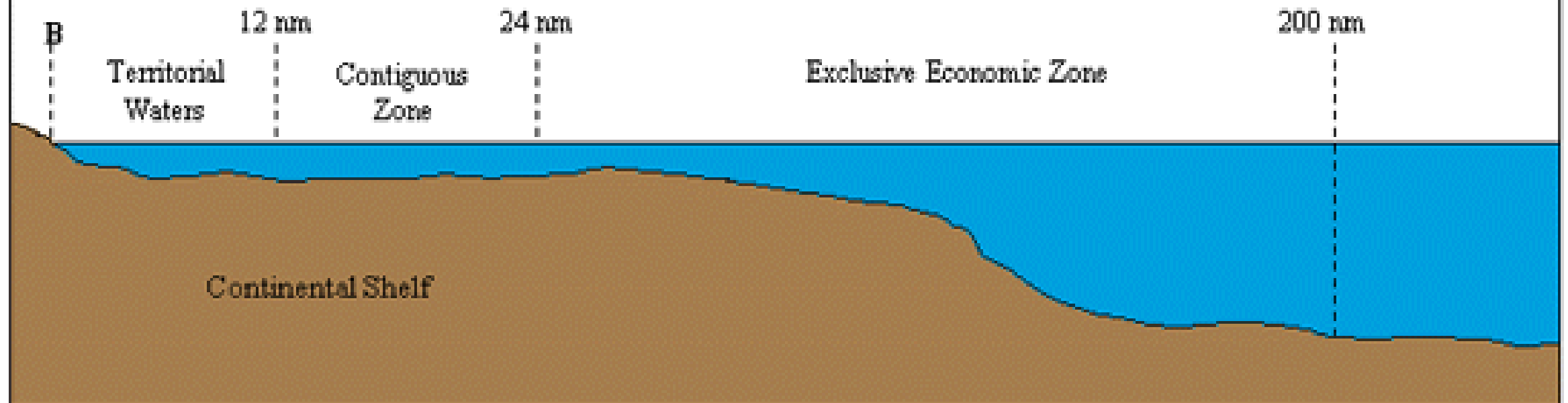


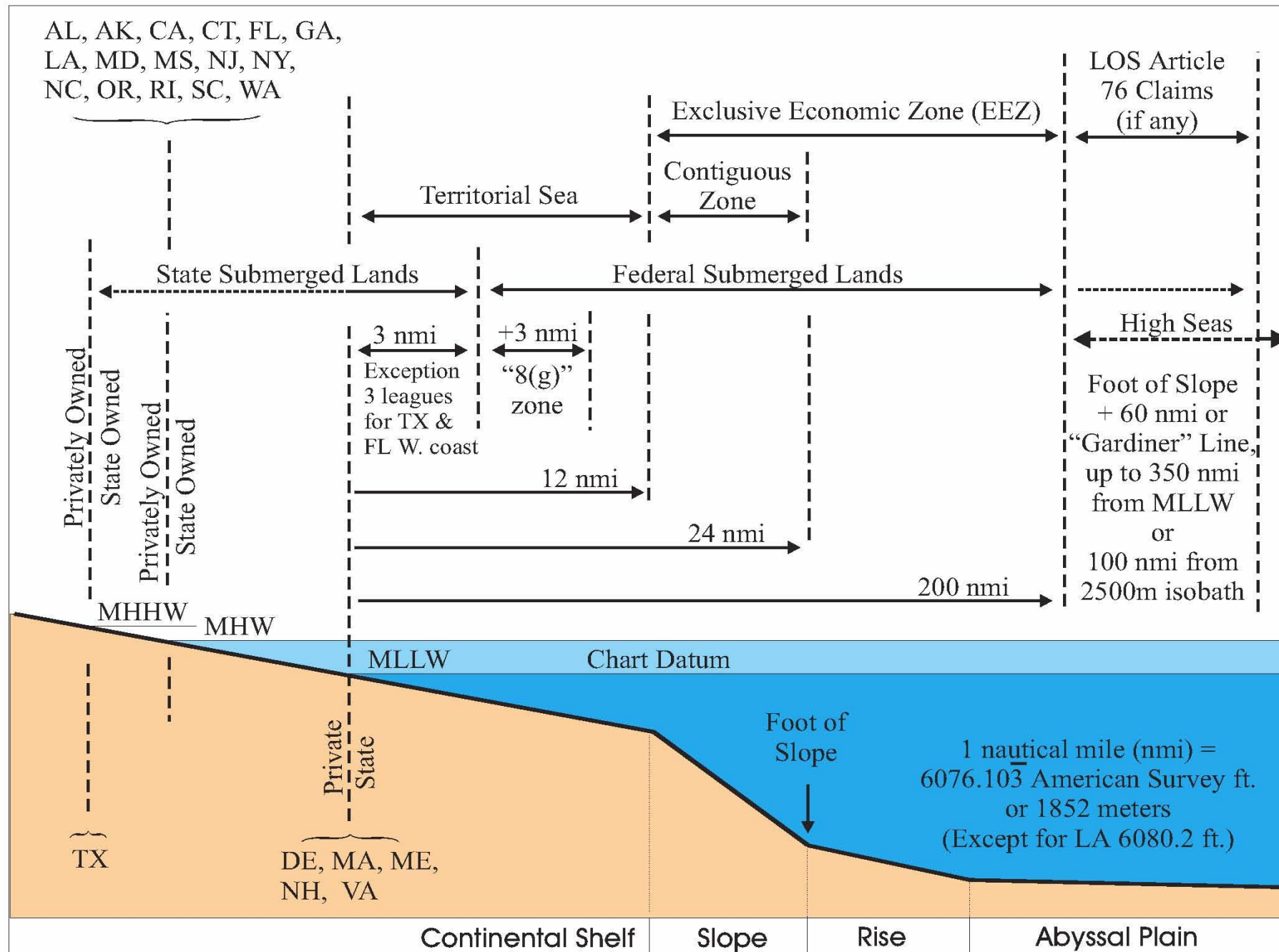
200 Mile EEZ

- EEZ one of most revolutionary agreements of UNCLOS • Idea of sovereignty of coastal states over continental shelf resources = fish, oil, minerals
- Continental shelf defined in 1958 by Int. Law Commission as ‘sea bed and subsoil of submarine areas adjacent to the coast but outside of the territorial sea, to a depth of 200 meters, or beyond’
- In UNCLOS the shelf roughly corresponds to a distance of 200 nm so that was adopted in most cases
- However, nations (around 30) with broader than 200 mile shelf can claim out to 350 miles or to the continental margin for seabed and subsoil exploitation based on criteria
- Such extensions allow resource exploitation but require sharing of revenues
- In 1996 25 % of oil production from offshore reserves

EEZ


Zones of National Jurisdiction 1982 Law of the Sea Convention

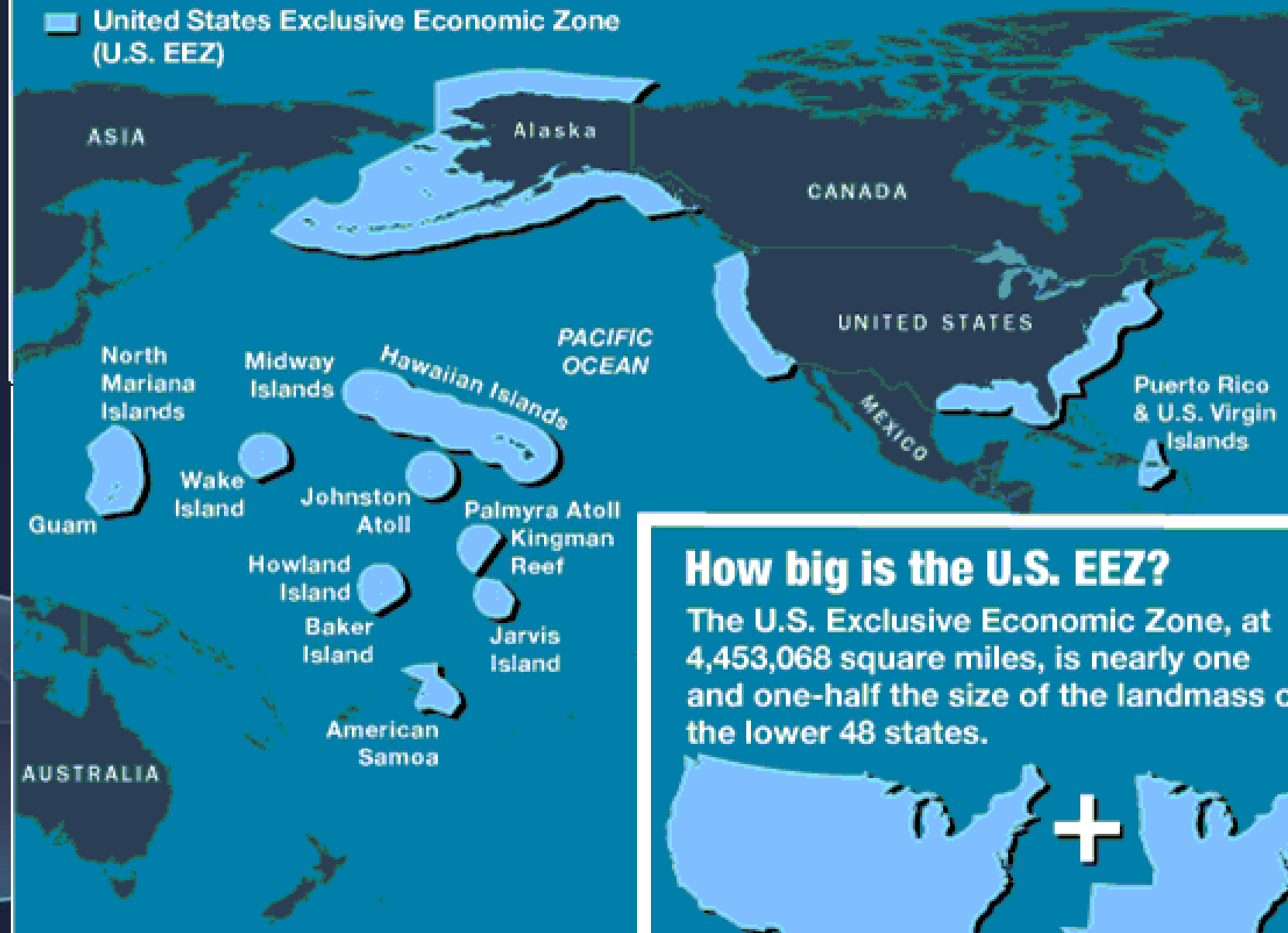






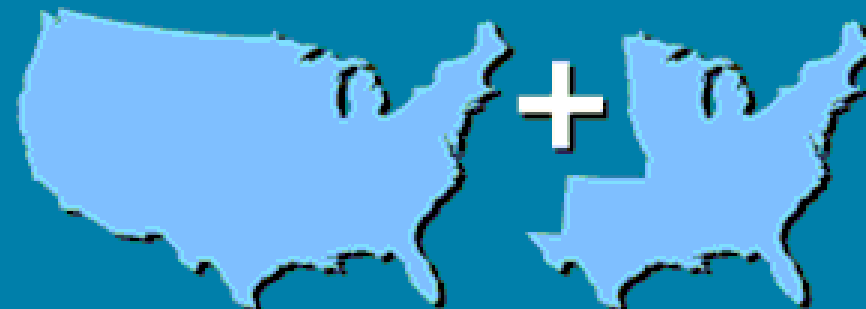
America's Ocean Frontier

 United States Exclusive Economic Zone (U.S. EEZ)



How big is the U.S. EEZ?

The U.S. Exclusive Economic Zone, at 4,453,068 square miles, is nearly one and one-half the size of the landmass of the lower 48 states.



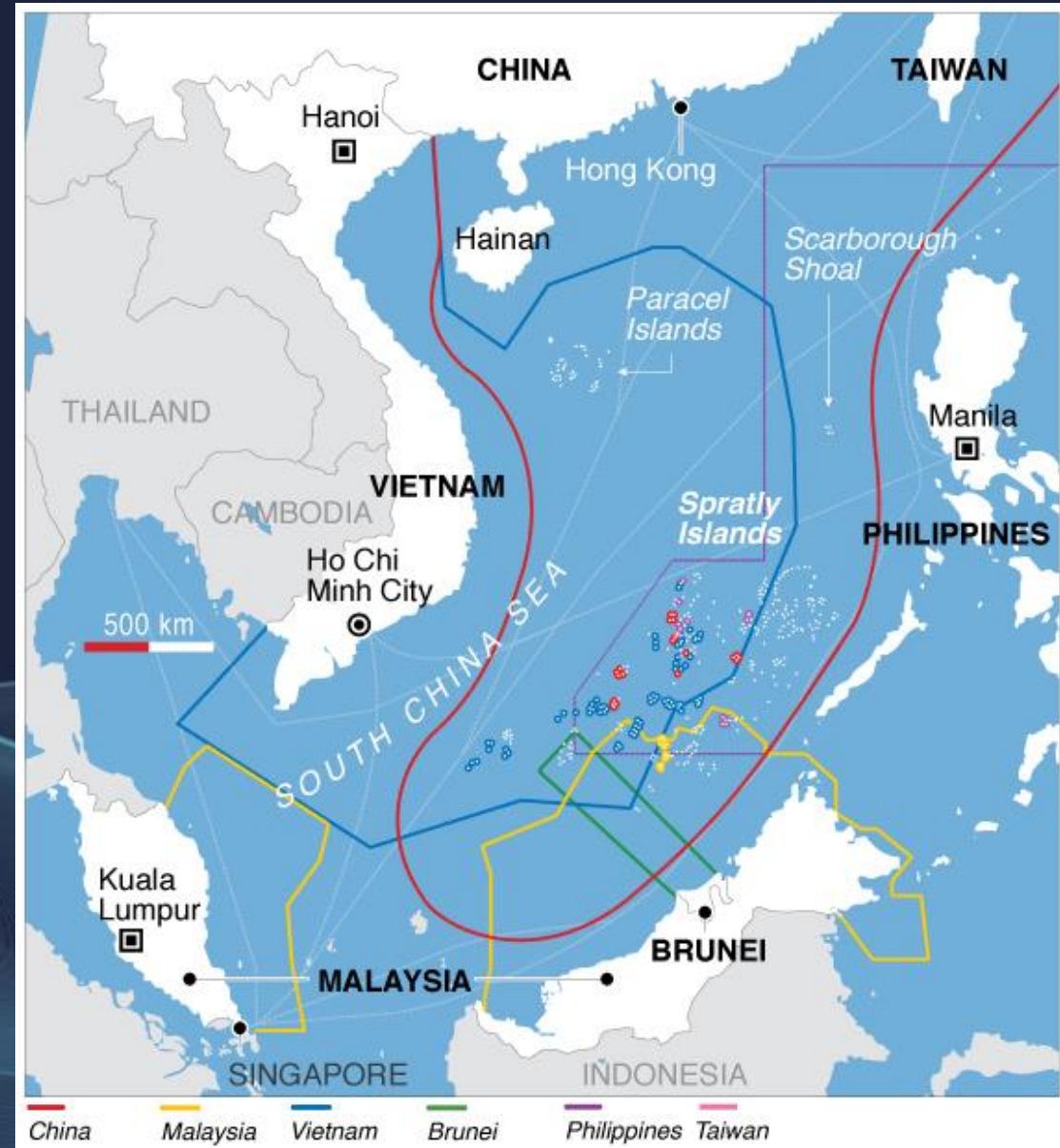
EEZ CLAIMS AND LAND AREA

	LAND AREA	EEZ CLAIM
1. AUSTRALIA	7,700,000	28,500,000
2. RUSSIA	17,100,000	21,500,000
3. USA	9,400,000	20,000,000
4. CANADA	9,900,000	12,400,000
5. CHINA	9,600,000	11,400,000
6. BRAZIL	8,500,000	11,000,000
7. FRANCE	500,000	6,000,000
8. INDONESIA	1,900,000	6,000,000
9. INDIA	3,200,000	5,700,000
10. NEW ZEALAND	300,000	5,500,000

UN Ocean 98; www.ocean98.org/fact.htm

EEZ Disputes

- South China Sea
 - Nation of Brunei
 - People's Republic of China
 - Republic of China (Taiwan)
 - Malaysia
 - Republic of the Philippines
 - Socialist Republic of Vietnam
- Alaska
 - Russia & Canada



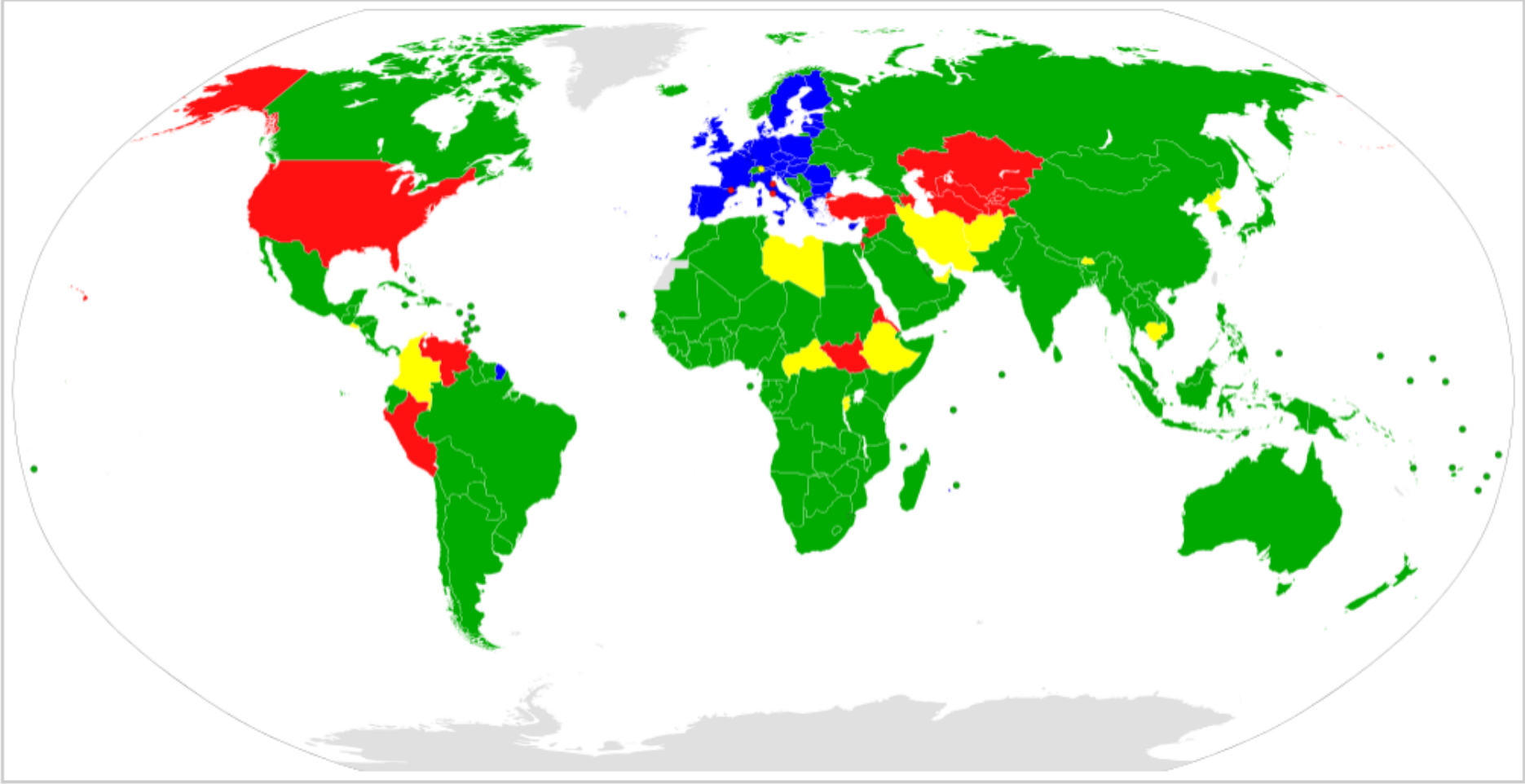
South China Sea





- China Building Islands
 - Claiming 200mi EEZ
 - Airstrips & military



EEZ and Fisheries

- Fisheries conservation and management was a major reason to adopt UNCLOS (although US Has NOT)
- World fish harvests had grown from 15 million tons in 1938 to 86 M tons in 1989, and factory trawlers were having a serious impact of coastal fish stocks and generating increasing disputes
- With control of fisheries comes the obligation to manage, ie to set sustainable total allowable harvest limit for each species, provide scientific marine research, protect habitat
- Also if coastal state cannot harvest all of TAC then obligation to neighboring states and land-locked countries to provide access to harvest
- 86 states have EEZ and now 99% of world's fisheries fall under some nation's jurisdiction

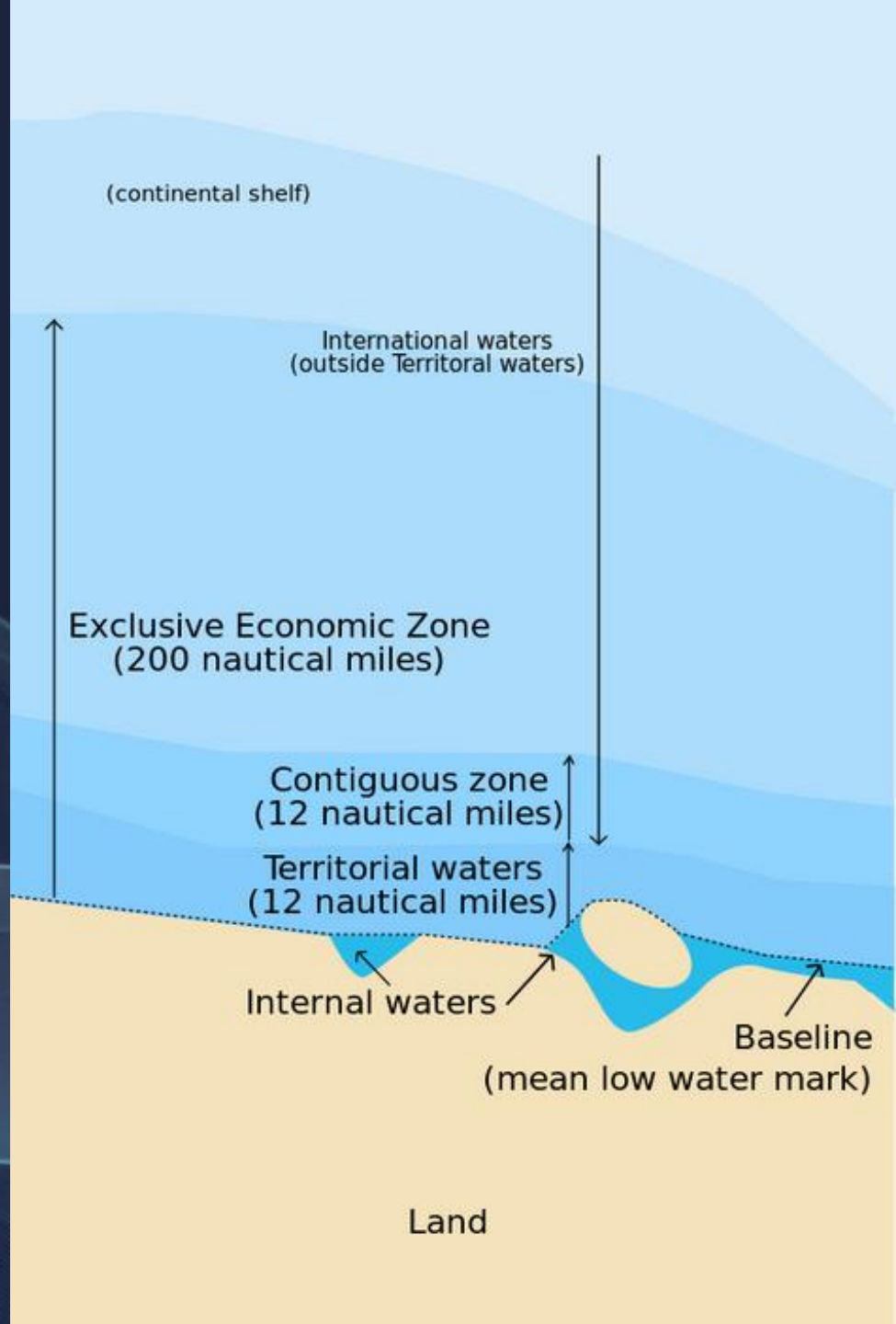


-  Parties
-  Parties, dually represented by the [European Union](#)
-  Signatories
-  Non-parties



EEZ and Marine Environment

- Convention addressed 6 sources of pollution: land and coastal, shelf drilling, seabed mining, dumping, vessel source, atmospheric
- Obligation to protect marine environment
- Obligation to cooperate on global or regional rules and standards within territorial sea
- Jurisdiction to protect marine environment in EEZ, to enforce laws adopted in accordance with the Convention
- International Maritime Organization to adopt global standards and rules
- Enforcement duty of a ship's flag state, authority of port state (where a ship is bound)
- States liability for damage for own or contractor's damage



Self Check

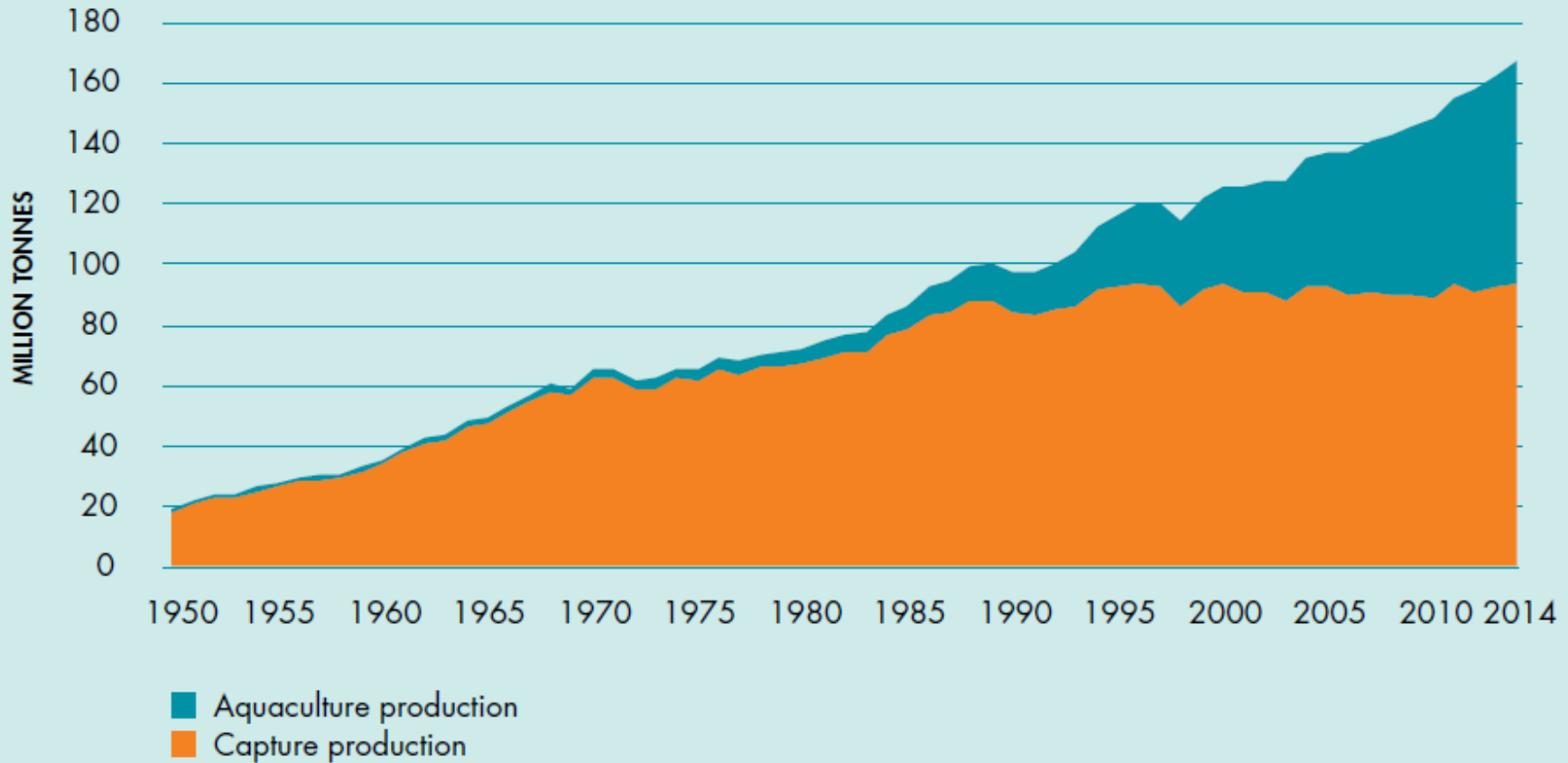
- The Exclusive Economic Zone extends to ____ miles from a counties shores
 - A. 3 miles
 - B. 12 miles
 - C. 100 miles
 - D. 200 miles
 - E. 500 miles

Self Check

- The United States is the founding member of UNCOLS
 - A) True
 - B) False

Status of World Fisheries

WORLD CAPTURE FISHERIES AND AQUACULTURE PRODUCTION



Status of World Fisheries

- Summary of fisheries and aquaculture for 2012 in web link – 230 page FAO 2016 yearbook is reference document
- 2-page summary and short PowerPoint links provided
- 2012 harvest of 136 million tonnes food; 158 TOTAL
- 4.3 billion people (of 6.9 B) provided 15% of animal protein
- 19.2 Kg/person
- Although leveled off since 2001, projected to reach 172 million tonnes by 2021
- Livelihood for 10-12% of world's population

World Fisheries

- Aquaculture showing growth, one of fastest growing food sectors; 47% of total; growing 9%/yr; China 60%
- FAO technical guidelines on best aquaculture management practices—practices improving
- Wild capture fisheries leveling off since 1990
- 30% of marine fish stocks are overfished, under-exploited stocks decreasing
- Need for improved international cooperation, better management, conservation of biodiversity, sustainable system, stewardship, food security, poverty alleviation
- Illegal, unreported, and unregulated fishing continues to be an obstacle to sustainable fisheries, especially in developing countries

CCRF

- "The right to fish carries with it the obligation to do so in a responsible manner so as to ensure effective conservation and management of the living aquatic resources."



Code of Conduct for Responsible Fisheries

- 170 members of FAO of UN adopted in 1995
- Voluntary not mandatory, requires people to commit to principles and goals and take practical measures to implement
- Responsibility to implement is with governments in cooperation with industries and communities
- Done by incorporating into national policies and legislation
- Goal is to achieve long term sustainable fisheries, food supplies, and to alleviate poverty
- Encourage assistance to developing countries by FAO and others, give practical advise



Food and Agriculture
Organization of the
United Nations



CCRF Guidelines

- Shared resources between states calls for new regional fishery management organizations, cooperation
- Minimize negative environmental impacts
- Improve quality of products, reduce waste
- Develop enforceable laws, and consequences
- Base practices on best available scientific information or use precautionary approach
- Consider needs of local people, educate, train, get input



CCRF 2

- Eliminate dynamite, poison, other destructive practices
- Control who fishes with permit
- Keep fleet size appropriate
- Use gear & methods that minimizes by-catch, waste of fish harvested
- Preparation for emergency conservation and management measures
- Keep detailed records, allow inspections, provide harbor services



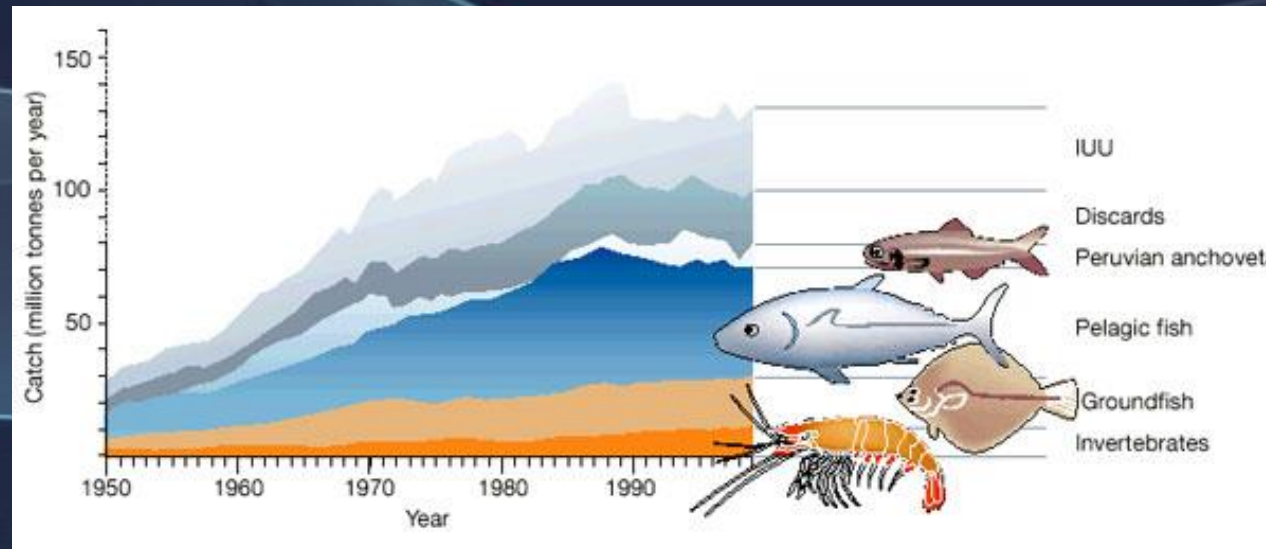
CCRF 3

- Minimize aquaculture effects on wild populations, conserve diversity of genetics
- Monitor environmental effects of aquaculture
- Minimize chemicals to control disease
- Policies for fish transport, introduction of non-native species, restoring endangered species
- Avoid conflicts with local people, settle disputes
- Prevent commercial fraud, eg incorrect labeling information for consumers
- Develop trade laws to avoid international trade from depleted stocks, endangered species
- Cost of conservation, management, research to regional organizations from members



CCRF

- Responsibility to both present and future generations
- “If the world’s nations unite in pursuing responsible fishing practices, there will be ample fish supplies for many generations to come.” –FAO Fisheries Department



Self Check

- The Code of Conduct for Responsible Fisheries can be seen as a set of guidelines for developing fisheries policies or management
 - A) True
 - B) False

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Homework and Readings

- Read Tragedy of Commons by Hardin
- Review state of world fisheries