

OCEANOGRAPHY

11. Marine Pollution

part 2: a supplement

notes from the textbook, integrated with original contributions

Alessandro Grippo, Ph.D.

- The coastal ocean is a very busy place
 - life in water and along the coast, commerce, recreation, fisheries, waste
- Coastal waters support about 95% of the total biomass in the oceans.
- Most commercial fish are caught within 320 km (200 miles) from shore.
- Coast waters are important also for shipping, oil and gas production, and recreation
- Coastal waters act as a sort of a protective belt from land-derived compounds for the open ocean
- Pollution and human-induced coastal changes are major issues

What Laws Govern Ocean Ownership?

- Ownership of the ocean is a relatively recent development
- The Romans spoke of “Mare Nostrum” (Our Sea) but mainly from a geographical point of view
- The Venetian Republic later on called part of that as its own “Gulf of Venice”, still referring to trade
- But the sea has essentially been free for everybody up to early 1600s

The Roman Empire in 117 AD

Legend:

- Senatorial provinces (pink)
- Imperial provinces (green)
- Client states (grey)



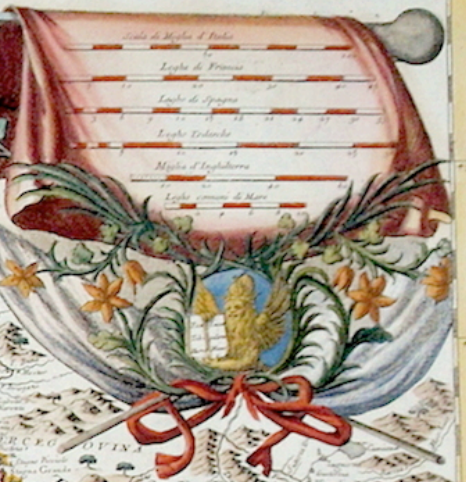


Setten-trione

PARTI DEL PODIUMI

GOLFO DI VENEZIA

ISOLE VENEZIANE
MARE ADRIATICUM



DEL GRAN
FLORENTINO



GOLFO DI VENEZIA

Dedicato
Dal R. M. Coronelli Cosmografo della
Serenissima Repubblica
ad uso dell'Accademia Cosmografica
delli Argonauti
Dedicato
Al' Eccellenza del Sig.
Giulio Giustiniani
Viceroy del R. Mare
in Venezia
Con privilegio del Cardinal Senese
1684

Occidente

Oriente

MARE DALL'ANIA
MARE IONIO

Mezzo Giorno

- In 1672 the British established the concept of territorial sea, the extension to which they could protect the shore with cannons (3 miles)
- By 1702, most countries in the world claimed the waters within the 3-miles limit under the jurisdiction

Law of the Sea

- **United Nations Conference on the Law of the Sea**
 - 1958, 1960, 1973–1982
- Treaties have undergone revisions
- U.S. still not part of the U.N. agreement

- Law of the Sea specifies how coastal nations watch over their natural resources, settle maritime boundary disputes and extend their rights to any riches on or beneath the adjacent sea floor

Four main components of the U.N. Treaty

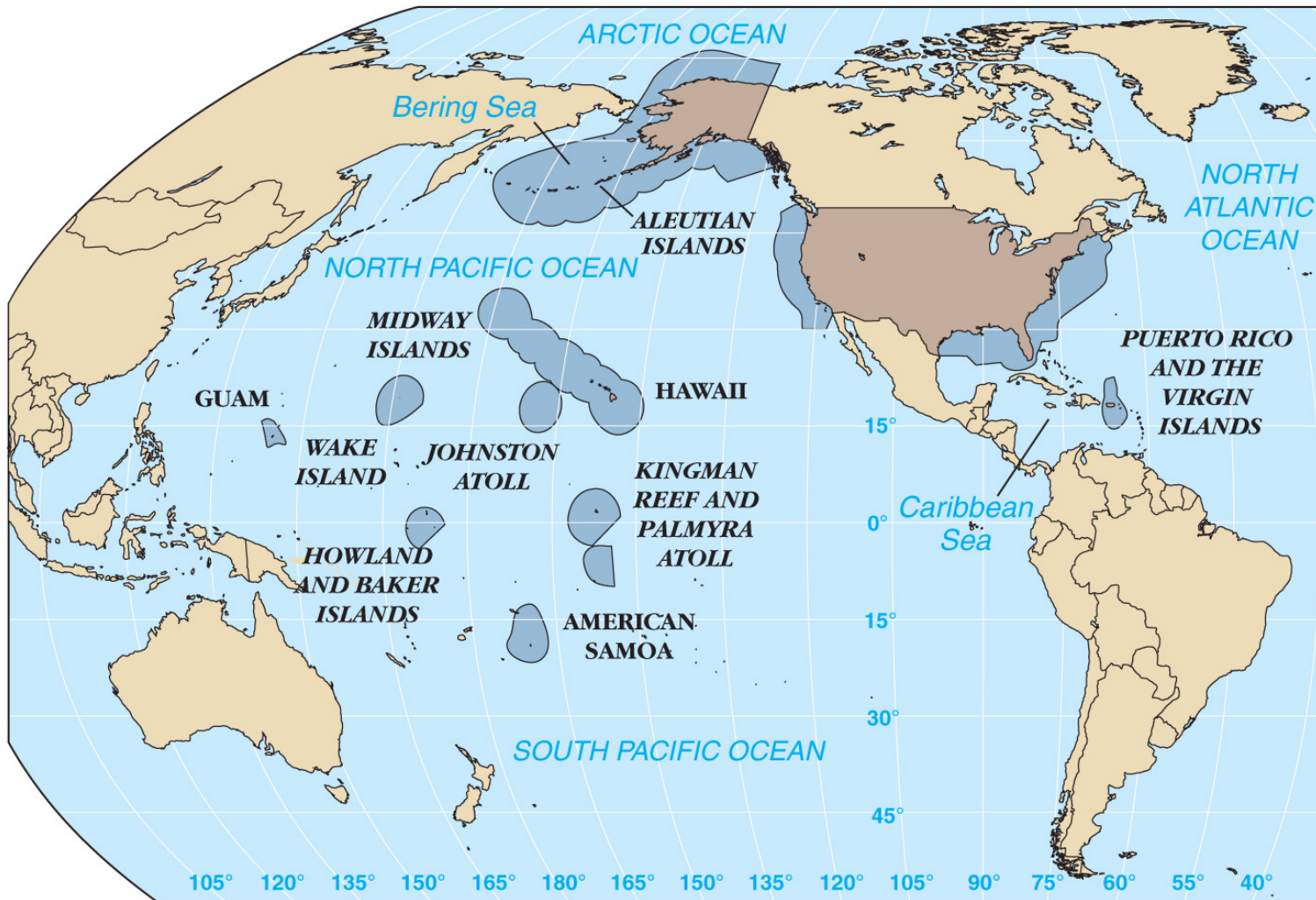
1 - Coastal Nations jurisdiction

- 12 nautical miles (13 miles/19 km) territorial sea
- 200 nautical miles of Exclusive Economic Zone (EEZ)
- If the continental shelf extends past the 200 miles limit, than the EEZ can be extended up to 350 miles

2 - Ship Passage

- Free passage for all ships in the open ocean always guaranteed
- Free passage also guaranteed in territorial seas and through straits used for international navigation

United States EEZ



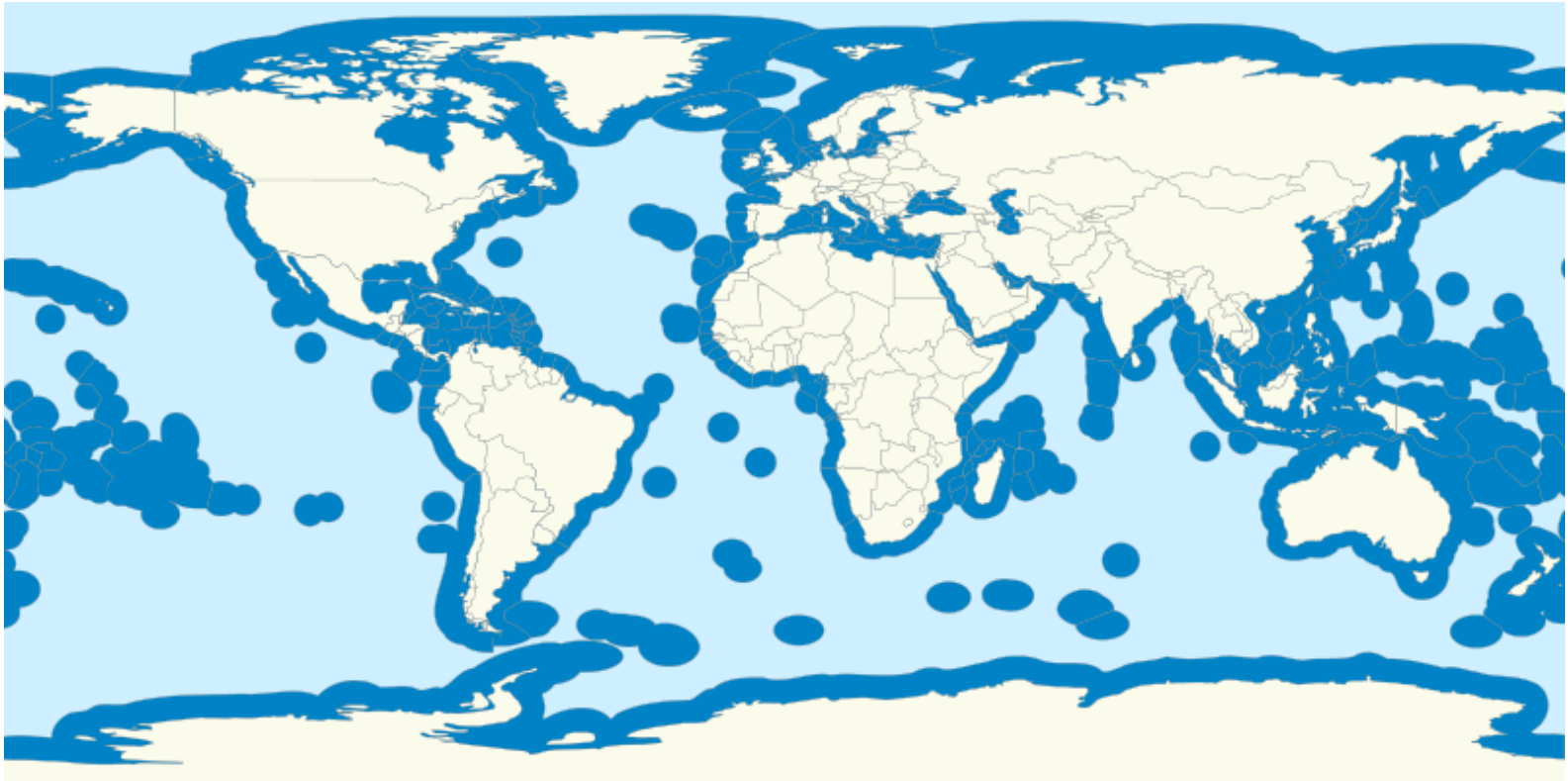
3 - Deep-Ocean Mineral Resources

- Private exploitation of sea-floor resources can be run under control of U.N.
- Companies have to run their own operation and fund a twin U.N. based operation

4 - Arbitration of Disputes

- The U.N. Law of the Sea tribunal will arbitrate any dispute in the treaty, or disputes concerning ownership rights

- The Law of the Sea treaty puts 42% of world's ocean under control of coastal nations
- The EEZ of the U.S. is 30% bigger than the entire land area of the country, including all of its territories



The World's exclusive economic zones, shown in dark blue