

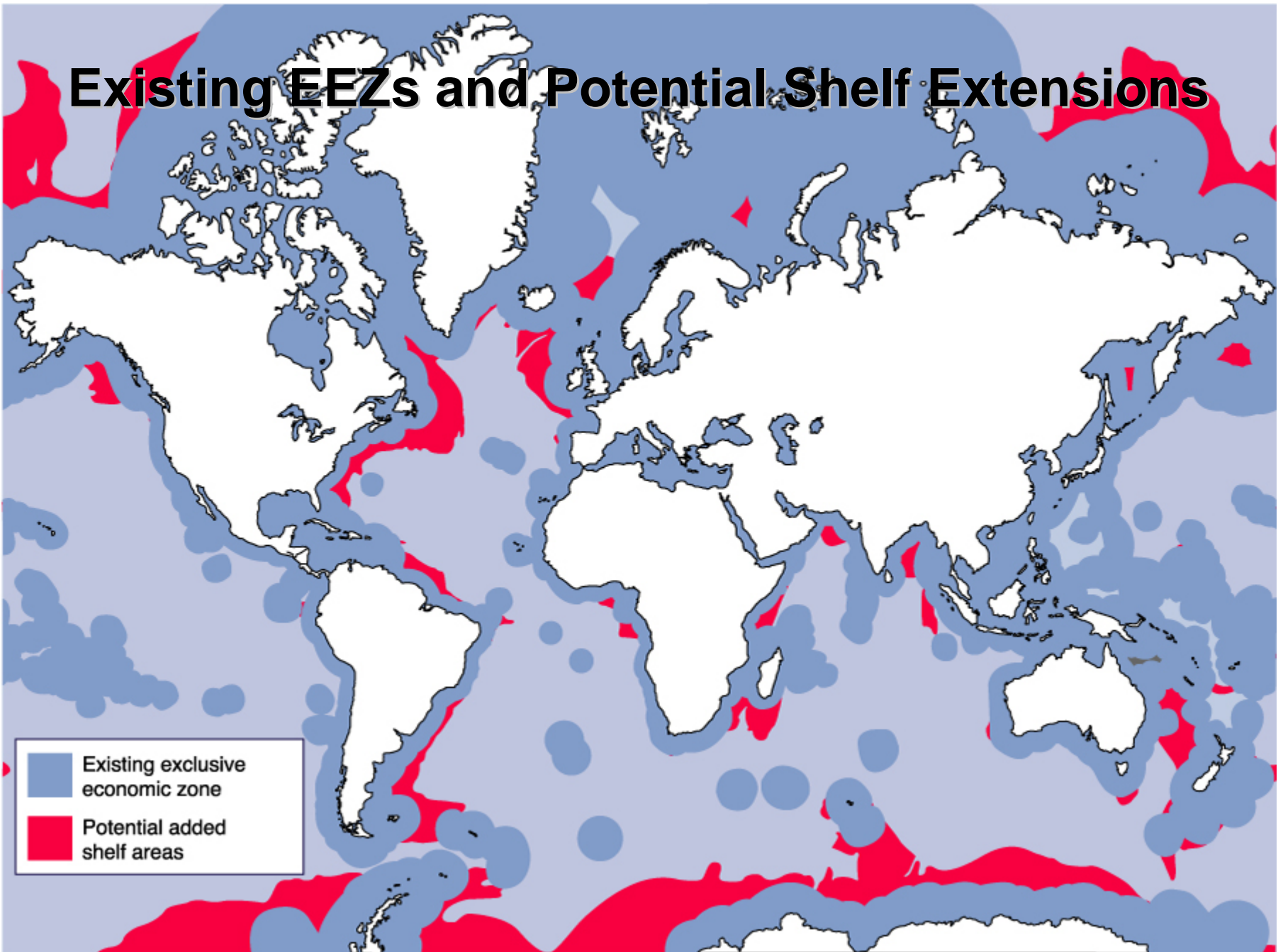
Hydrokinetic and Wave Energy Technologies and Offshore Marine Resources

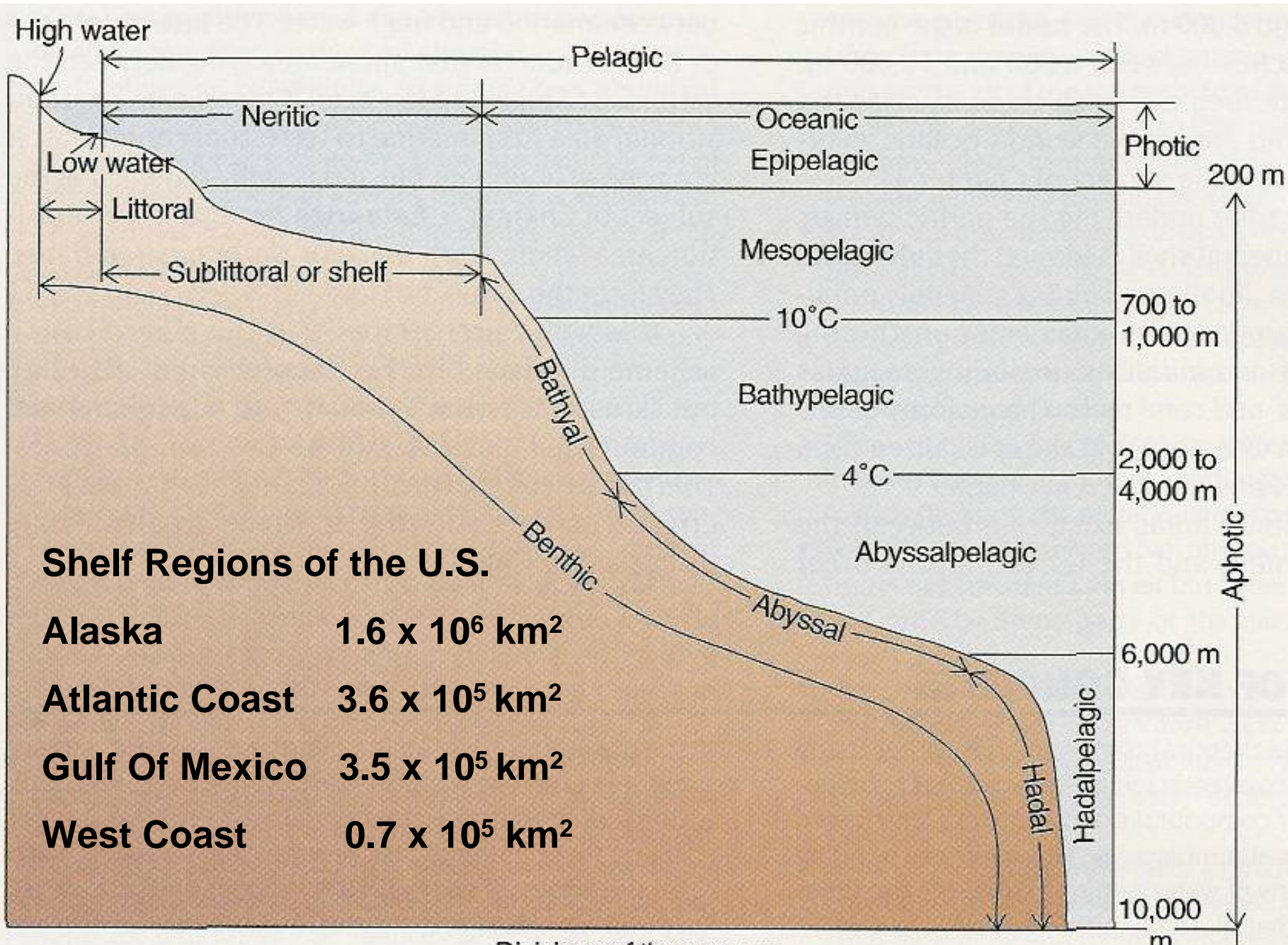
John Ogden

Florida Institute of Oceanography

University of South Florida

Existing EEZs and Potential Shelf Extensions

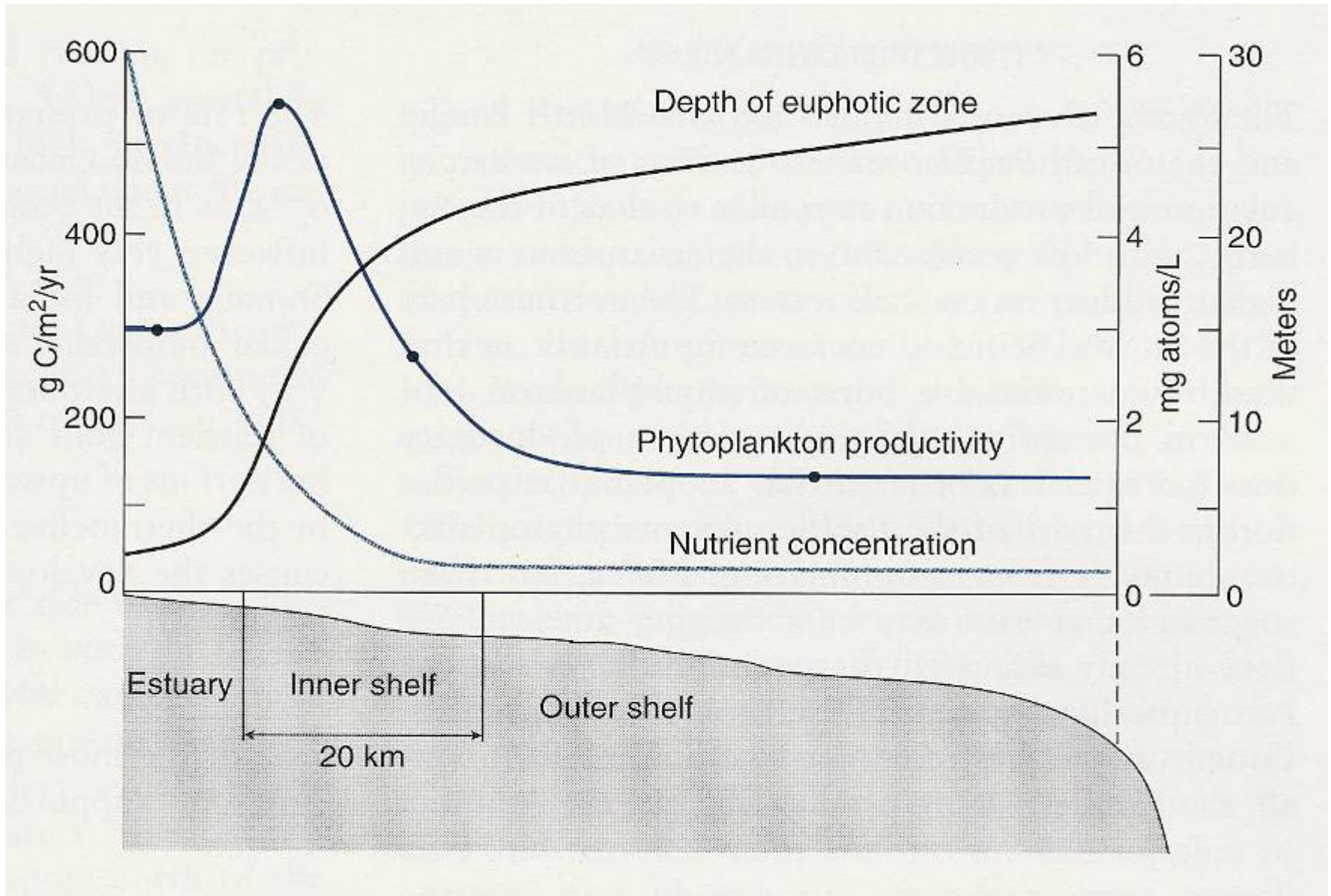




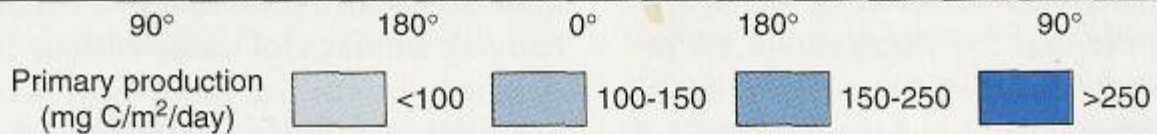
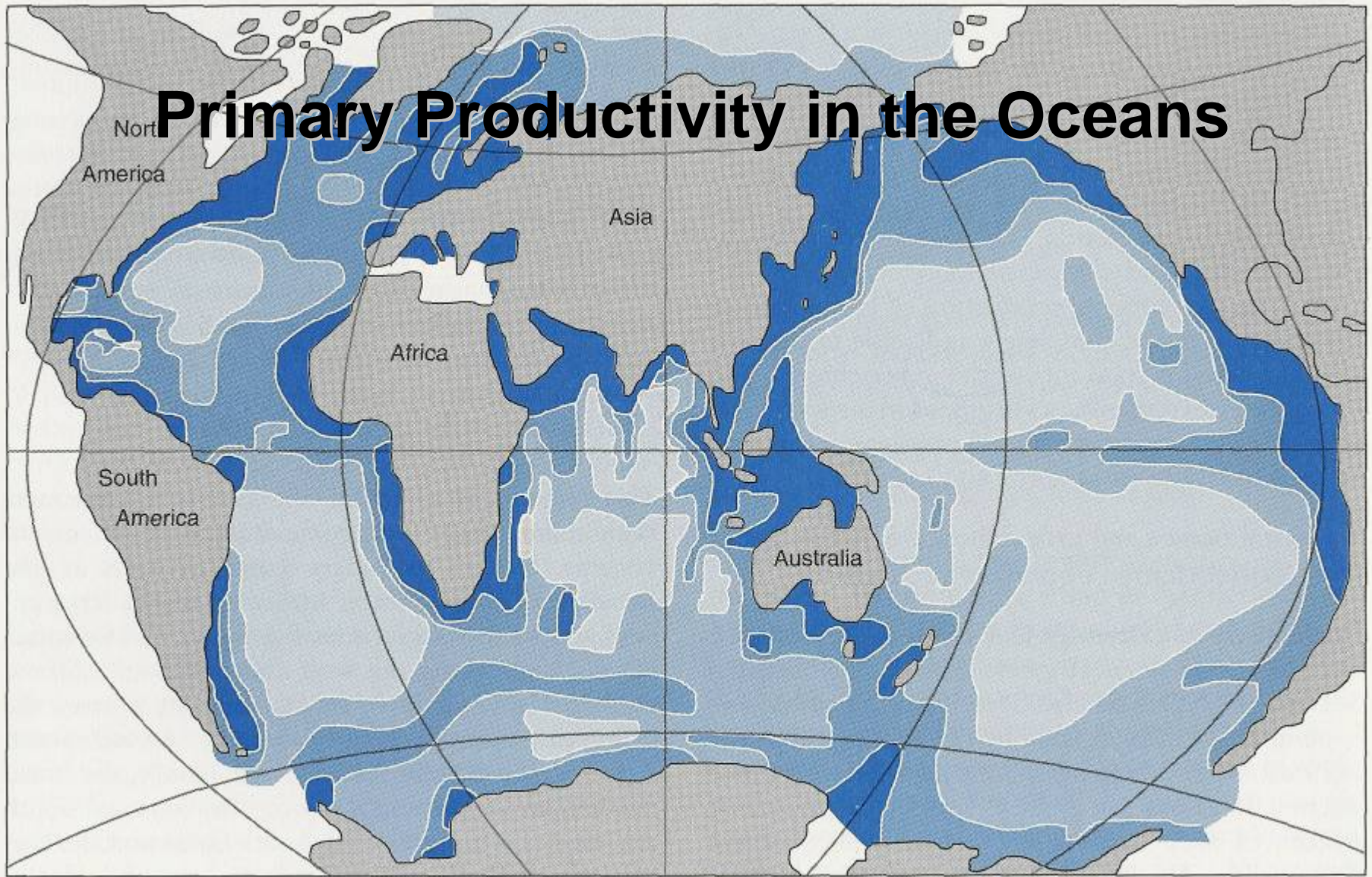
Shelf Regions of the U.S.

Alaska	1.6 x 10⁶ km²
Atlantic Coast	3.6 x 10⁵ km²
Gulf Of Mexico	3.5 x 10⁵ km²
West Coast	0.7 x 10⁵ km²

Cross-Shelf Productivity Gradients



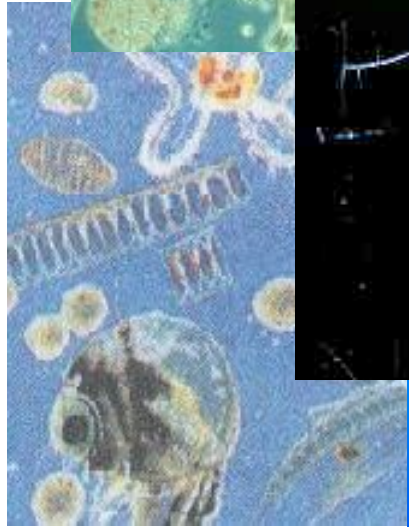
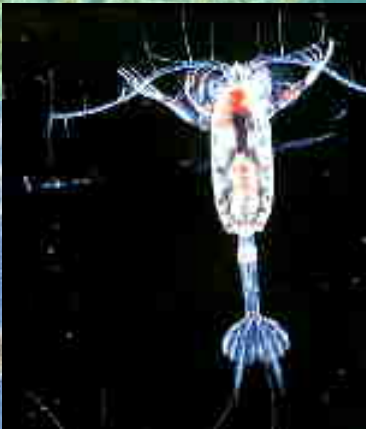
Primary Productivity in the Oceans



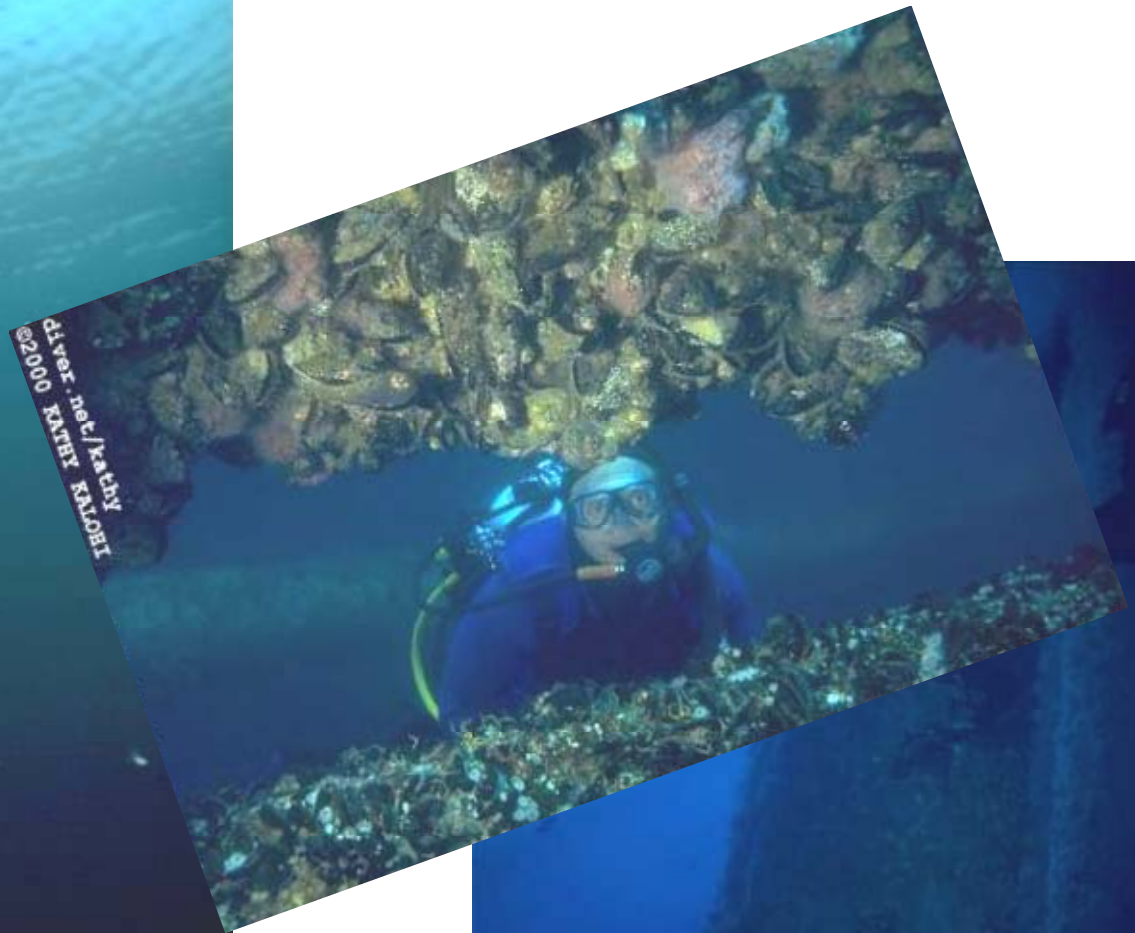


Nearshore Productivity Supported by the
Benthos

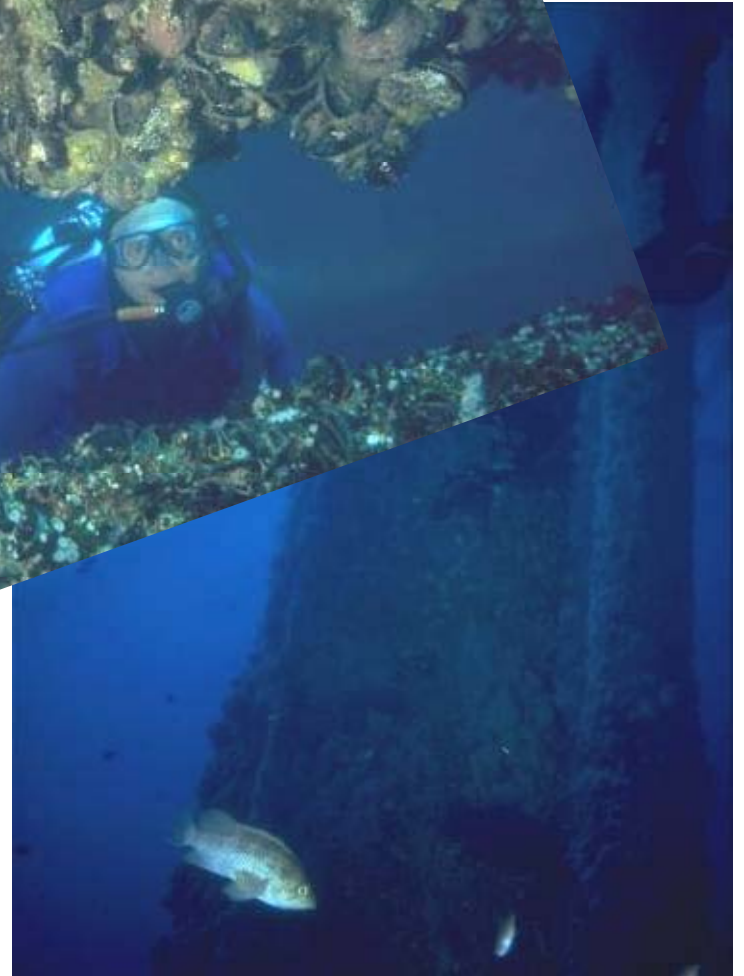
Oceanic Food Chains Supported by the Plankton



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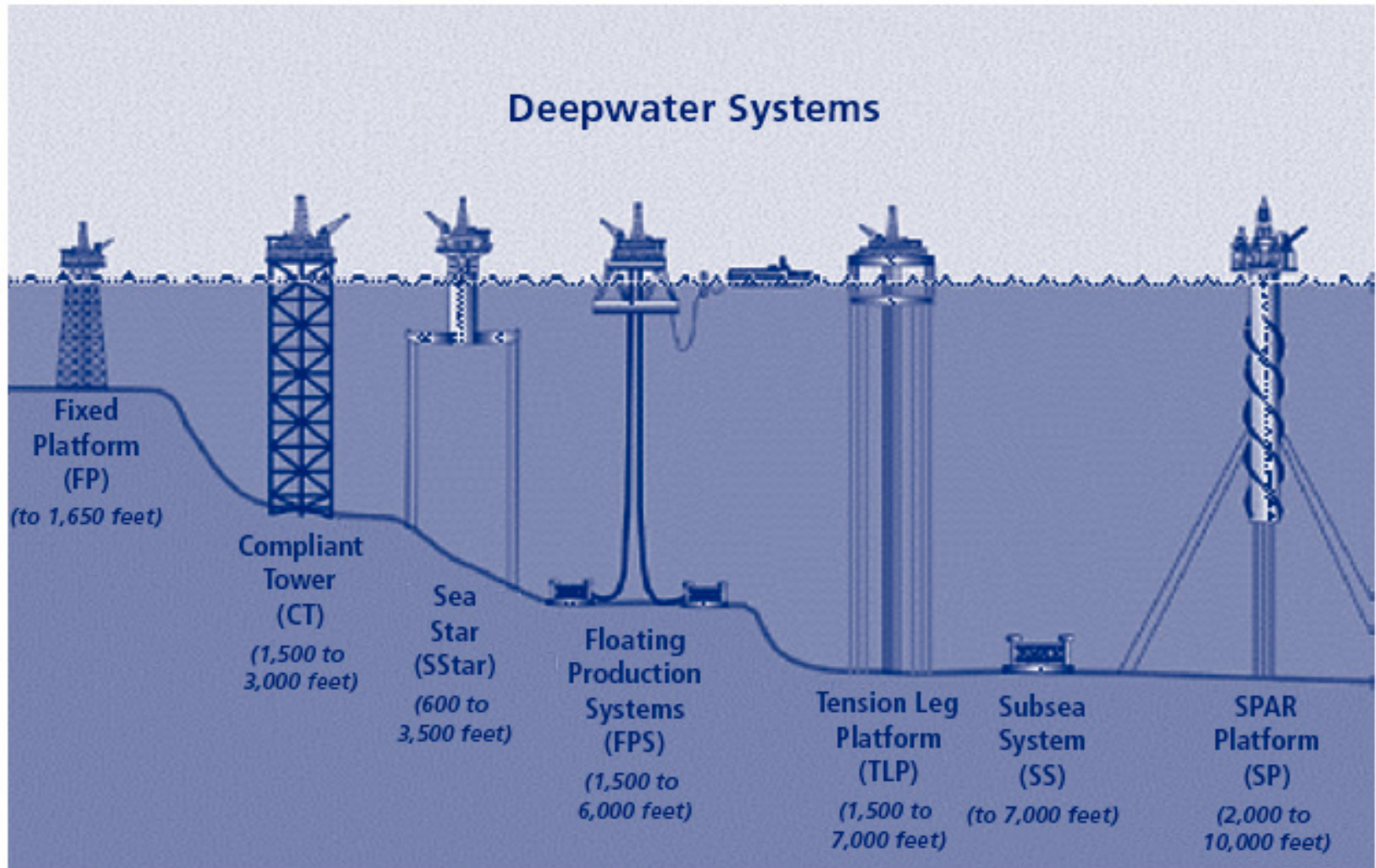


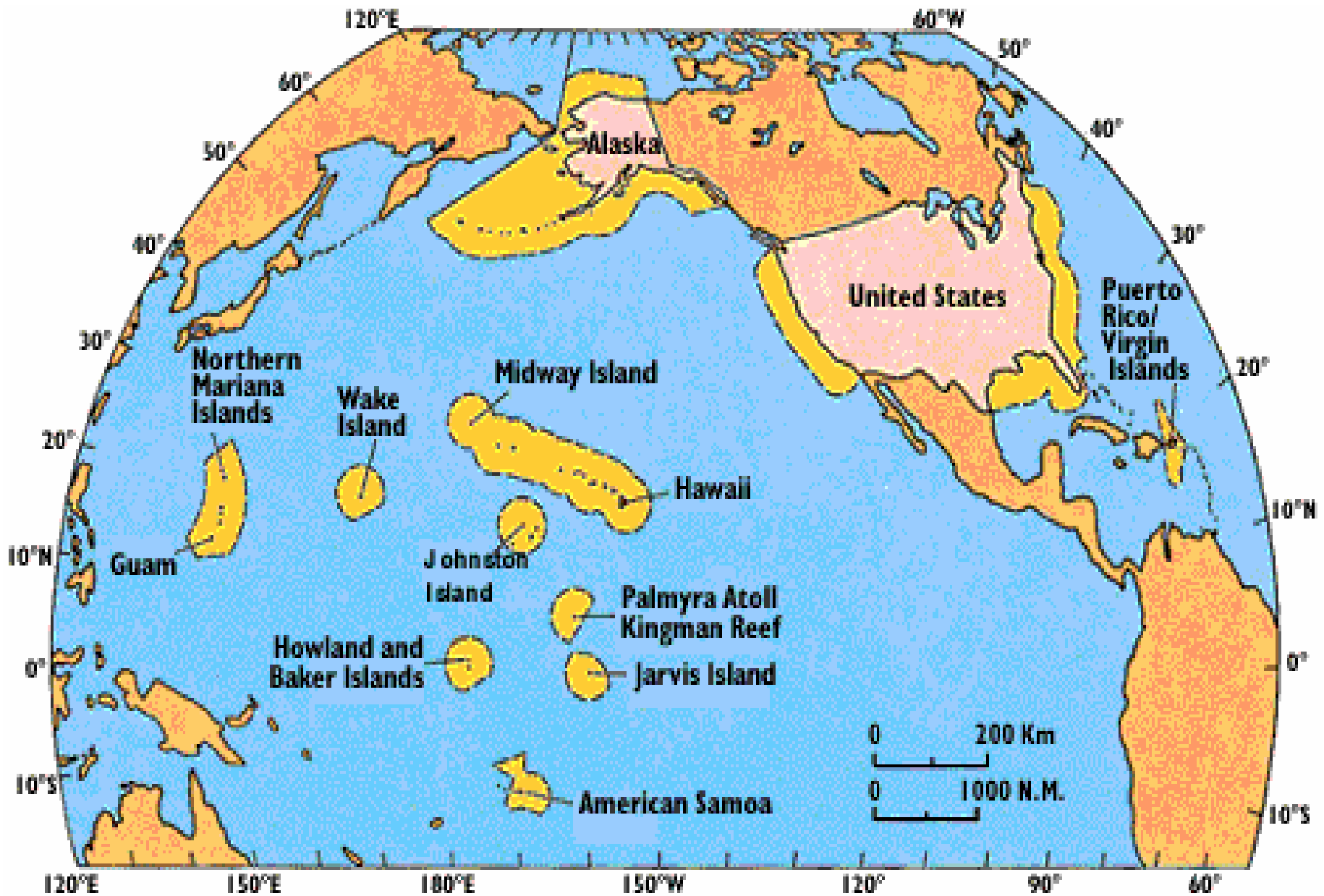
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Structures Bring the Benthos to
the Surface of the Deep Sea

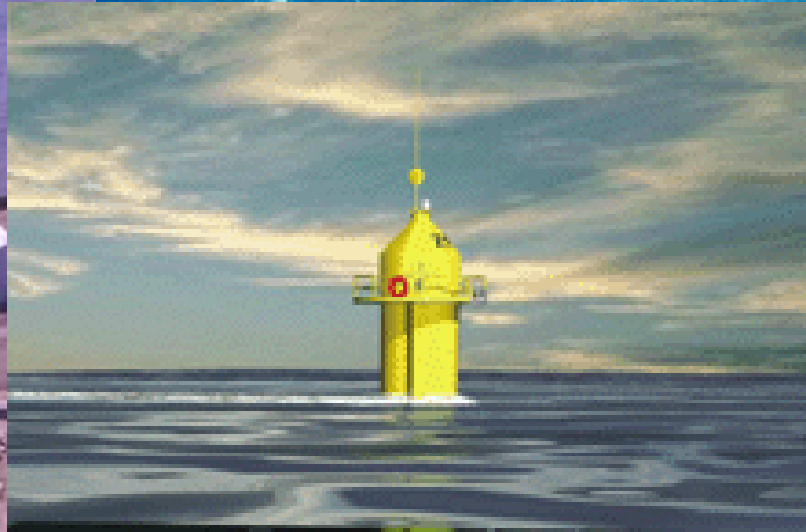
>4000 oil industry structures in the Gulf of Mexico (>800 manned)





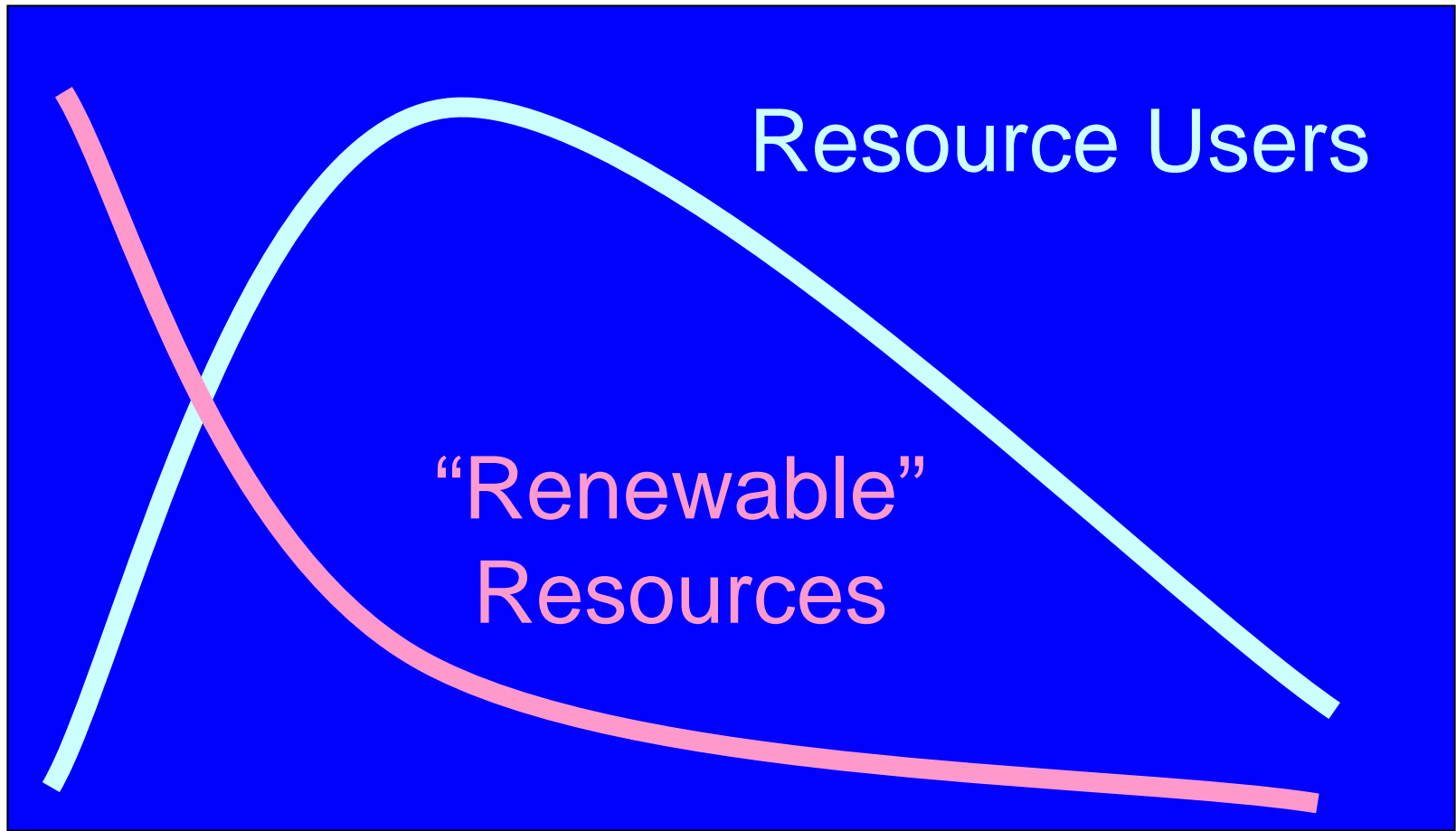
The “Real” United States





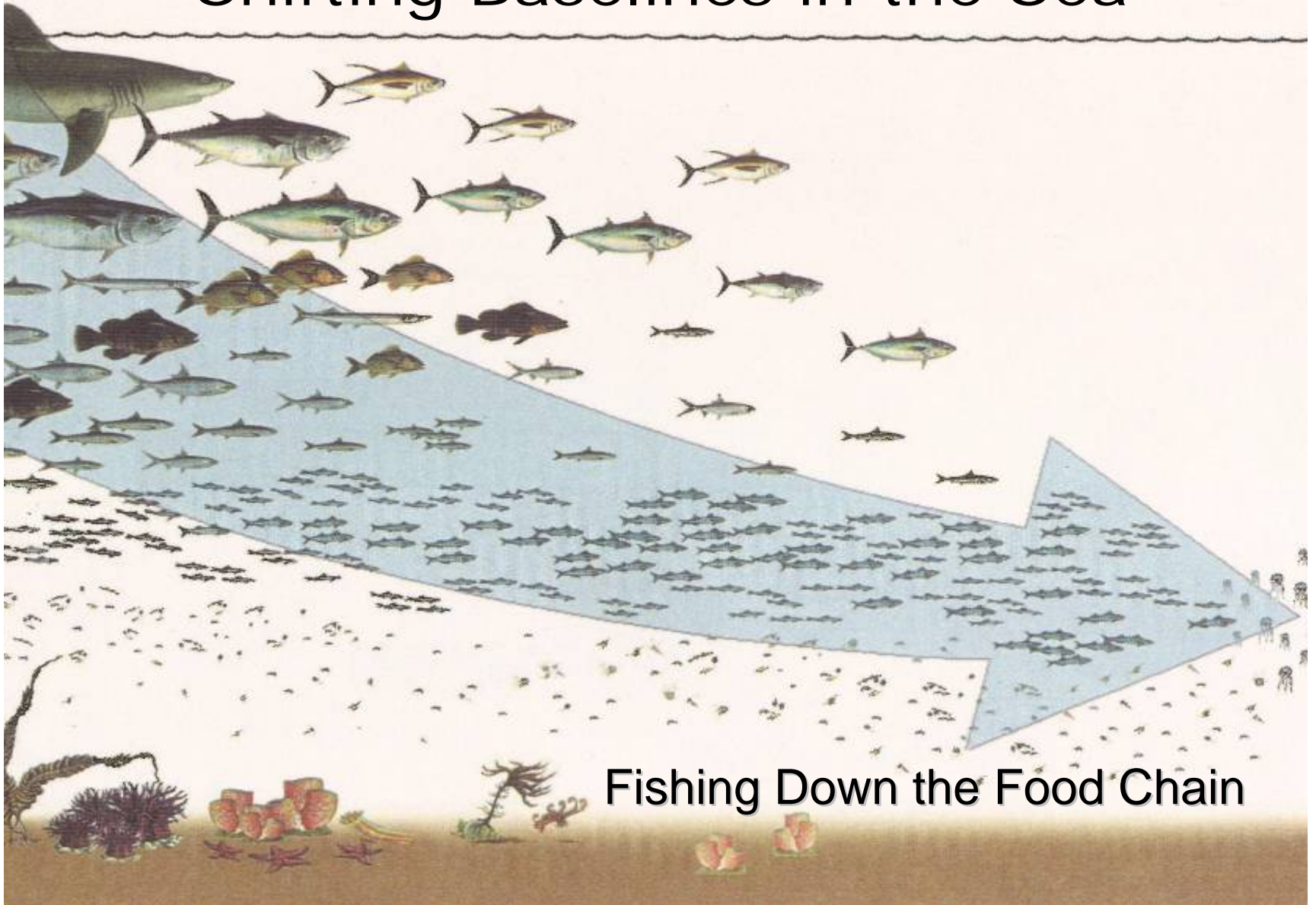
Oklahoma Land Rush 1889





Results of Open-Access Competition

Shifting Baselines in the Sea



Fishing Down the Food Chain

The Need for Planning is Urgent

- Fishing and fisheries management
- Aquaculture
- Ports and harbors
- Channels, rights of way
- Pipelines and cables
- Wind power
- Tidal and wave power
- Offshore oil and gas
- Mining and dredging
- Ocean fertilization
- CO₂ sequestration
- Floating and submerged hotels
- Disposal
- Weapons testing
- Recreation
- Conservation
- Management
- Scientific research

Three Unique Developments Advancing US Ocean Policy

Pew Oceans Commission

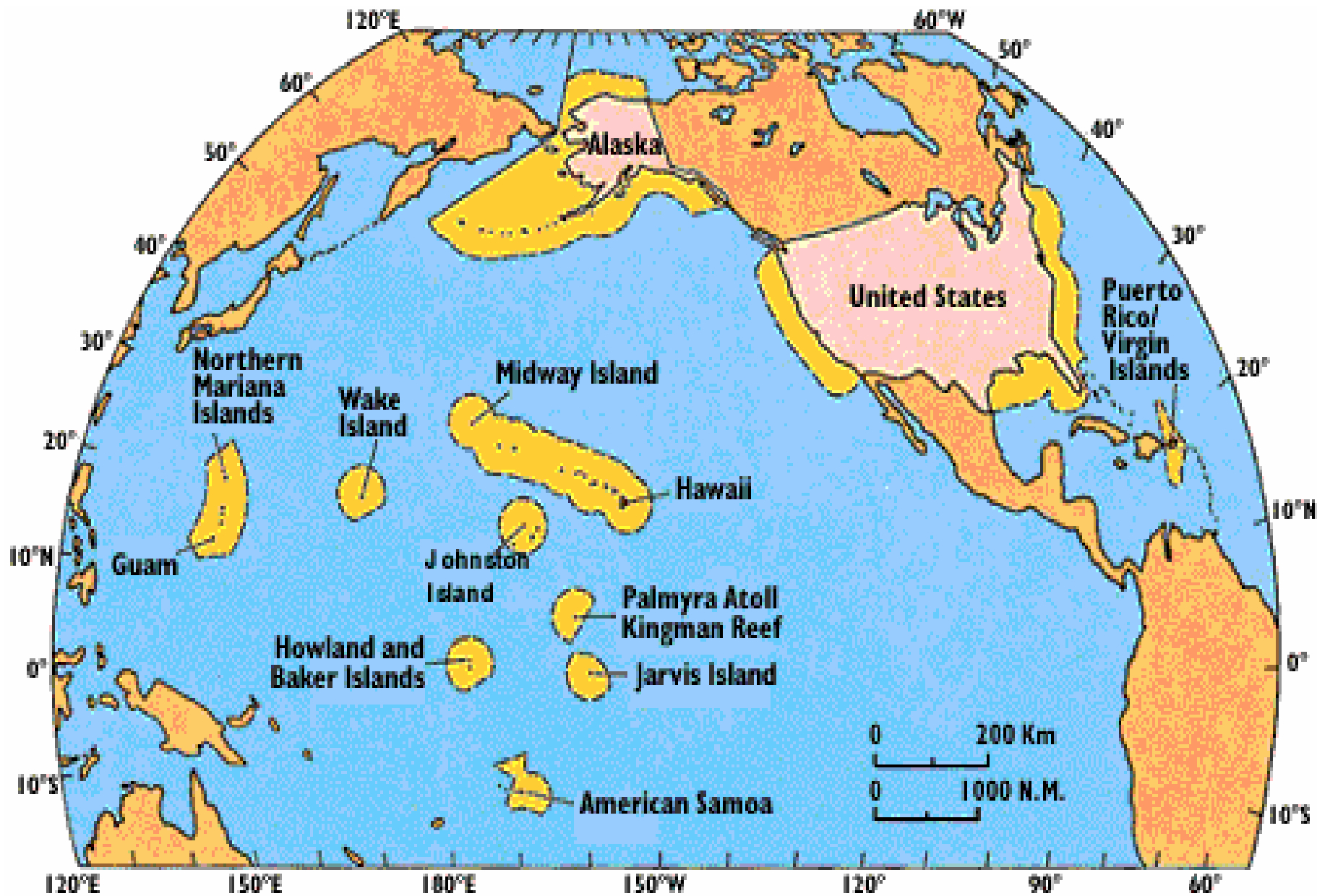
(Report April 2003)

Commission on Ocean Policy

(Report December 2004)

U.S. Ocean Action Plan

(President's Response to COP, Dec. 2004)



The “Real” United States