

Geography of Resources

The background of the slide is a dark blue-grey color. It features a faint, light-colored map of the United States, showing state boundaries and major geographical features. In the bottom-left corner, there is a faint compass rose with the letters 'N', 'S', 'E', and 'W' indicating the cardinal directions.

Natural Resources

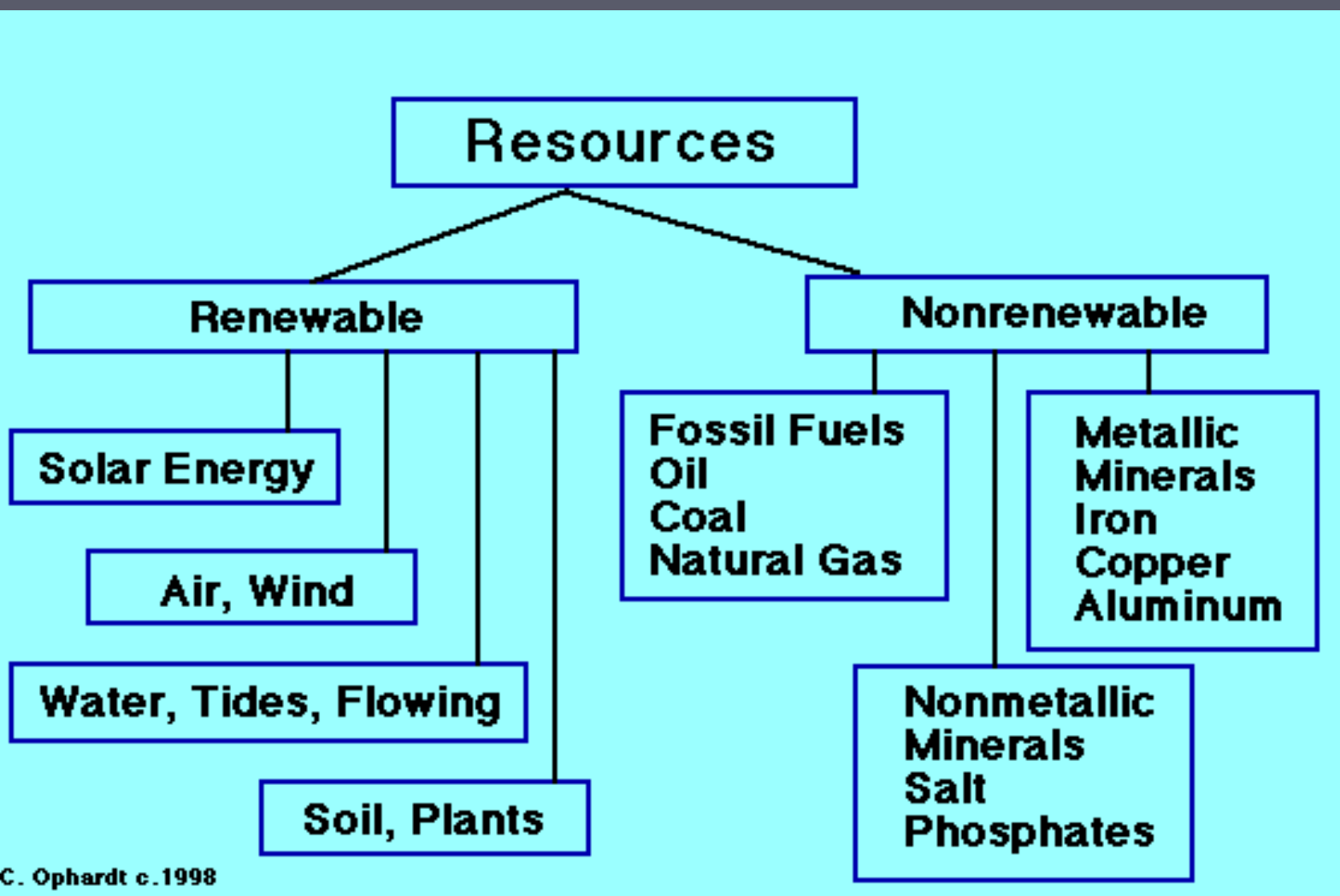
- Naturally occurring materials that humans view as necessary/useful for its economic/material well-being
 - Renewable
 - Can be replenished in a human lifetime
 - Non-renewable



Resource Collection

- Two classifications:
 - Gathering industries
 - Harvesting of renewable resources
 - Extractive industries
 - Removal of non-renewable minerals





Fishing

- Primary Sector of the Economy
- Renewable resource?
- Major resource
 - 75% of world catch = human consumption
 - 1 billion people rely upon this resource
 - 25% = processed fish meal for livestock/fertilizers

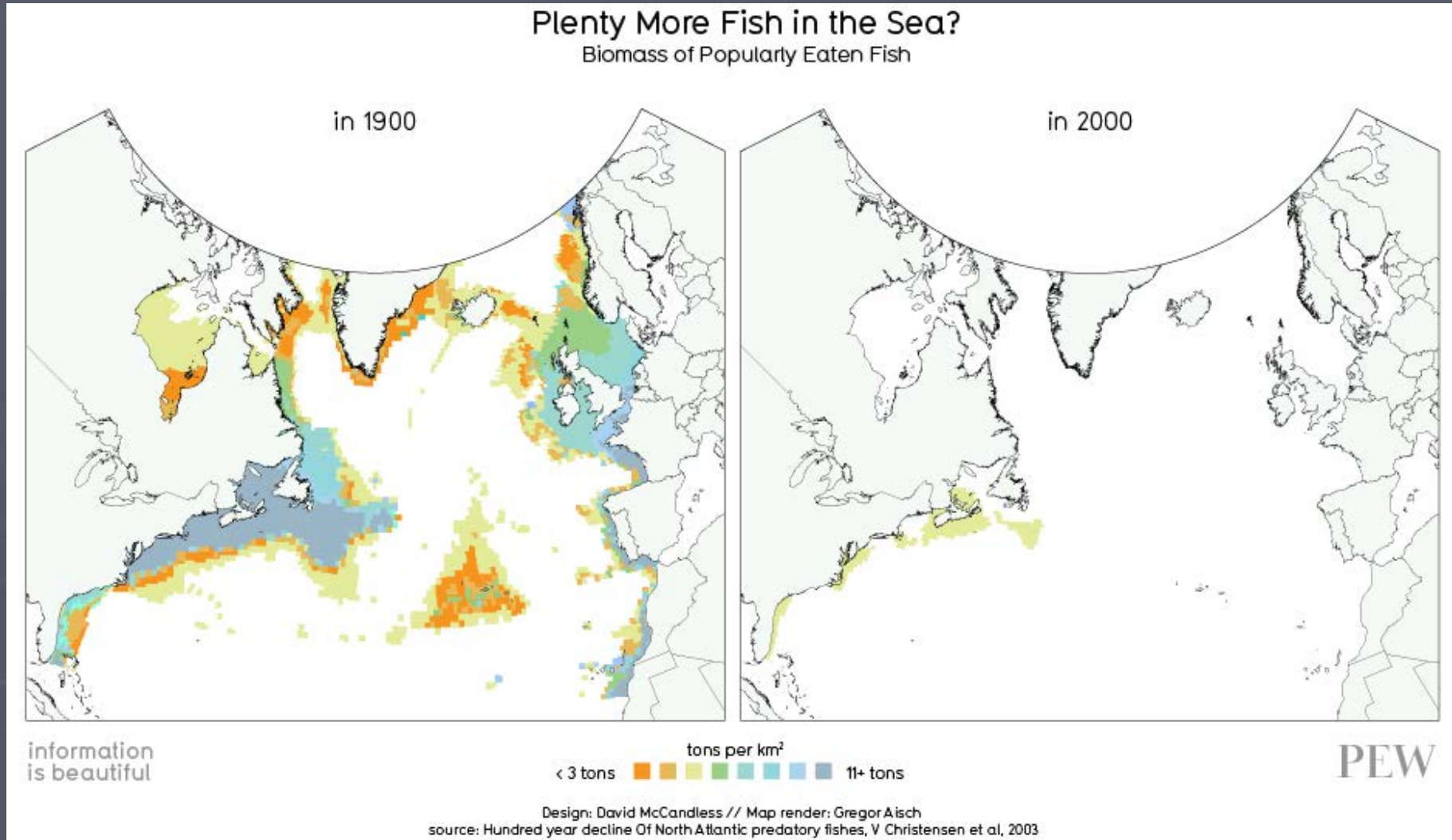


Fish Harvesting

- 120 million tons harvested worldwide per year
 - Maximum sustainable yield is exceeded
- Sources
 - Inland catch
 - Fish farming
 - Marine catch

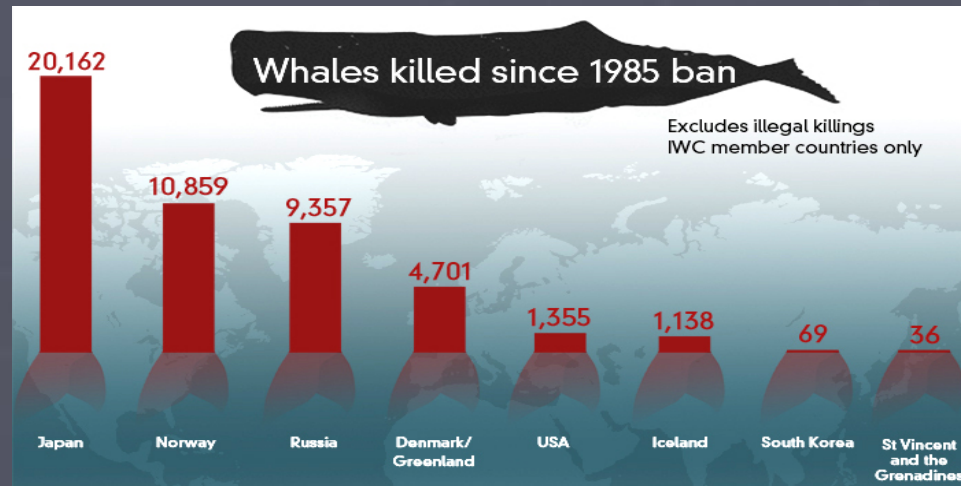


Fish as a Renewable Resource?



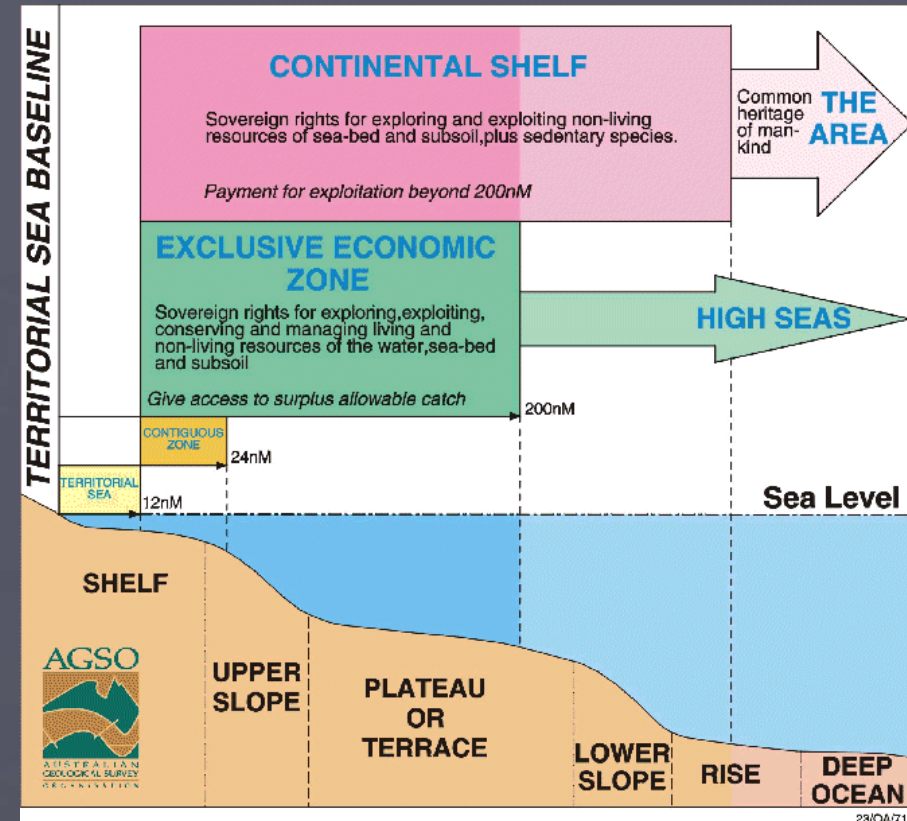
Common Usage

- Accepted view that world's oceans are common property and open to all
- No one is responsible for its maintenance, protection, improvement
 - Each user exploits before someone else can

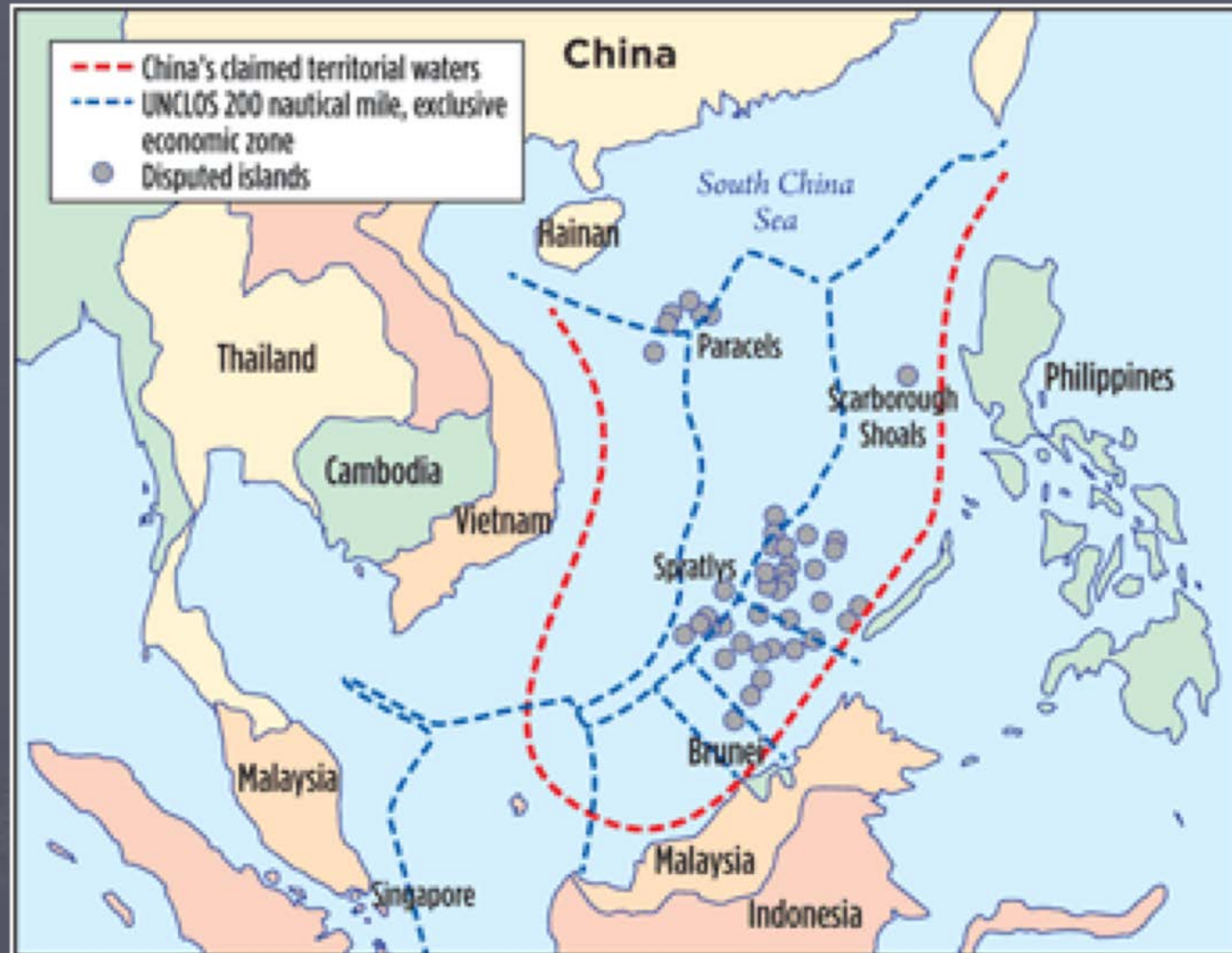


Response

- 1982 – United Nations Convention on the “Law of the Sea” treaty
 - Gave control of 200 nautical miles to nearest country
- Increasing fish farming
 - Aquaculture – both marine & freshwater



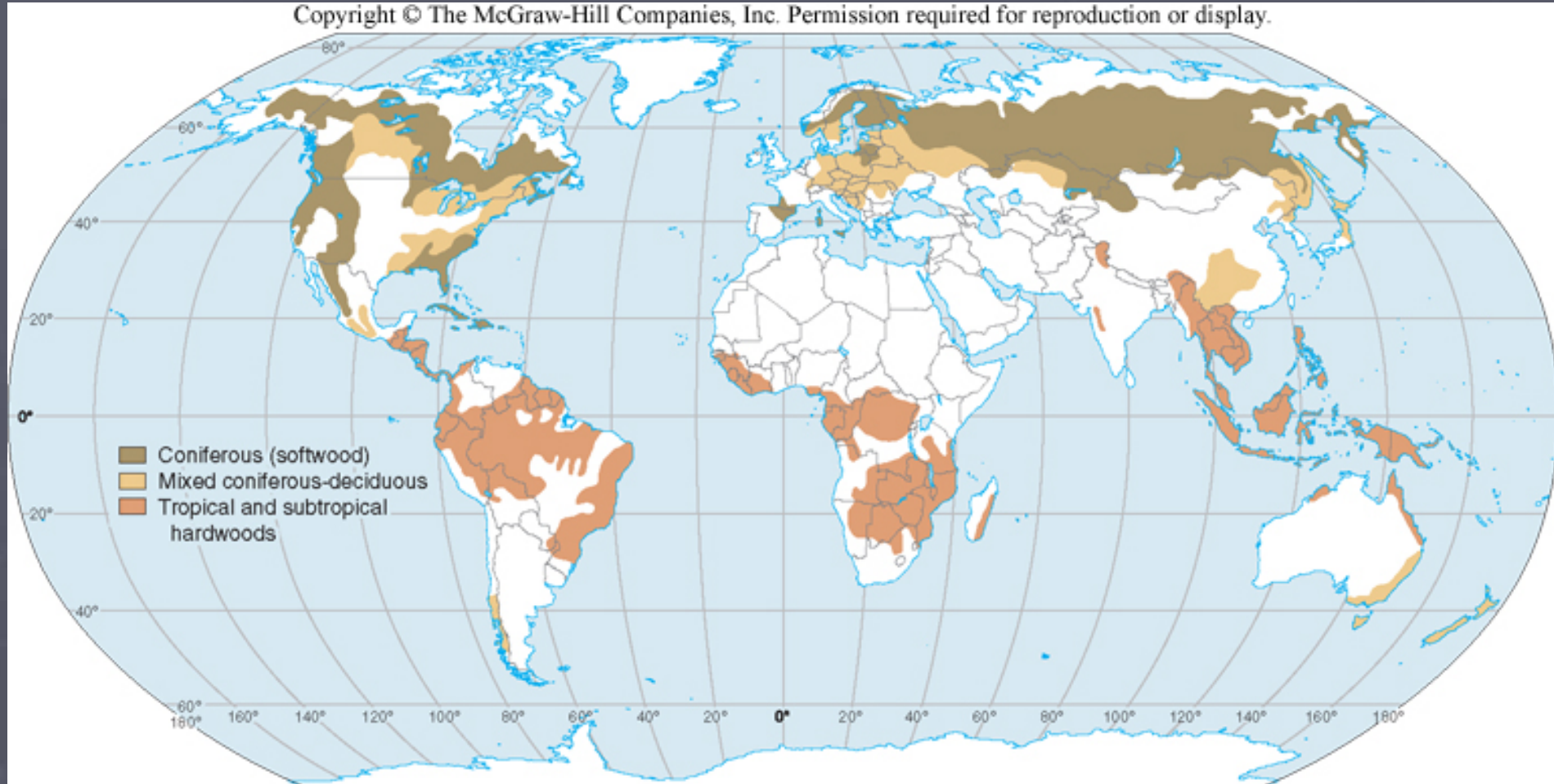
South China Sea Problem



Forestry

- Primary sector of the economy
- Renewable resource?
 - 12,000 years ago forest covered 45% of earth
 - Today forest only covers 30%
- Two large global belts of commercial forests:
 - Upper-middle latitudes of the Northern Hemisphere
 - Equatorial zones of South & Central America, Central Africa, Southeast Asia

Major Commercial Forestry Zones



Forestry Threats

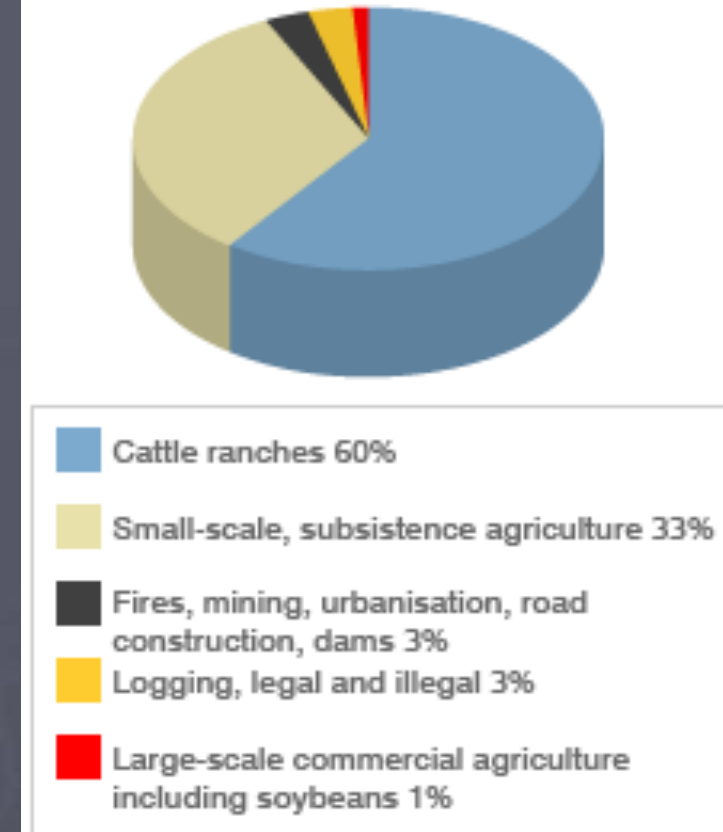
- Threats to global forests
 - Acid rain, Atmospheric pollution, over harvesting, invasive species, slash-and-burn agriculture, Fires
- Forestry Protections
 - Conservation/Reforestation, Government Regulation



Threats to Forests

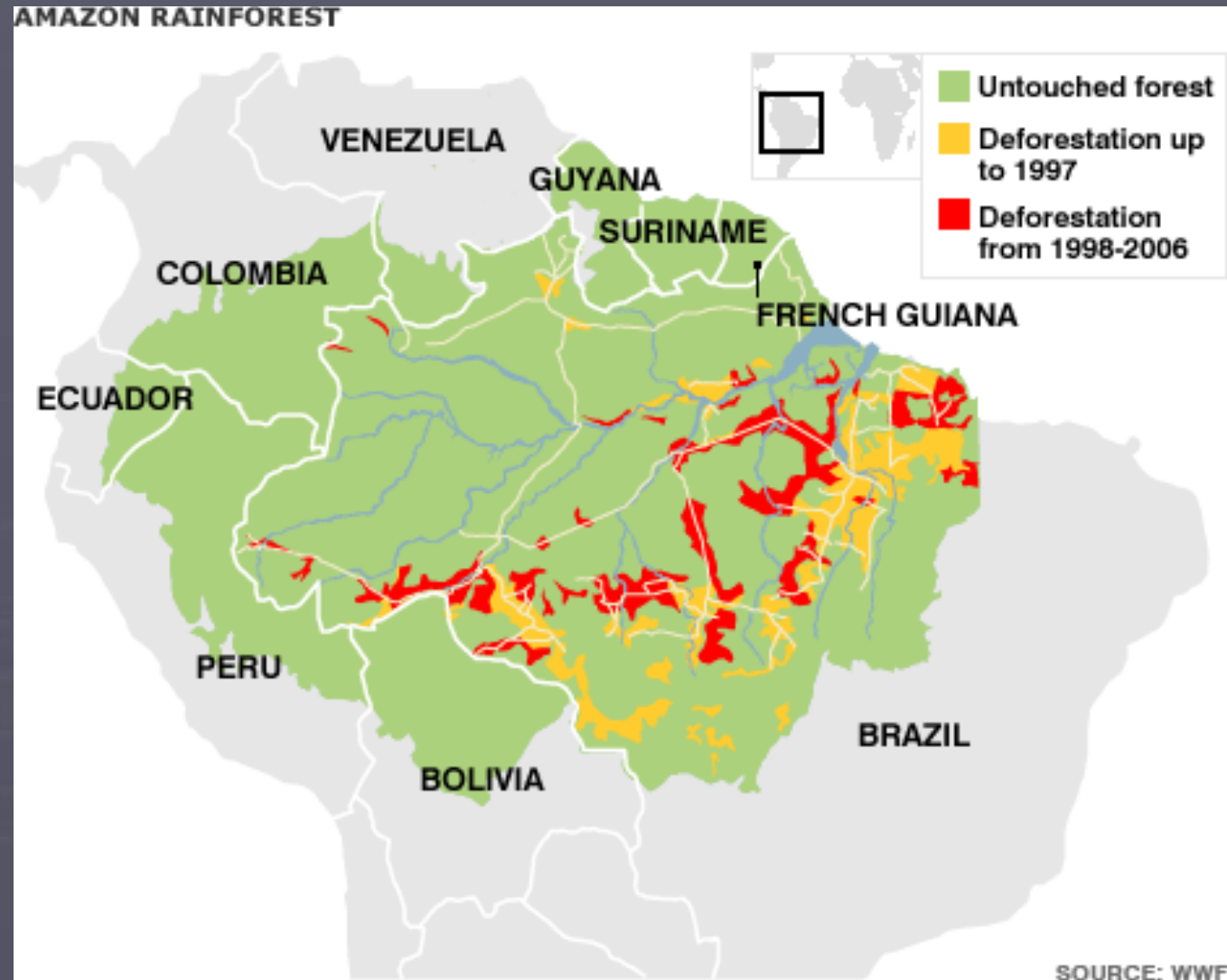
- Northern forests
 - 45% of timber is for industrial use
- Southern forests
 - 55% of timber is for fuel wood/charcoal use
 - Expensive mahogany extraction
 - Often at expense of other flora
- Forest depletion
 - Loss of a renewable resource
 - Conversion to agricultural lands
 - Economic/ecological implications

CAUSES OF DEFORESTATION IN THE AMAZON, 2000-2005



SOURCE: Mongabay.com

Amazon Rainforest Depletion



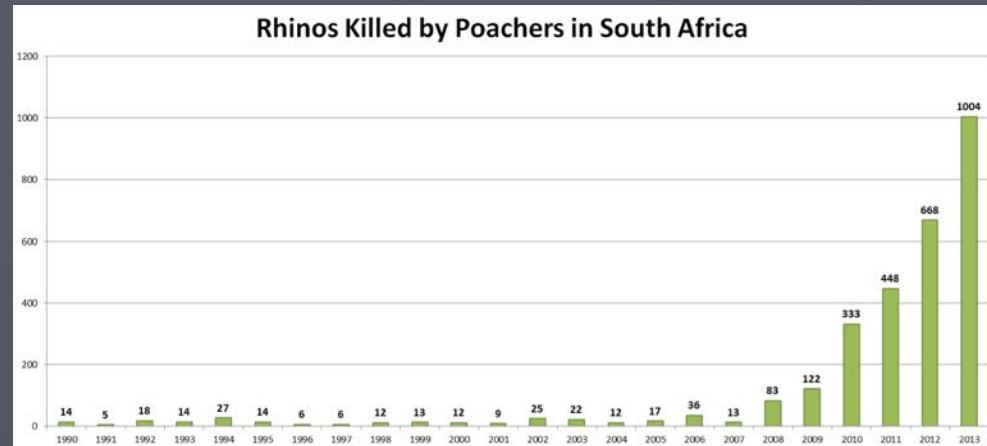
Fur Trapping

- Dependent on northern forests
- Anti-fur campaigns began in 1960s
 - Challenged for inhumane treatment of animals
 - Banning of fur products
- Farmed furs are 85% of industry today



Poaching

- Illegal hunting of animals
 - Especially big-game and exotic animals
- Black market trade
 - Ivory
 - Furs
 - Animal parts



Mining and Quarrying

- Primary sector of the economy
 - Distribution is uneven, determined by past geologic events
 - Ease of access to materials
- Extraction is possible with technology
 - Deeper materials require more technology for extraction



Metallic Minerals

- Most important Copper, Lead, Iron ore
- Most abundant locations:
 - Russia, Canada, China, United States, Brazil, Australia
- Production is balanced by:
 - 1. Quantity available
 - 2. Richness of ore
 - 3. Distance to markets



Non-Metallic Minerals

- Most Common are sand/gravel, gypsum, limestone, building stone
- Two types of usage:
 - Construction use (ingredients for cement)
 - Fertilizer use (potash, phosphate)



Mineral Fuels

- Fossil fuels
 - Made industrial revolution possible
 - Non-renewable
 - Coal, Petroleum, Natural gas



Coal Mining

- United States, China, Northern Hemisphere
- Open-pit (surface mining)
 - Very damaging to environment
- shaft mining
 - expensive, more dangerous
- Very polluting – slag heaps, ecosystem destruction
- Bulky to move



Natural Gas

- 25% of global energy consumption
- Popular due to:
 - Highly efficient, versatile
 - Requires little processing
 - Environmentally safe
- Problems:
 - Uneven distribution
 - Difficult to move
 - Limited supply



Petroleum/Oil

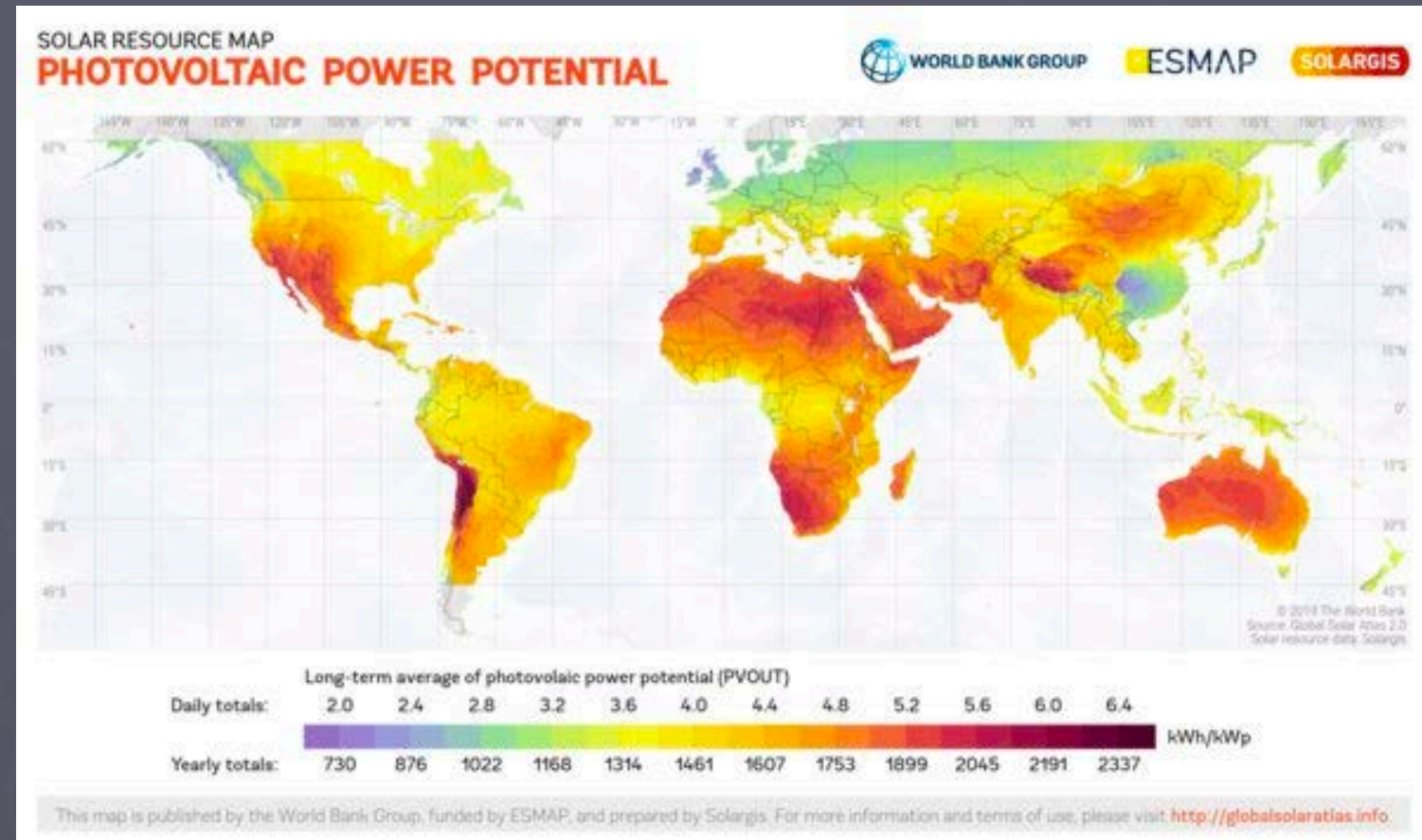
- 75% of proven reserves in just 7 countries
- Usage boomed in 20th century
- Costs & effects:
 - Cheaper & easier to move than coal
 - Polluting – global warming
 - Reserves are diminishing
 - Due to distribution & lack of availability – market value fluctuations, politically sensitive

Renewable Energy Sources

- Solar
- Wind
- Hydroelectric
- Tidal
- Geothermal
- Biofuels
- Nuclear?

Solar Energy

- Higher upfront costs
- Highest potential nearer to equator
- Dependent upon development of storage batteries



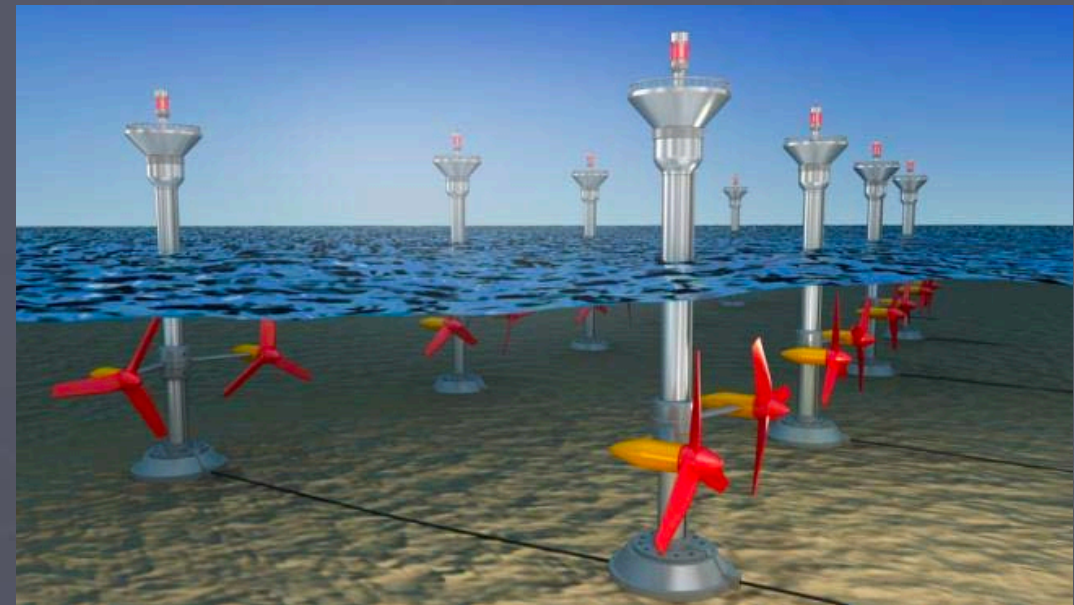
Wind energy

- Greatest potential on high plains and offshore
- Dependent upon consistent sources of wind
 - Batteries for storage need further development for non-windy days
 - One of most dependable forms of renewable energy



Hydroelectric & Tidal

- One of most widespread & oldest forms of renewable
- Dependent upon river flow
- Controversial amongst conservationist due to disrupting fish migrations & river flows
 - Helpful in limiting flood damage



Geothermal

- Uses heat of Earth's interior to create energy
- Widespread, but more accessible in some areas than others
- Expensive upfront but then lower maintenance costs



Biofuels

- Heat and energy generated from the burning of organic materials
 - Ex. Ethanol or Peat moss
- Not as clean as others, but renewable



Nuclear

- Technically non-renewable, but sustainable
- High risk, but also high reward
- Expensive
- Clean

