

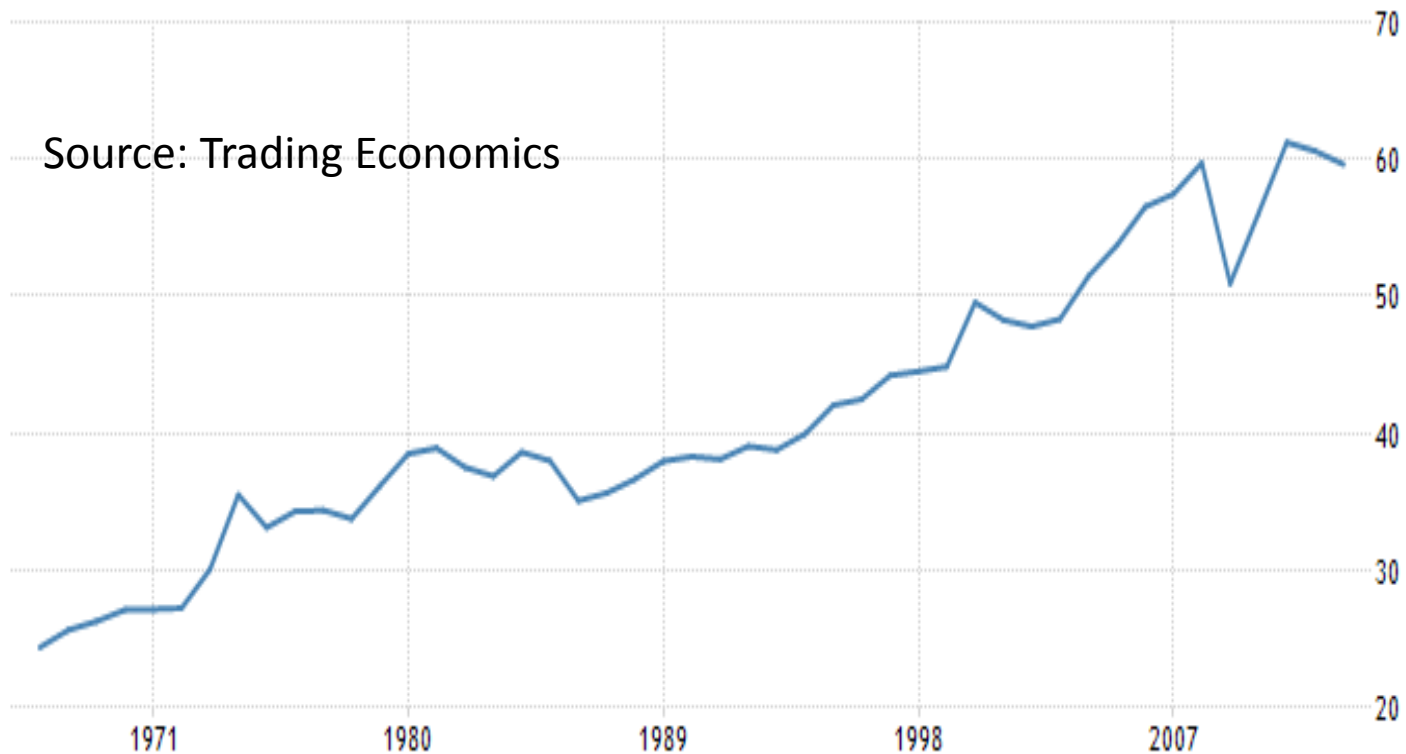
Environmental and Safety Concerns: Ports and Shipping

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Global Trade/Global Product



Most International Trade Carried by International Shipping

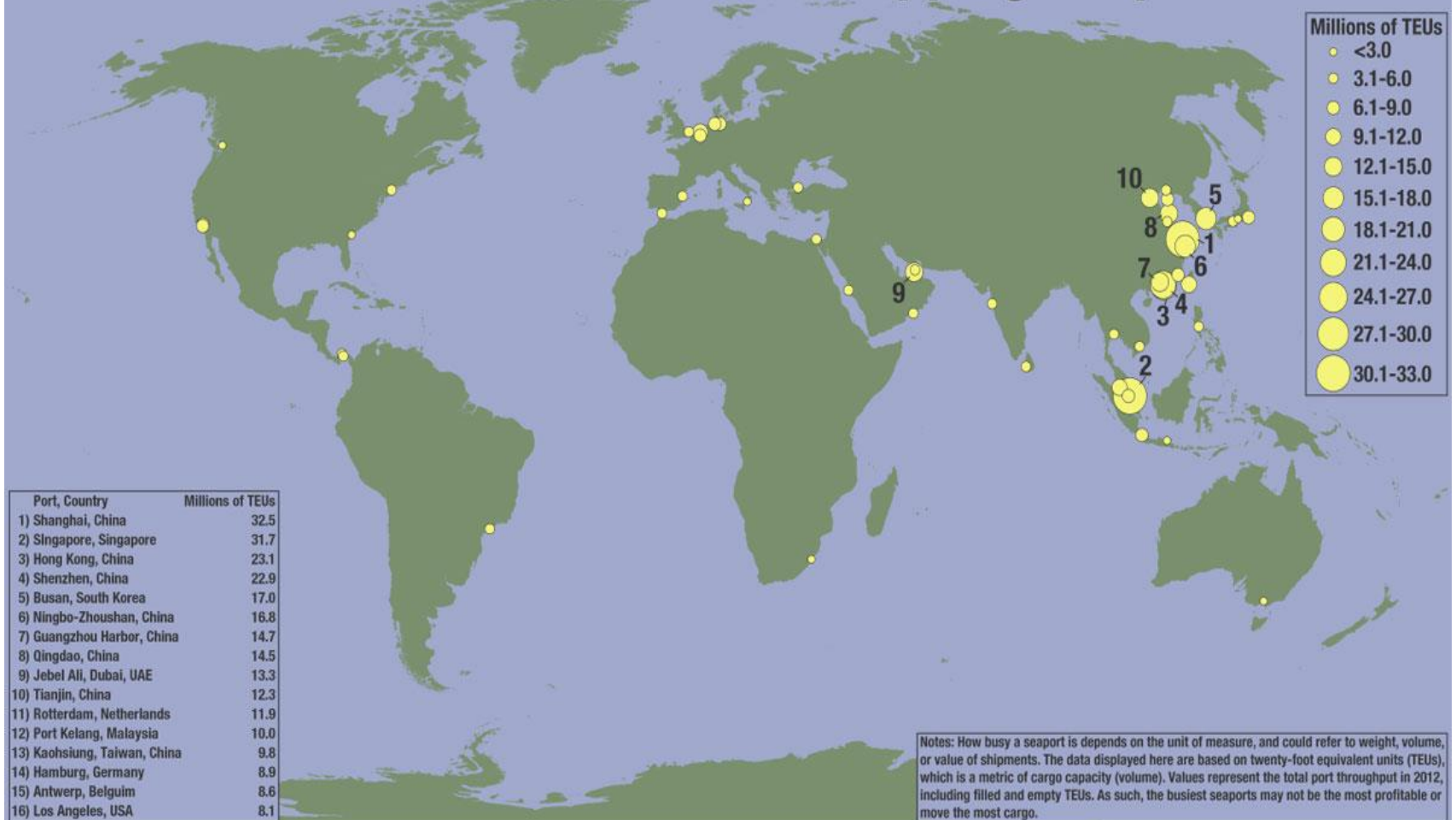
- Estimated 90 percent by value of global trade goes by ship
- Estimated 50,000 merchant vessels registered by 150 nations
- Aside from goods trade, expanding international ferry and cruise ship business
- Aside from international activities, much domestic trade and travel by ship

Importance of Ports

- International trade shipped must go through ports at least twice, and perhaps several times
- Port cities have traditionally been hubs of commerce and related services as well as industry. They are often among the world's largest cities: Tokyo, Shanghai, New York, London, Mumbai, and Istanbul, for example.
- By their nature, port cities have a large environmental impact

Big Container Ports

The World's 50 Busiest Container-Shipping Seaports in 2012



Environmental Impacts at Construction Stage

- Destruction of coastal habitats
- Land reclamation activities
- Dredging operations
- Building and road construction (noise, lime dust, fumes, etc)

Environmental Impacts During Operations

- Air pollutants (sulfur, oil and exhaust gases, chemical fumes, dust, e.g.)
- Water pollutants (oil and grease run-off effluent, bilge oil, ballast water)
- Solid waste
- Redredging operations
- Noise, social impacts
- Indirect GHG emissions from power usage

Port Safety and Security Concerns

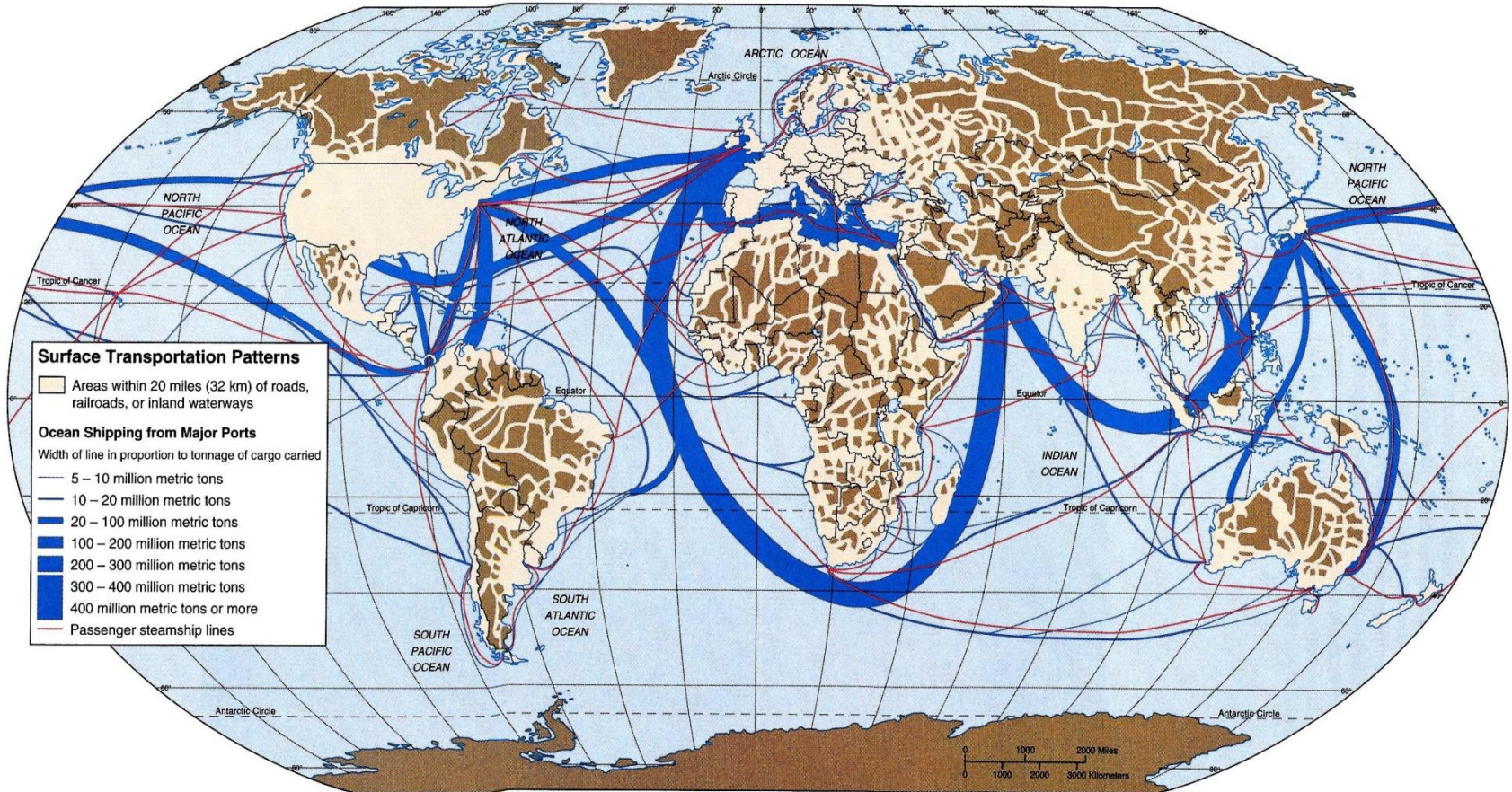
- Accidents: concentration of many ships and other transport vehicles in a small area
- Fires or explosions from improperly stored chemicals
- Impacts on industrial, commercial, and residential populations in vicinity of the port
- Theft and crime, including piracy in ports
- Targets for terrorists
- Climate-related events such as storm surges, tsunamis, and sea level rise (new estimates dramatically increase the potential challenges of sea level rise)

Port Design/Redesign

- Nature of international shipping coming into the port
- Integrated transport system: transfer to trucks, rail, inland or coastal shipping
- Port industries and functions
- Environmental impact mitigation in all operations
- Port – community relationships: urban design

Global Transportation Patterns

World Transportation Patterns



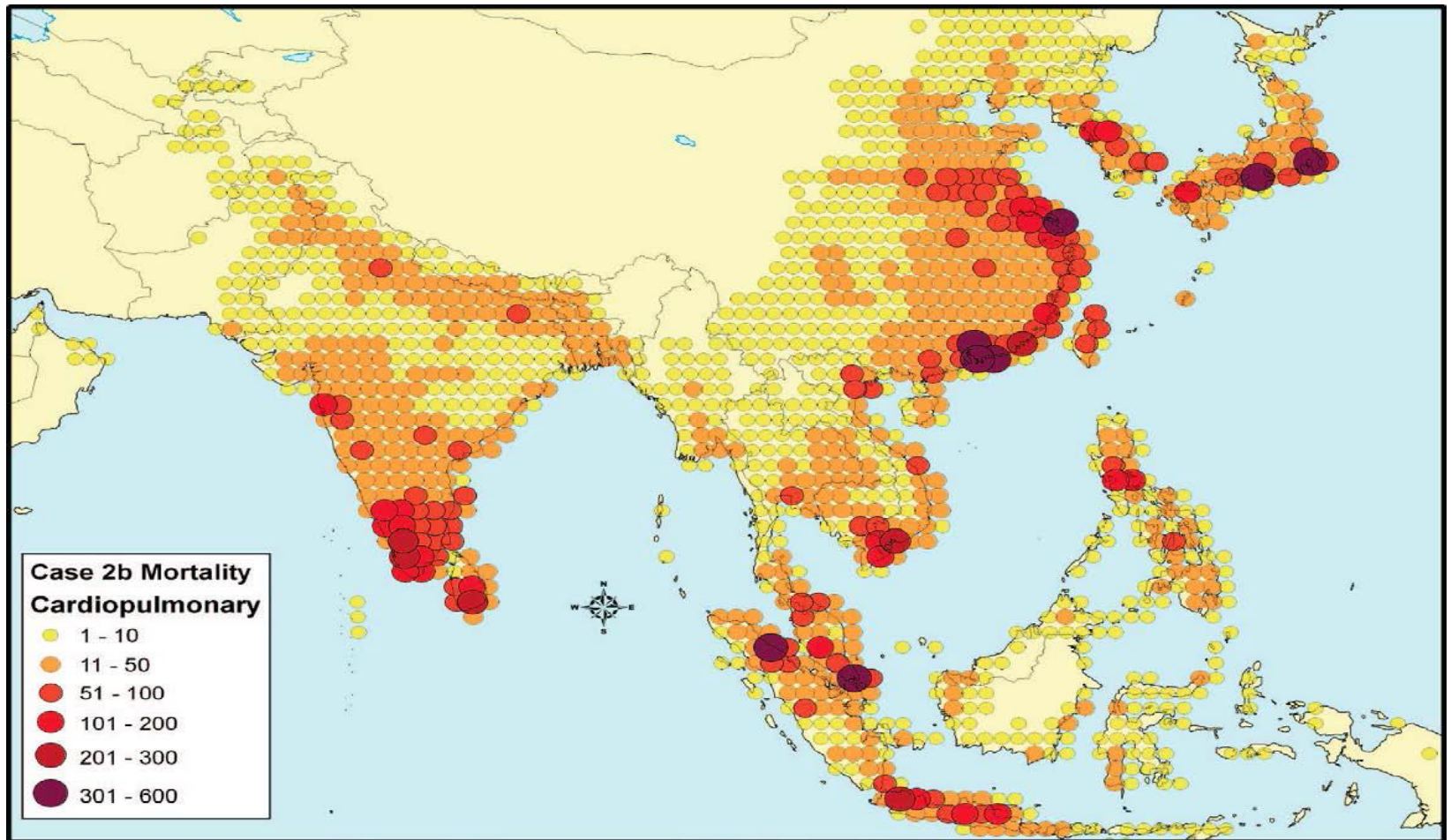
Shipping Concerns

- Pollutants and chemicals from operation of ship, such as NO_x and SO_x
- Noise and other impacts on human populations near port areas
- Cargo contaminants
- Ballast water micro-organisms
- Accidents, such as spills or sinkings, especially in heavily-used shipping lanes or from negligence
- Hijacking, kidnapping, piracy on seas, or terrorism

Shipping Accounts for About 3 Percent of Global Carbon Dioxide Emissions



Shipping Directly Related to Human Health



Source: Fred Fung, International Council for Clean Transportation

New Global Goals Framing Our Agenda for Ports and Shipping

- U.N. Sustainable Development Goals
- Paris Agreement on Climate Change

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Paris Agreement

We will always have Paris

Paris Agreement sets framework for concerted global action to tackle climate change through a low carbon pathway addressing various stakeholder concerns



1884



1950



2014

NASA Time series shows 5-year mean variation of surface temperatures from 1884 to 2014. Dark blue indicates areas cooler than mean. Dark red; warmer than mean



We are happy that India's concerns have been taken care of in the final climate draft of the negotiating text... It is a balanced text and is a way forward for the world

— **Prakash Javadekar**



Salient points

DIFFERENTIATION Common But Differentiated Responsibilities ensuring equity to provide developing countries a cushion

TARGET Sets a binding target of well below 2 degrees for rise in temperature. Also endeavours to keep rise to 1.5 degrees. Nations will regularly provide a national inventory of greenhouse gas emissions

FINANCING Developed countries to raise more funds over time to help developing countries and strike balance between need to adapt to climate change and cut their emissions

Goals of This Meeting

- Build networks of interested partners
- Share experiences and learn from each other
- Anticipate problems before they happen
- Continue to collaborate and work toward solutions
- Develop action proposals that can be brought to regional and global bodies

What Should Our Agenda Be?

- Local Level
- National Level
- Asia-Pacific Level
- Global Level