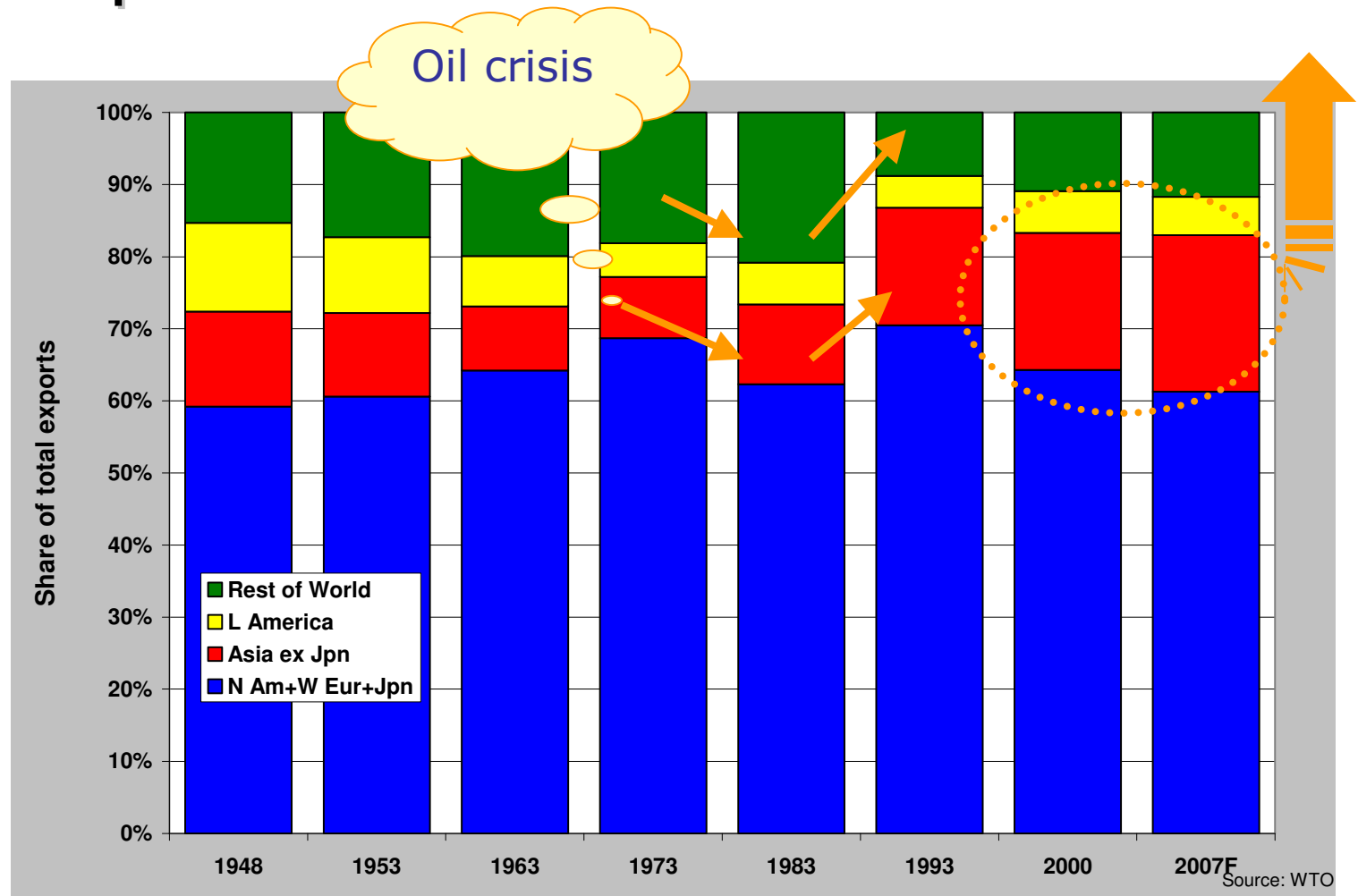


General Strategies for Port Development

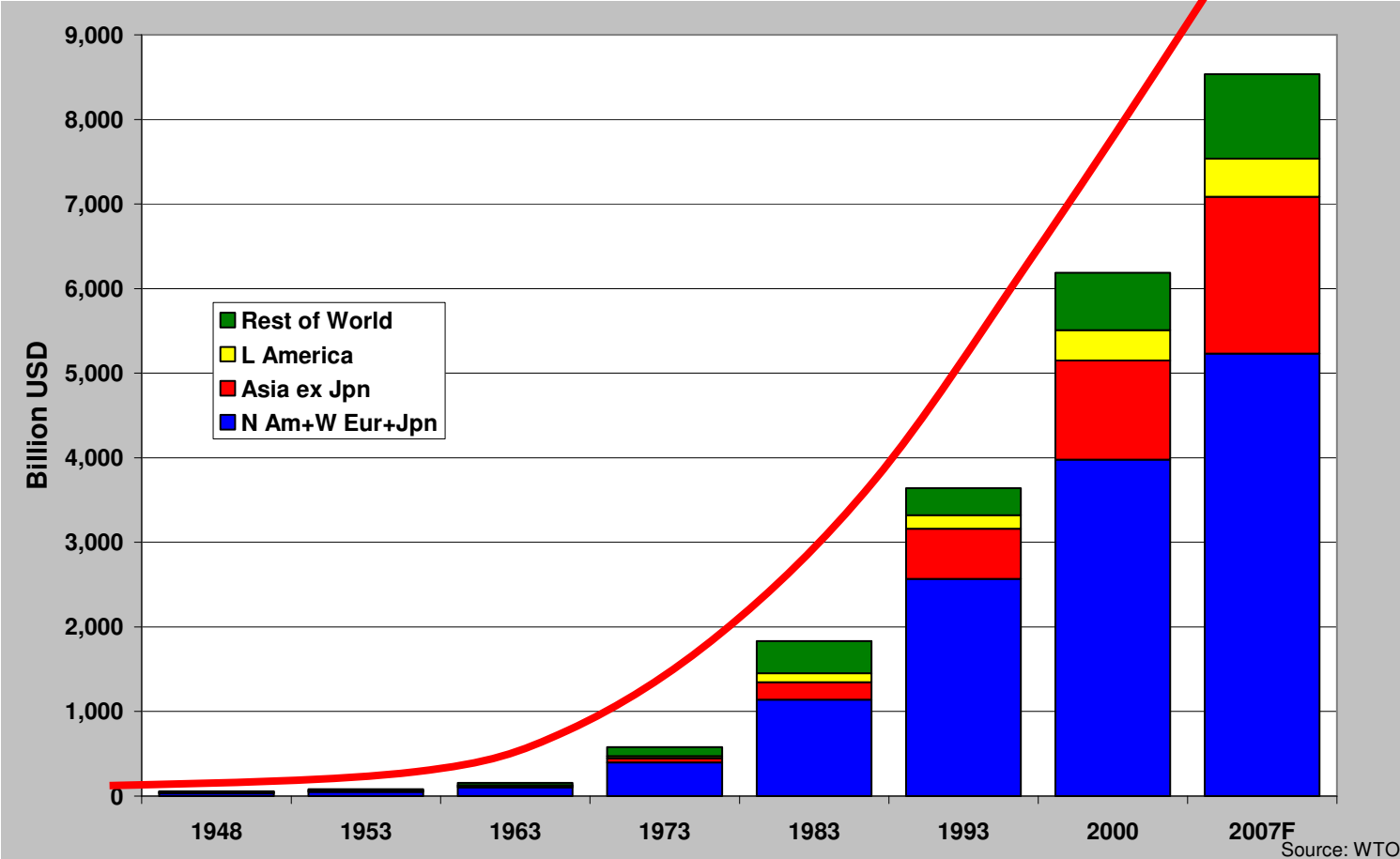
Agenda

- ◆ Port market driving factors
 - Trade/exports
 - Seaborne transport
- ◆ Ships
 - Deep sea
 - Short sea
 - Environmental performance
- ◆ Environmental and logistic guidelines for port investments

Regions of World exports

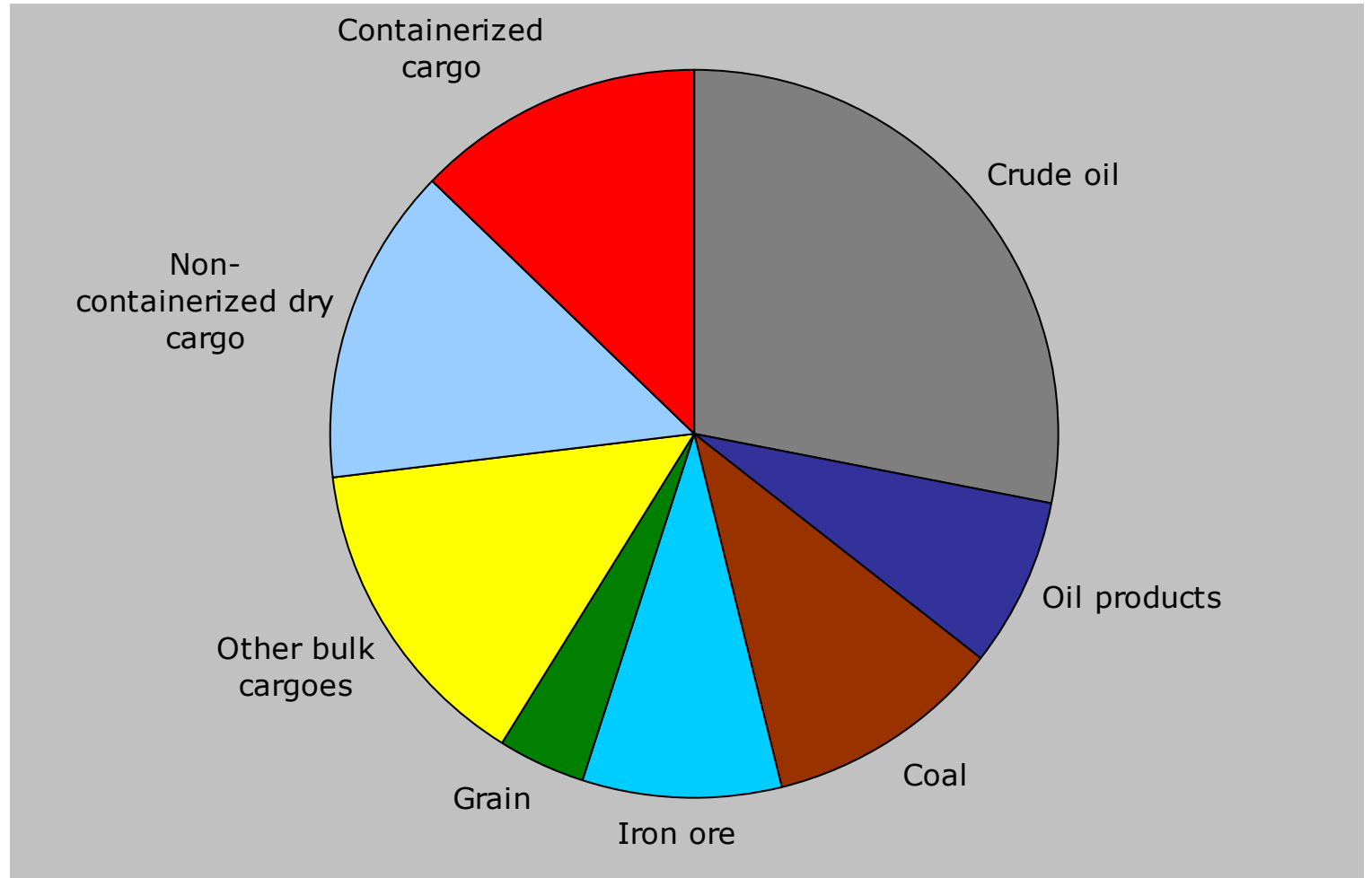


Growth of world exports

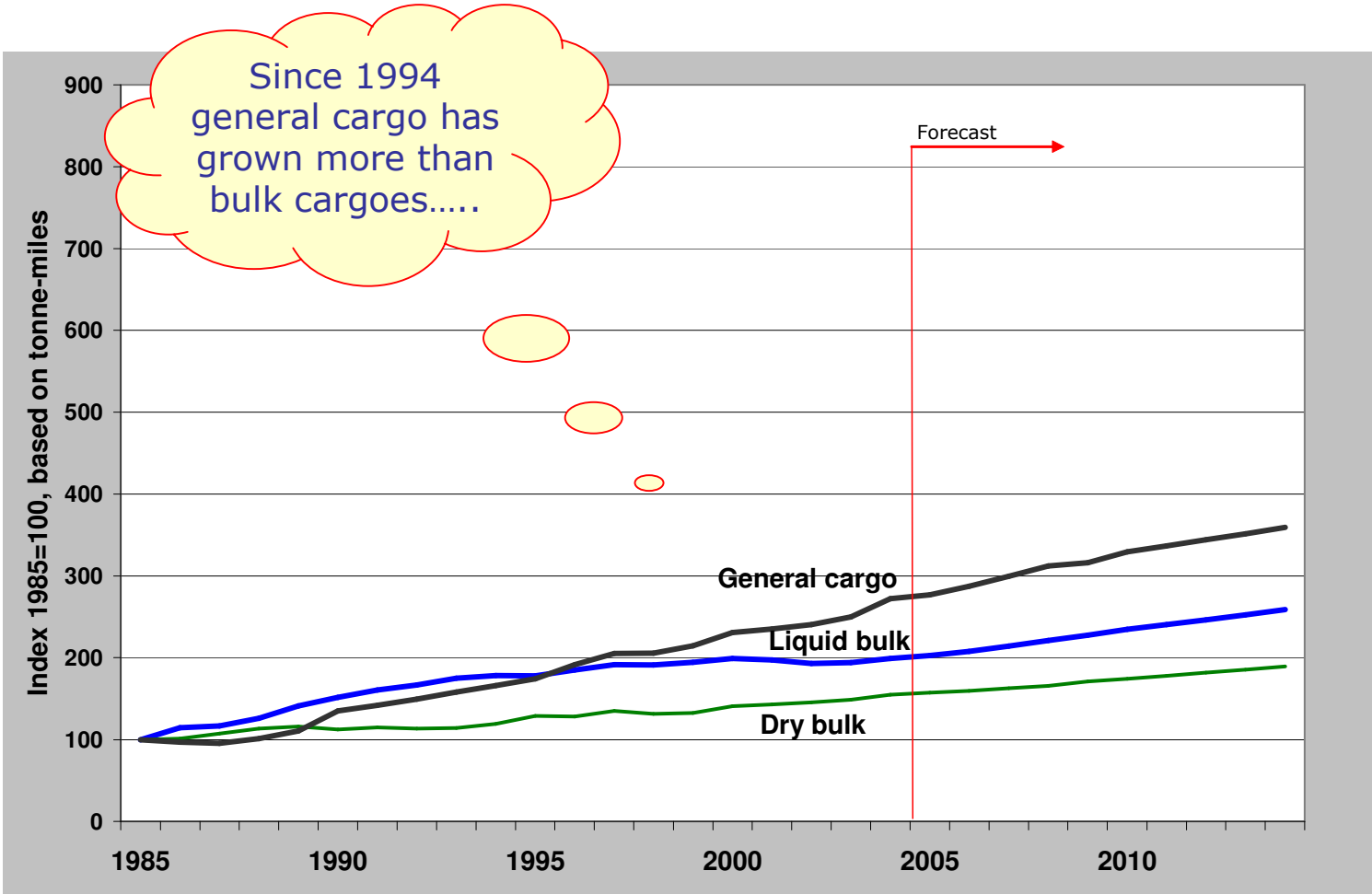


Source: WTO

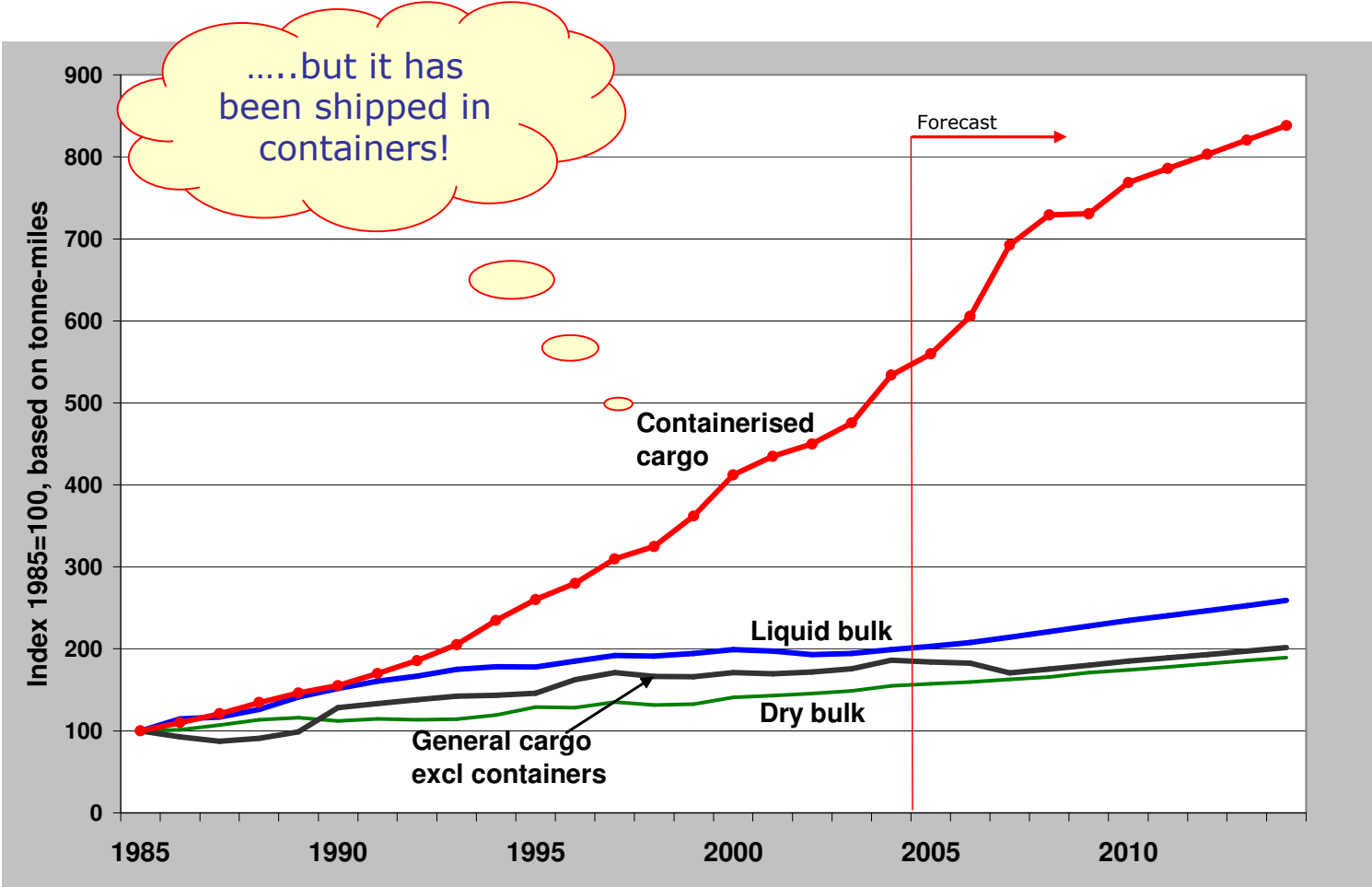
The split of seaborne deep sea trade



Development in deep sea transports 1985=100



Development in deep sea transports 1985=100



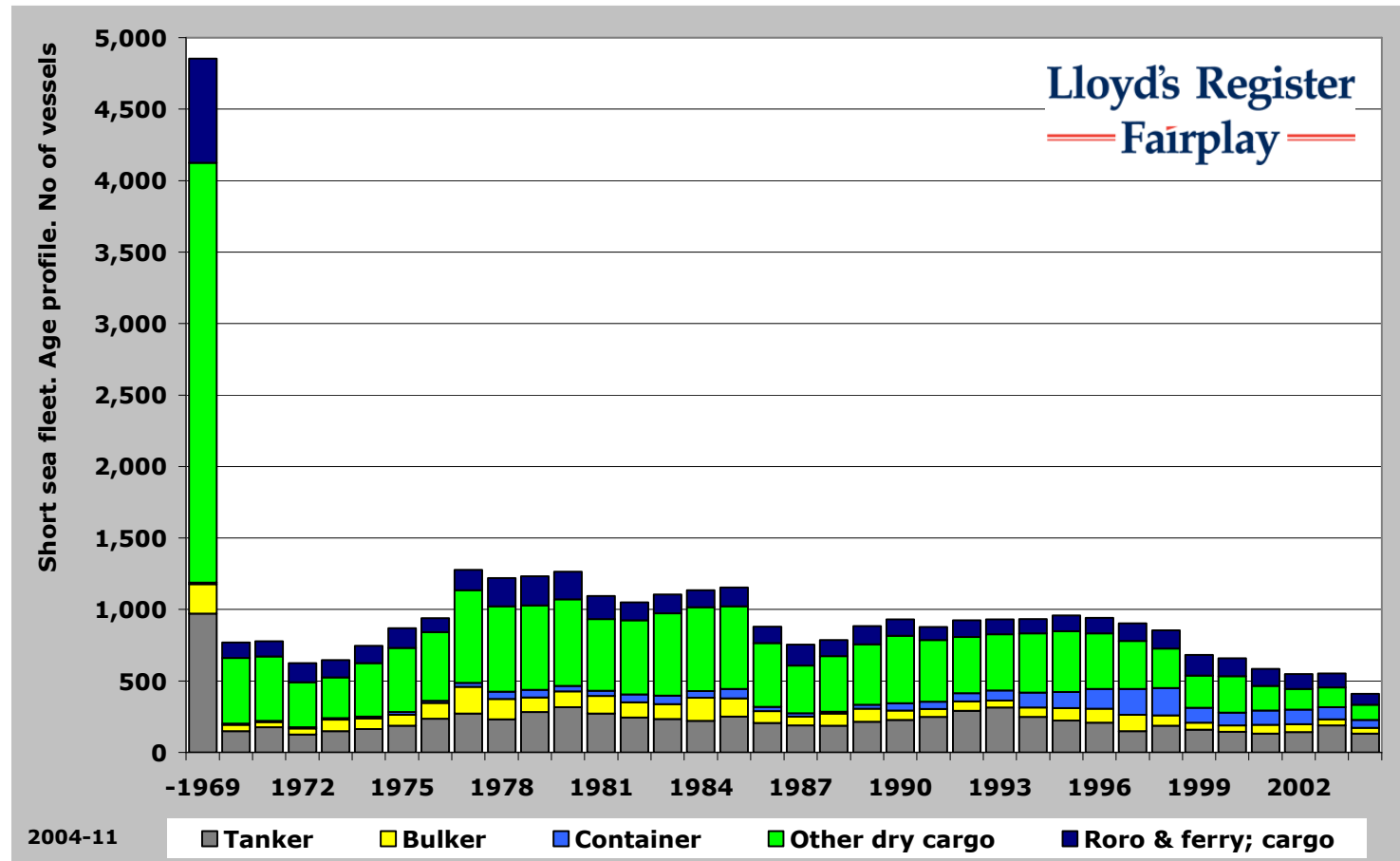
Why this development for the deep sea transports?

- ◆ Globalisation
 - Fragmentation of production processes
 - Consolidation of multi-national enterprises
- ◆ Exploration of economies of scale
 - Highlighted by the container fleet
- ◆ Population growth

The development for short sea transports

- ◆ Growing all over the world
- ◆ The ships differs between regions
 - In Asia general cargo and container ships
 - In Europe general cargo and ro-ro ships
- ◆ Exploration of economies of scale
 - Ships in all sectors are larger when replaced
 - This gives pressure for rebuilding of fairways and ports
 - Big advantage regarding ships emissions since fuel consumption are lowered in relation to tonnes carried

Age distribution of cargo carrying short sea fleet <35,000 dwt (no of vessels)



Environmental and logistic strategies for port investments

- ◆ Dry and liquid bulk ports, small container ports (<100,000 TEU), ro-ro terminals
 - Close to the industry/user
 - Away from habitat areas
 - Close to road and railway
- ◆ Cruise and passenger ferry terminals
 - Close to city centers
- ◆ Environmental reception facilities
- ◆ Facilities for cold ironing (high voltage)

The End

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