



# IMAGINING DREDGING

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Dredging Summit & Expo 2014

# OUTLINE

## **One Man's View of Dredging Equipment 2020.**

- Assumptions
- Predictions

## **Author's Predictions**

# GREENER'S PAPER

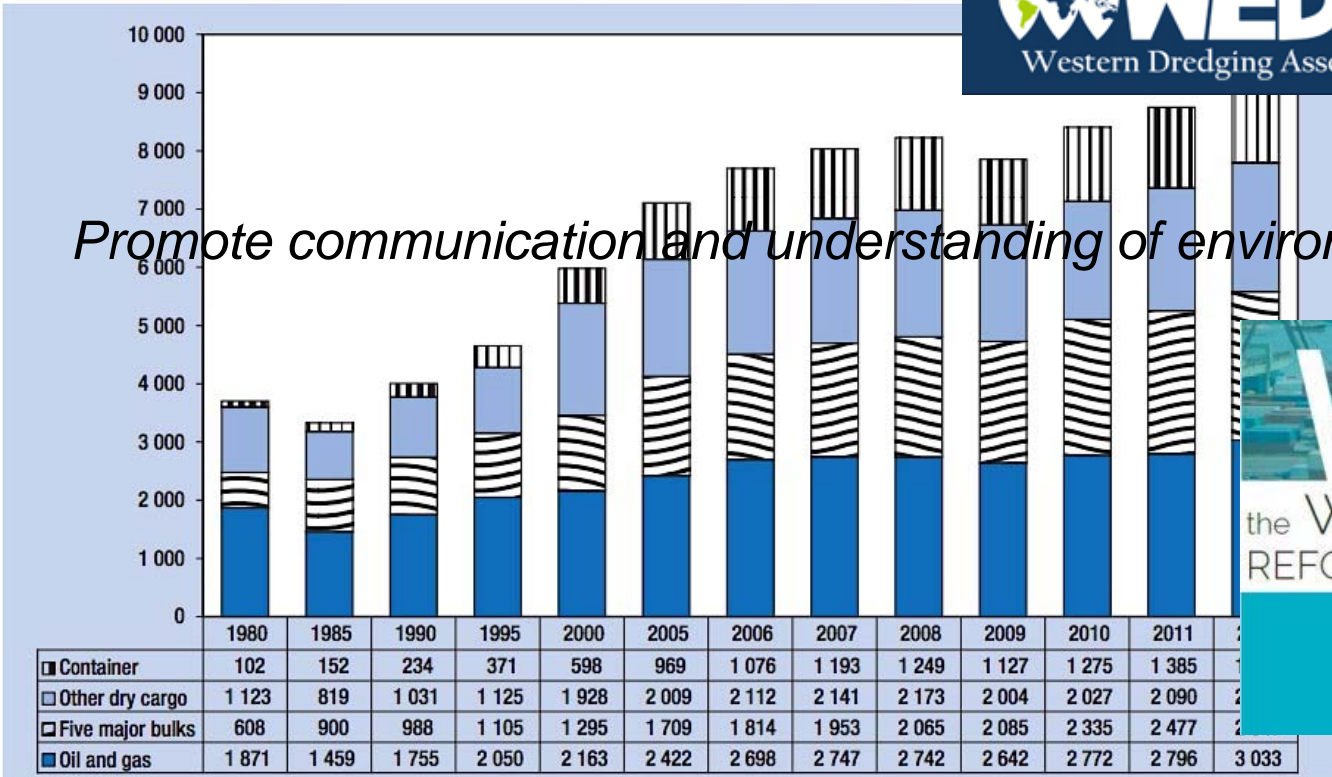
Written in 1994

## 2 Assumptions

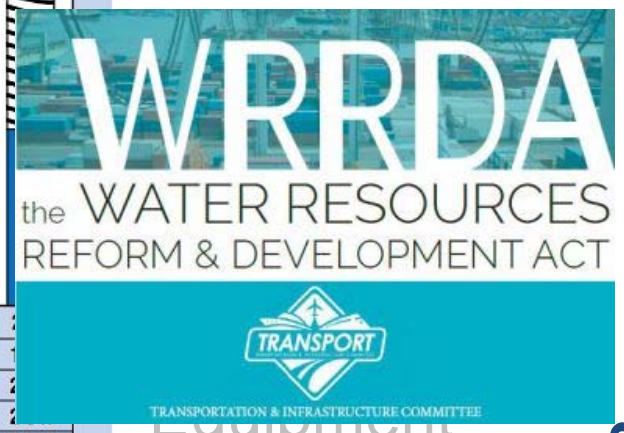
- Importance of Maritime Shipping



Figure 1.2. International seaborne trade, by cargo type, selected years (Milli



Promote communication and understanding of environmental issues .....



Source: UNCTAD Review of Maritime Transport, various issues. For 2006-2012, the breakdown by type of dry cargo is based on

# INCREASED DEMAND OF MARITIME INFRASTRUCTURE

**More Maritime Trade More Demand on Maritime Infrastructure**

## **Panama Canal**

- \$5.25 Billion
- 2 New Sets of Locks
- Widening and Deepening Existing Channels



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# TYPES OF NAVIGATION CHANNELS

- Non-Bulk Transportation  ~~Shallow Draft Projects?~~

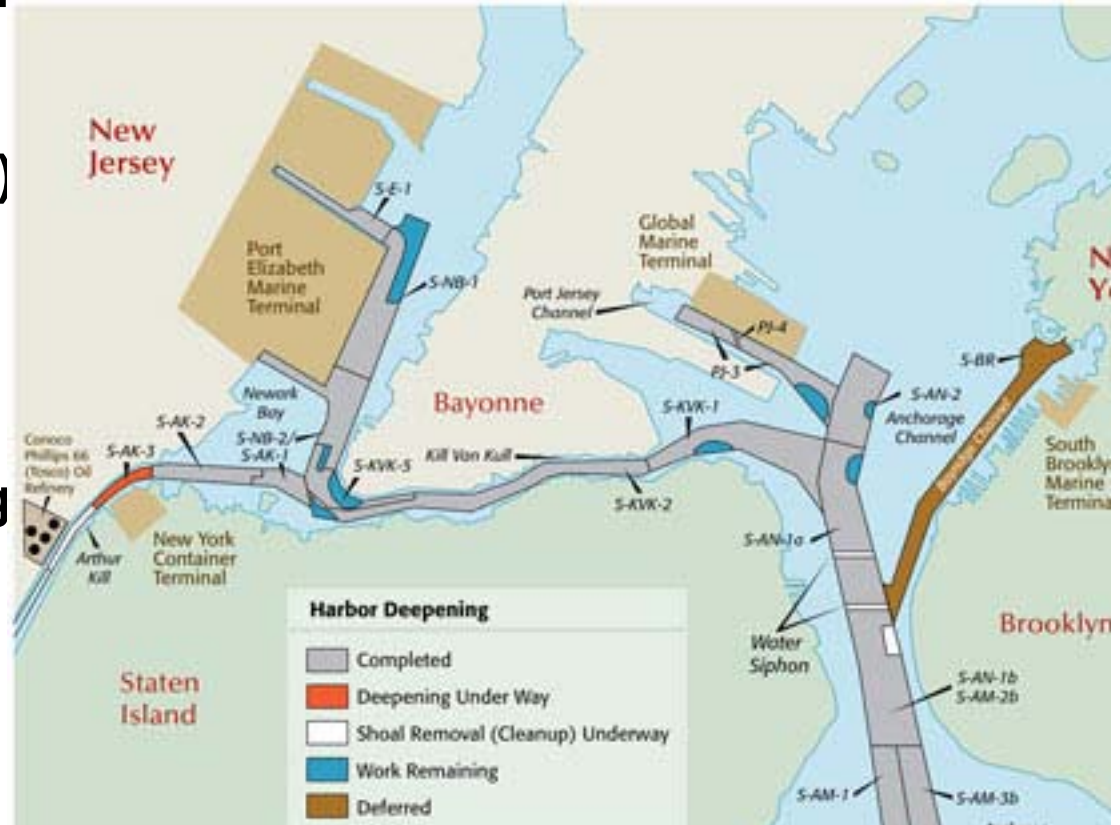
- Container Ships and Panama Canal

- Port of Moin (Costa Rica)

- \$922 Million
- 52.5 Ft. Channel

- NY NJ Harbor Deepening

- \$1.6 Billion
- 50 Ft. Depth





# ENVIRONMENTAL DREDGING EQUIPMENT

## Clamshell Buckets

- **Hudson River**
  - 5<sup>th</sup> Year Of Dredging
  - Removal Of PCBs
  - Restoration Of Marine Habitat



## Hydraulic Dragheads

- **Price Rupert Canada**
  - 50,000 CM Of PCB Sediment Removed
  - Port Areas Being Reused



# IN SUMMARY

**Shipping And Environmental Concerns Affect The Dredging Industry.....**

**..... Is That All?**

**No**

- **Growing Populations And Economies**
- **Social Trends**
- **Energy Demands**

# AUTHOR'S PREDICTIONS



# AUTHORS PREDICTIONS

## **Internal Vs External Factors**

### **Internal**

- Industry Controlled
  - Professional Certification
  - Technology

### **External**

- Outside Industry's Control
  - Economic And Shipping Growth
  - Coastal Urbanization
  - Future Energy Demands

# GLOBAL ECONOMY

## Global Economy Affects Shipping

### HSBC Study For 2050 Economy:

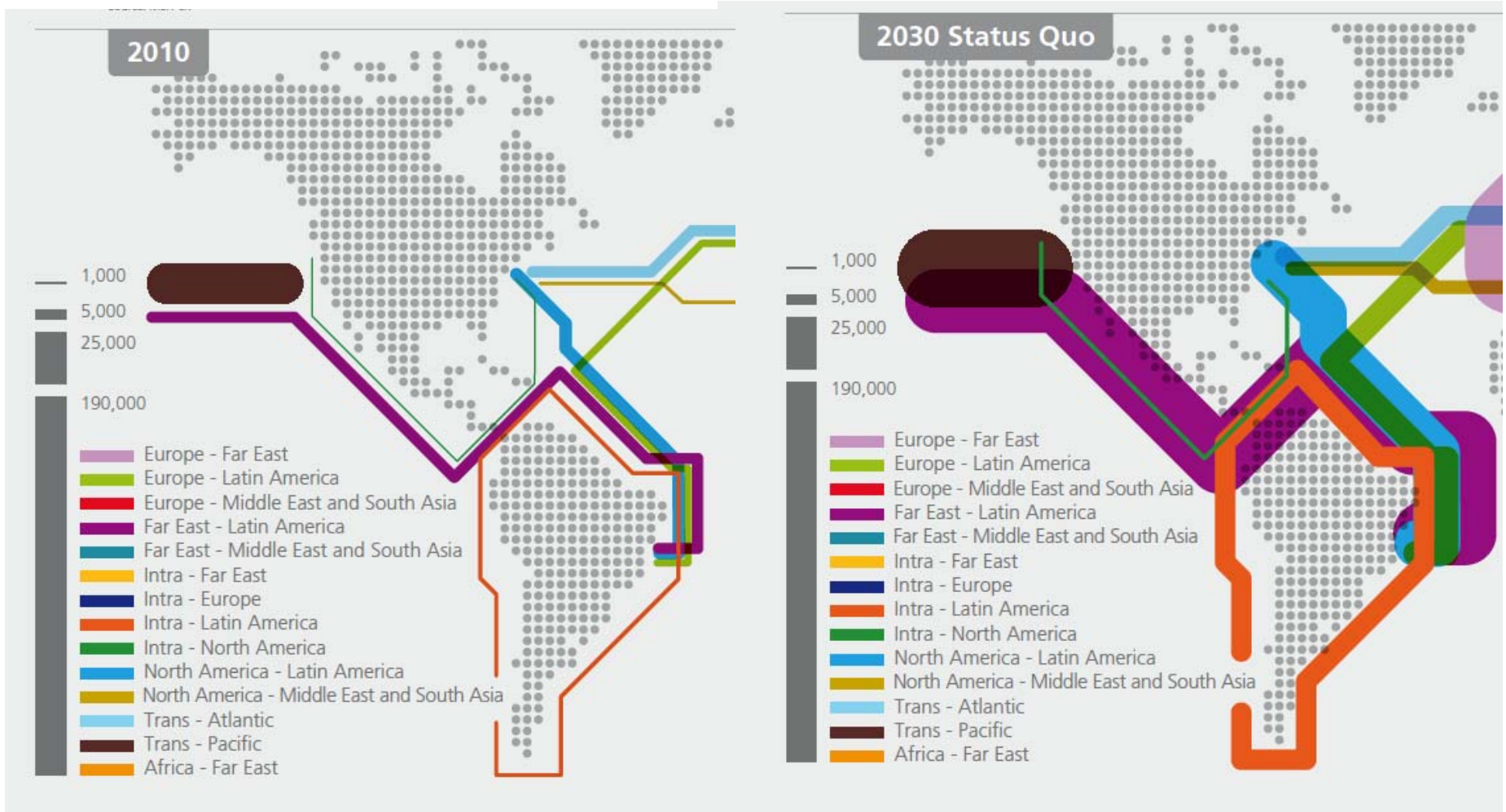
- 4 Of Top 10 Economies: US, Canada, Brazil, Mexico.

### More Important: Growth Of Latin America

- Fast Growing Region
- Peru, Bolivia, Honduras, Ecuador @ 5% GDP
- 11 Others @ 3-5%
- 2 Landlocked Countries
- Maritime Investment Will Be Critical



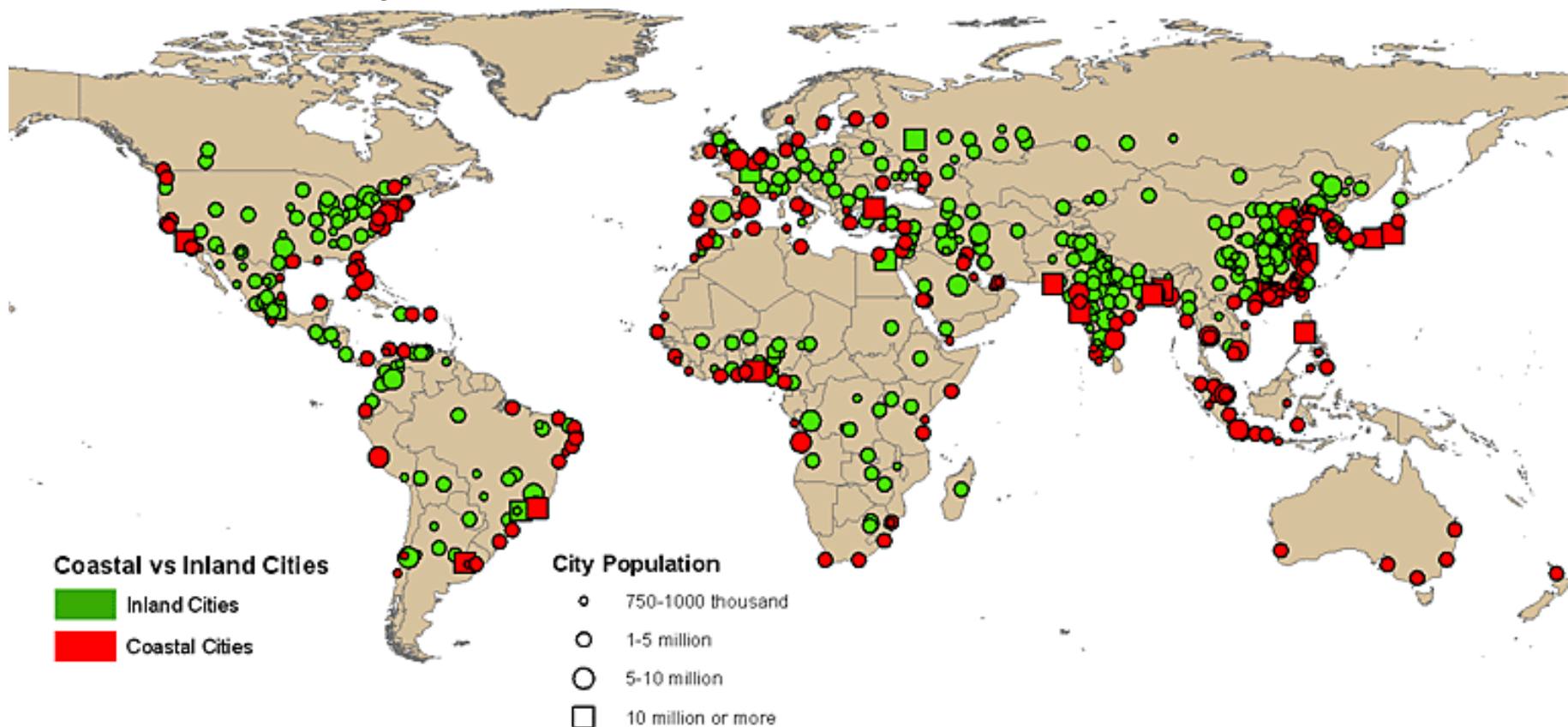
# GLOBAL TRADE



# COASTAL URBANIZATION

**World Bank(2013): 53% Of World Population Lives  
In An Urban Area**

**UN: 70% By 2050**



# ENERGY DEMANDS

## **EIA: 56% Increase In Global Energy Demand By 2040**

- Latin America 62% More Energy In The Future
- **Growing Environmental Concerns Over Fossil Fuels**
  - Greater Push For Renewable
  - Ocean As A Source
  - Dredging



# CONCLUSION

- **Assumptions For The Future:**
    - Maritime Shipping Continue To Be Of Importance
    - Environmental Concerns Remain Relevant
    - Technology Will Develop
  - **Latin America Will Grow In Importance**
  - **Costal Urban Areas Of Great Concern**
  - **Energy Demands**
- } Dredging!



# THANK YOU

QUESTIONS?

# REFERENCES

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