

11-2011

# Regional and Global Implications of the Panama Canal Expansion

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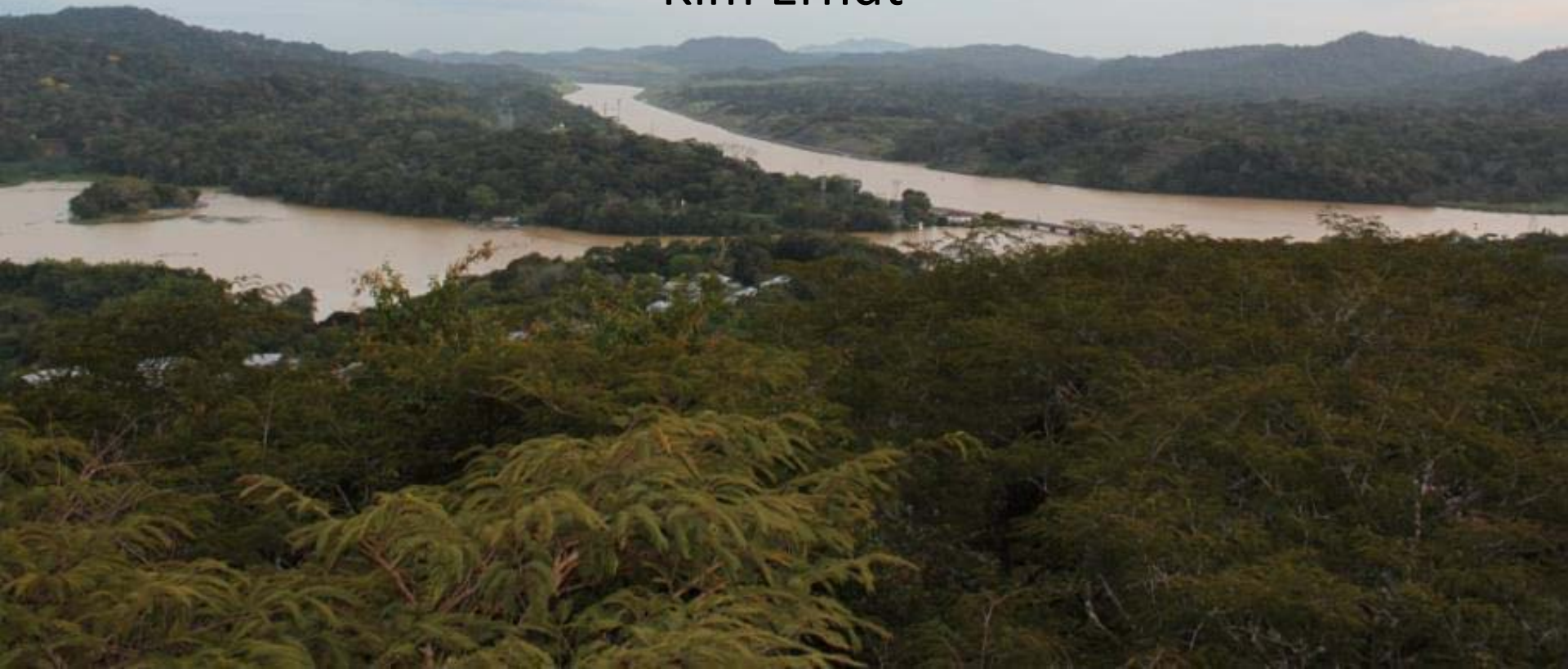
## Recommended Citation

Pitts, Kristen, Stoebner, Tim and Erndt, Kim. "Regional and Global Implications of the Panama Canal Expansion." (Nov 2011).

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# Canal Expansion

- Began in 2007; Completion 2014
  - Currently has two lanes
    - Adding a third - same capacity
  - Increase efficiency through
    - Reduced wait time
    - Reduced shipping costs



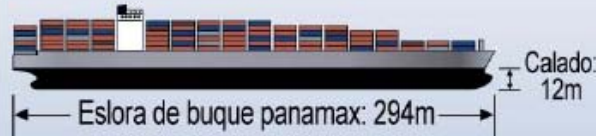


## Comparación entre Buques Portacontenedores Panamax y Pospanamax

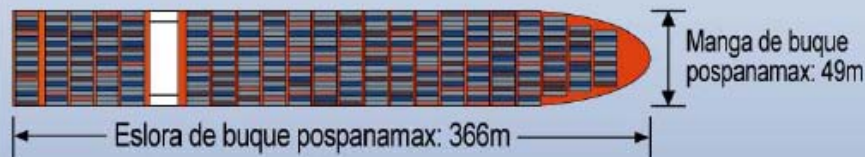
**Post Panamax**



**Current Panamax**



**Post Panamax**



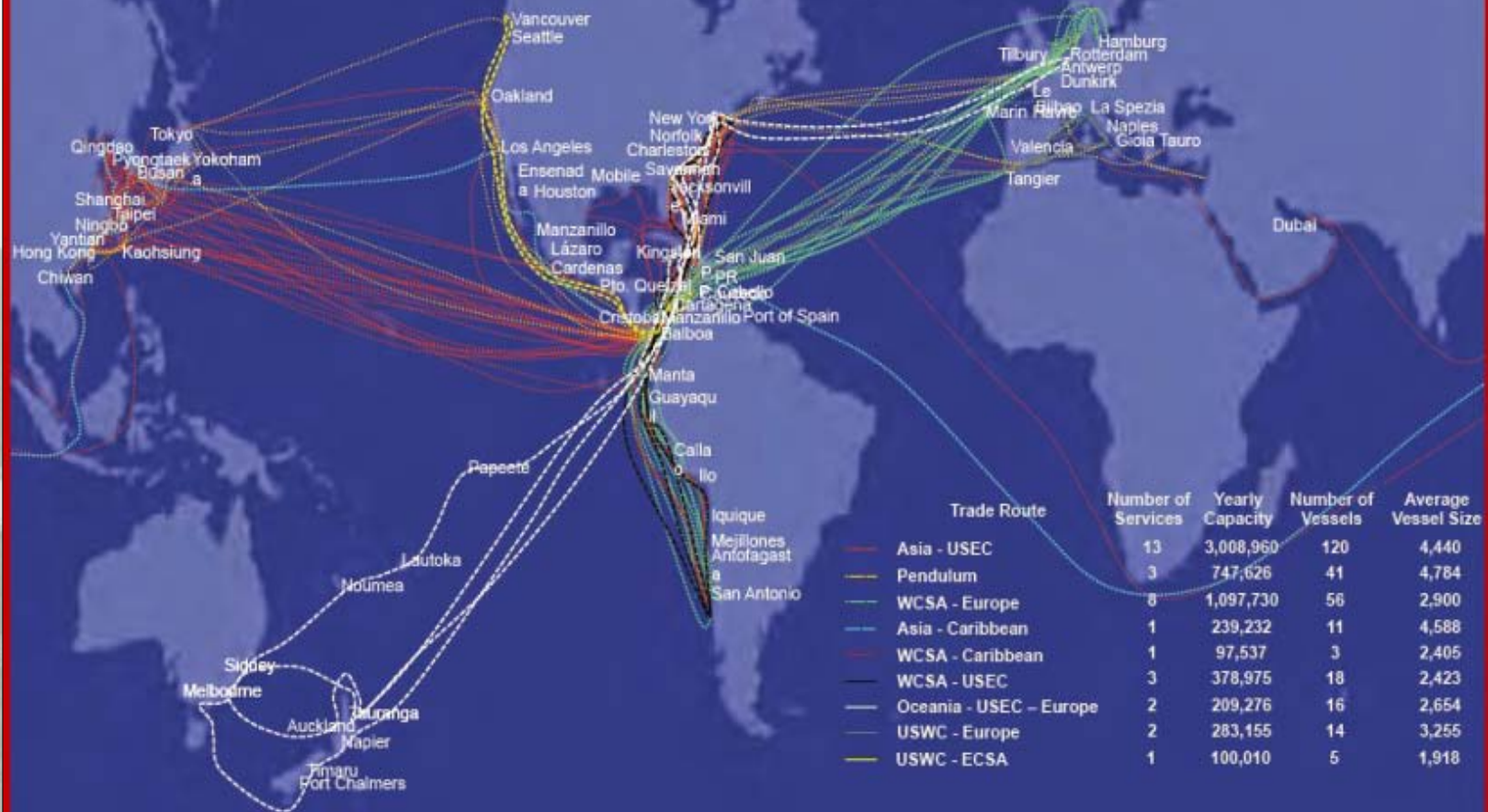
**Current Panamax**



	Panamax	Pospanamax
<b>Capacidad:</b>		
Contenedores (TEUs)	4,500	12,000
<b>Dimensiones:</b>		
Manga	32m (106')	49m (160')
Eslora	294m (965')	366m (1,200')
Calado	12m (39.5')	15m (50')

Comparison between a Panamax container vessel, with maximum dimensions to transit the Canal, and what would be the Post Panamax vessel in the expanded Canal. The new vessel would be 2.5 times the current carrying capacity of Panamax vessels.

# Liner Services Through The Panama Canal



Source: Compair Data, January 2011



# Panama Canal

- Current Canal Operations
  - 14,000 vessels/year
  - 300 million tons of freight
    - 5% of world trade
  - 10% of Panama's GDP
  - Average toll: \$300,000
    - Will likely increase



- Shipping volume projected to double by 2025

# Economic Growth for Panama

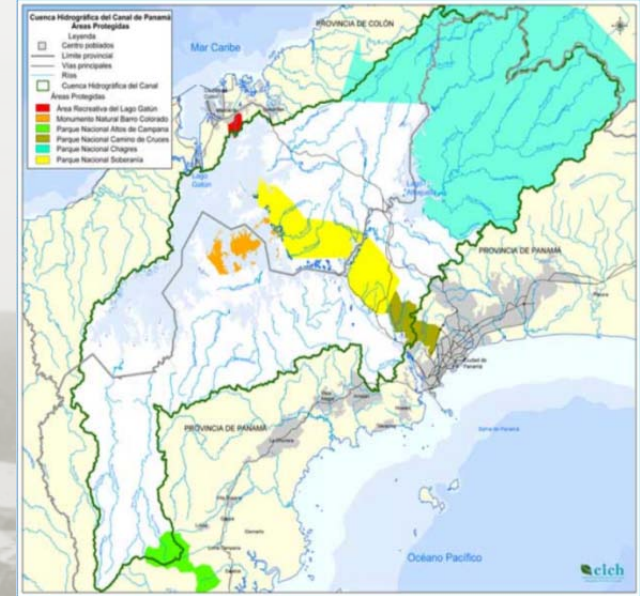
- Growth within Canal Watershed (2003 – 2006)
  - 240% Construction
  - 102% Wholesale trade
  - 36% Manufacturing
  - Mining makes up ~1% of GDP
    - But grew 69% (Panama)
- Puts pressure on watershed
  - Deforestation
  - Erosion





# Protection of the Rio Chagras (Panama Canal) Watershed

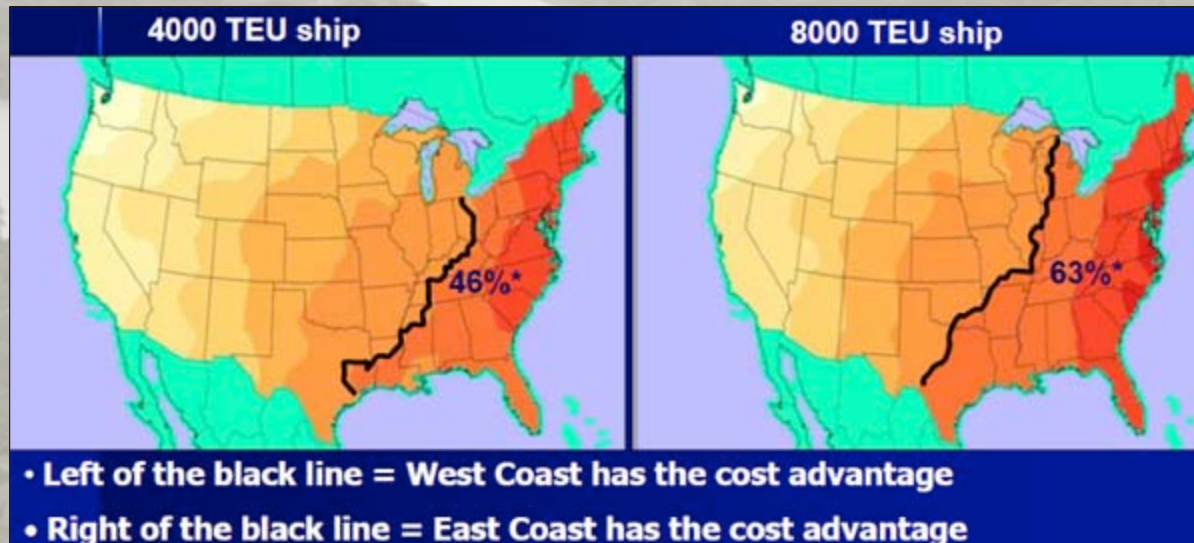
- Canal Operation Dependent on:
  - Water Quantity
    - 7 Million m<sup>3</sup> per day
  - Sedimentation
    - Reduces Reservoir Capacity
    - Reduces Draft Depth
    - Degrades Water Quality
  - Water Quality
    - Environment
    - Human
  - National Parks and Protected Areas
- Protection of the Panama Canal Watershed has World & Regional Implications





# Impact on USA

- US Ports
- Shifting Transportation Methods
- Transportation Infrastructure



# US Ports

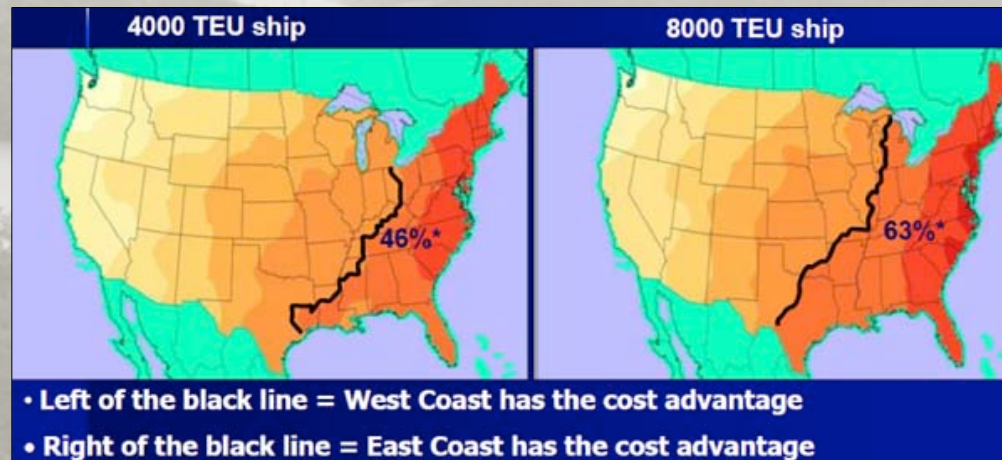
- Major East and Gulf Coast ports are expanding
  - New York, Charleston, Norfolk, Miami
  - New Orleans, Tampa, Gulfport
- Work being done
  - Mainly dredging to accommodate ship draft
  - Bayonne Bridge – New York
- Partnerships being made
  - Between Port Authorities
    - Savannah and Charleston
  - Between States
    - Georgia and South Carolina
  - Between US and Panama
    - New Orleans and ACP
- “Infrastructure is really what allows the economy to grow” – Rudolfo Sabonge, VP of Market Resesarch and Analysis, Panama Canal Authority (ACP)





# Shifting Transportation Methods

- From West Coast to East Coast
  - Asian Markets
  - Lower Cost of Shipping
  - Distance from Mississippi River
    - From 75 to 150 miles



- “tsunami of freight to Cincinnati area” – Ohio Kentucky Indiana Regional Council of Governments

# Transportation Infrastructure

- Improvements and expansion
  - Rails
  - Roads
  - Rivers





# Political Pressures

- Pressure to improve transportation infrastructure
  - “major transportation infrastructure challenges exist in the United States that could limit anticipated benefits of the canal expansion” – United Soybean Board
  - “Improvements to locks and dams on Mississippi River are needed” – Soy Transportation Coalition, Upper Mississippi, Illinois and Missouri Rivers Association
  - “will double the area that draws U.S. soy through Gulf of Mexico ports via the Mississippi River” – United Soybean Board

# Some Questions

- Industry is saying: Mississippi River infrastructure will need to be expanded and improved
  - Current Funding structure
    - New improvements 50% Federal tax dollars
    - Maintenance 100% Federal tax dollars
  - Is this cost effective
  - Who should pay for the improvements
    - US citizens
    - Shipping industry
    - Agriculture/Coal industries
- Focus on roads and rails rather than river?