The Story So Far: The US Maritime Industry Perspective

Environmental Law Institute
Noisy Oceans: Beyond Navy Sonar

Washington, DC
May 20, 2008

NATURE DOES NOTHING IN VAIN.

Aristotle

Chamber of Shipping of America

- 33 US based companies
- Own, operate or charter vessels
- Trading in coastwise and international trades
- US and non-US flag registries
- Variety of vessel types including tankers, bulk carriers, containerships, ro-ro's and others

CSA Historical Involvement

- Industry advisor on US delegation to IMO
- Involvement in marine ecosystem issues associated with normal operating scenarios
- “Lonely” marine industry representative on US federal advisory committee on Acoustic Impacts on Marine Mammals
- Steering Committee and presenter at both NOAA conferences (2004, 2007)

Federal Advisory Committee on Acoustic Impacts on Marine Mammals

- Broad stakeholder representation (scientists, environmental groups, government, military, E&P, marine)
- Broad scope e.g. all sound producers
- Science based disagreements
- Sound producer based disagreements
- 90% agreement, but 10% disagreements
- Missed goal of consensus based report
- Caucus reports only

WHERE IS THE KNOWLEDGE WE HAVE LOST IN INFORMATION?

T. S. Eliot

Marine Industry Caucus Report

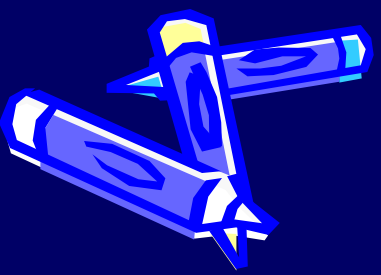
- Refusal to engage in “finger pointing exercises” among sound producers
- Recognition of precautionary approach
- Recognition of need for future work but…
- Belief that current state of knowledge is sufficient to pursue possible solutions
- Need for international focus e.g. IMO
- Need for education of industry stakeholders

IT IS BETTER TO ACT TOO QUICKLY THAN IT IS TO WAIT TOO LONG.

Jack Welch

NOAA Outreach Conferences

- 2004 – focus on science and management
- 2007 – focus on vessel quieting technologies
- With few exceptions, both resulted in "preaching to the choir"
- Continuing need to outreach to entire industry (owners, naval architects)



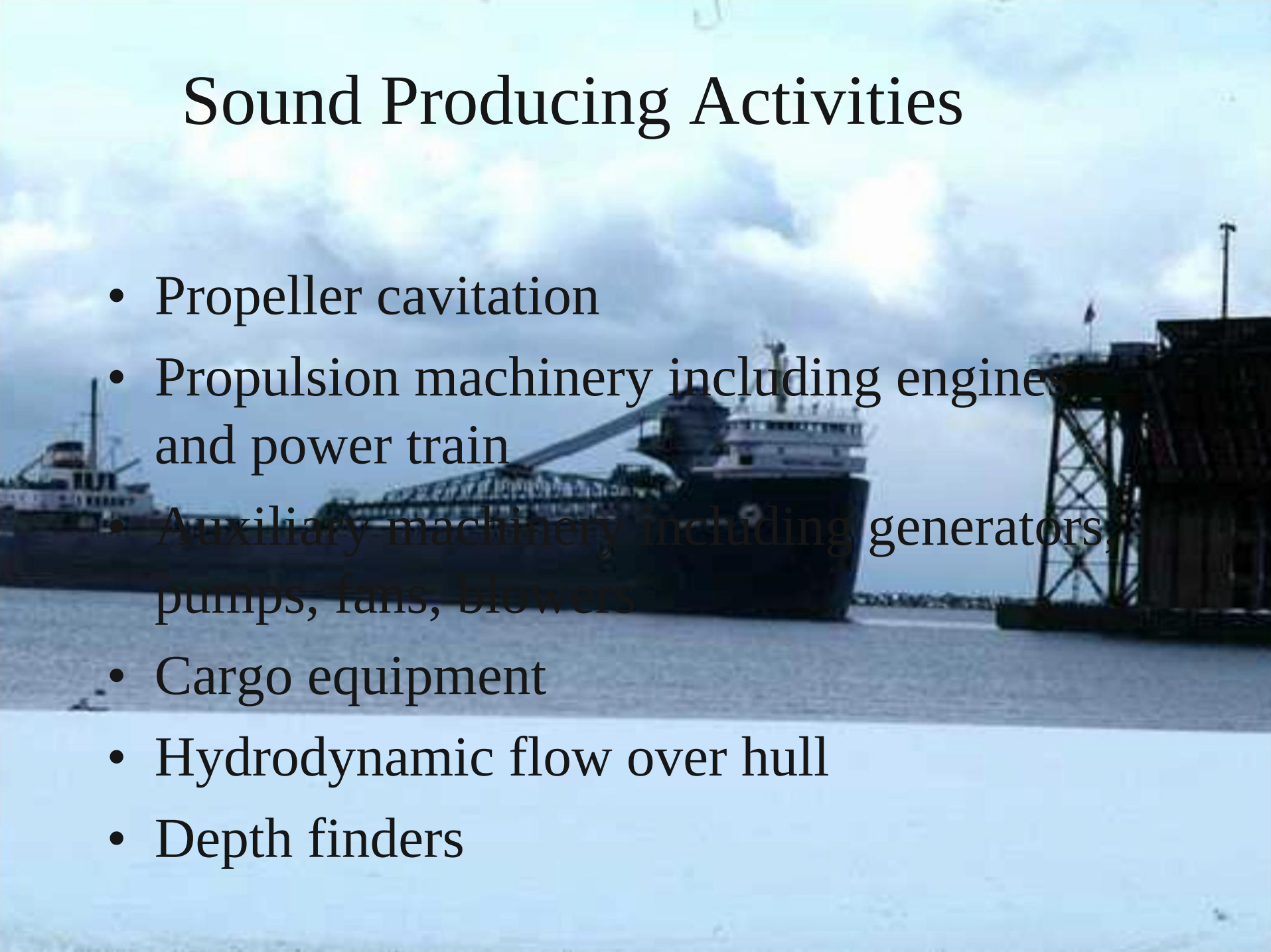
Key Considerations

- Mariners are not marine biologists
- Mariners are not acoustical engineers
- Mariners generally are not aware of negative impacts of sound
- Mariners do want to operate in an environmentally responsible manner
- Progressive approach to assess alternative vessel designs

Ship Design and Construction

- Large customized vessels based on owner specifications
- Design criteria including propulsion systems, cargo capacity, operating equipment and economics
- Water borne noise generation is NOT a factor (yet ☺) in the construction of commercial vessels
- Reduced cavitation = increased fuel savings?

Sound Producing Activities



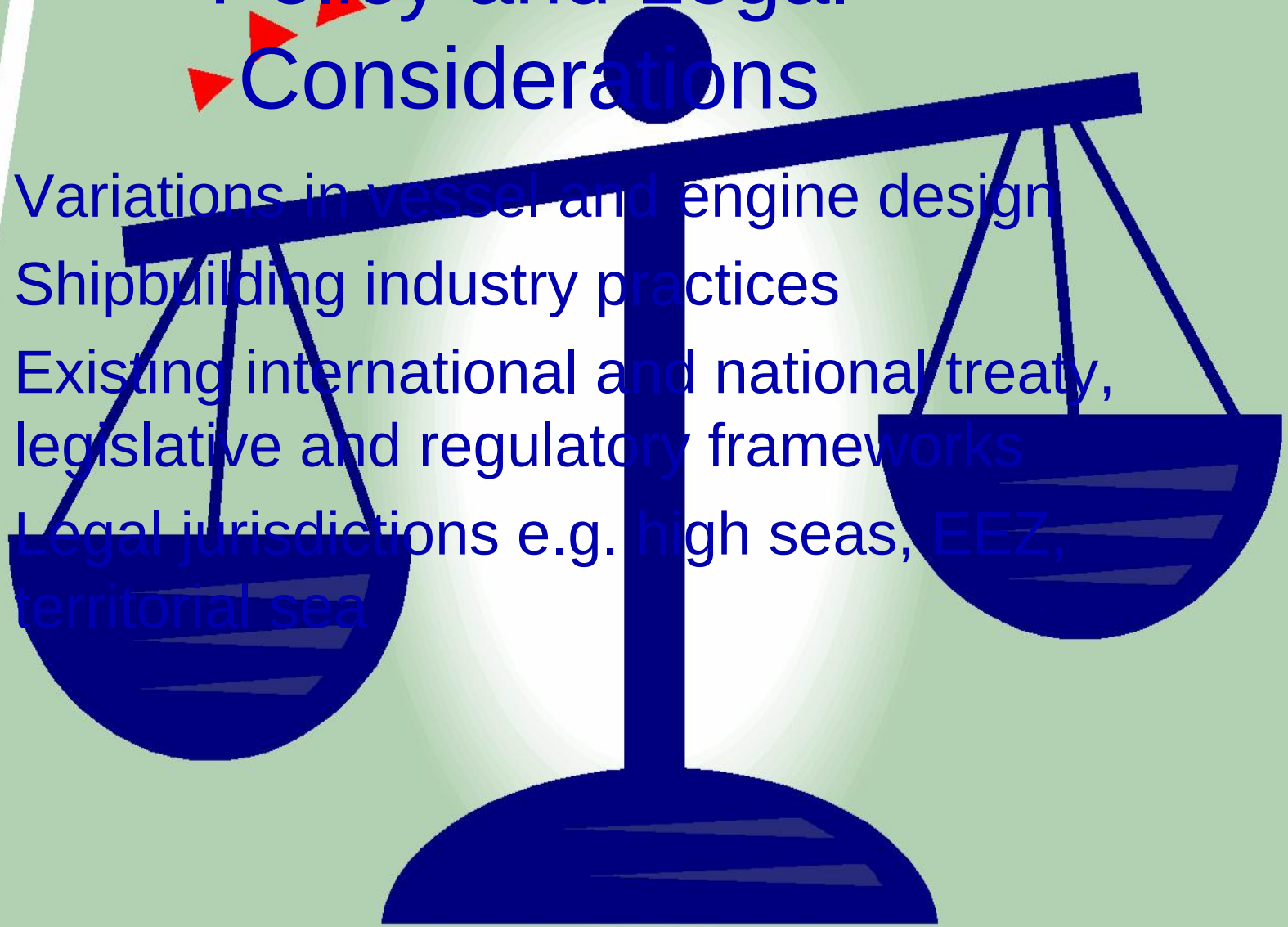
- Propeller cavitation
- Propulsion machinery including engines and power train
- Auxiliary machinery including generators, pumps, fans, blowers
- Cargo equipment
- Hydrodynamic flow over hull
- Depth finders

Ship Generated Noise Characteristics

- Ships as point source and collective contributors to background noise
- 85% of ship radiated noise due to excessive cavitation
- Geographic patterns depend on transoceanic and coastal routing
- Other variations due speed, load and onboard operations
- Sound respects no legal boundaries

Policy and Legal Considerations

- Variations in vessel and engine design
- Shipbuilding industry practices
- Existing international and national treaty, legislative and regulatory frameworks
- Legal jurisdictions e.g. high seas, EEZ, territorial sea



International Workshop on Shipping Noise and Marine Mammals Held By Okeanos - Foundation for the Sea Hamburg, Germany, 21st-24th April 2008

- Stakeholders with expertise in the areas of underwater acoustics, naval architecture, marine engineering, ship building, marine mammal bioacoustics, marine operations, noise control, and international maritime and environmental law .
- Marine mammals are acoustic specialists and depend on sound for survival.
- Relationship between commercial shipping and the amount of underwater noise. Increased shipping results in increased ambient noise levels and thus negative impacts on marine mammals.
- This is a global problem. Sound propagation respects no jurisdictional boundaries….neither due marine mammals!

International Workshop (cont'd)

- Noise is non-persistent, therefore reduction of noise provides immediate benefits.
- Goal is to mitigate or eliminate the impacts of noise on marine mammals.
- **"To achieve this goal we call for initial global action that will reduce the contributions of shipping to ambient noise energy in the 10-300 Hz band by 3dB in 10 years and by 10dB in 30 years relative to current levels. This goal would be accomplished by reducing noise contributions from individual ships."**

What's Next?

- Continue to quantify impacts
- Assess technological feasibility of possible solutions
- Assess economics associated with alterative design processes
- Integrate solutions into normal ship operating and design scenarios
- Initiation of IMO review process (Information paper early 2008; US submission fall 2008?)

IGNORANCE OF ENVIRONMENTAL ISSUES IS SIMPLY BAD BUSINESS. DISREGARD OF THEM IS EVEN WORSE.

Capt. John Henry Bates

Presenter's Contact Information

Kathy J. Metcalf
Director, Maritime Affairs
Chamber of Shipping of America
1730 M Street, NW Suite 407
Washington, DC 20036
202.775.4399
kmetcalf@knowships.org