

COME 2014

Present Approach to Environmental Care in the Marine Industry

Douglas W Lang
Anglo-Eastern (UK) Limited



COME 2014

- * Present Approach to Environmental Care in the Marine Industry:
 - * Drivers
 - * MARPOL Legislation
 - * Challenges



Drivers

- * Environmental
 - * Special interest groups
 - * Local/regional interests
 - * COP XX
 - * UN climate control organisation

Drivers

- * Political
 - * Responding to pressure groups
 - * Buying votes
 - * Fashionable



Drivers

- * Economic
 - * High fuel Costs
 - * Low freight rates
 - * Slow steaming
 - * Ecoships



Drivers

- * Technical
 - * Engine efficiency
 - * Hull form
 - * Propellers
 - * Weather routing
 - * Coatings
 - * Silicon



Drivers

- * Scientific
 - * Vastly complex
 - * Opinions easily polarised
 - * Varied quality of research
 - * Lack of robust analysis
 - * Difficult to measure outcomes
 - * Phase lag between cause and effect

Drivers

- * Legal
 - * IMO
 - * EPA (US)
 - * EU
 - * Coastal states
 - * ECA's
 - * SECA's



Drivers

- * Legal (cont)
 - * Draconian legislation works!
 - * Oil Pollution Act
 - * Post "Exxon Valdez"
 - * O'board discharge of oily waste
 - * Multi-million dollar fines in US



Drivers

- * Proactive
 - * Is there a commercial benefit?
 - * Energy efficiency
 - * Green discount
 - * Green premium
 - * Is there a reputational benefit?
 - * ISO 14001
 - * Green Award
 - * Public recognition



MARPOL Legislation

MARPOL Legislation

- * Marine Coatings
 - * Tin free
 - * Less effective
 - * Increased fouling
 - * Increased fuel consumption
 - * Increased transfer of invasive species
 - * Increased hull scrubbing
 - * Concentrations from scrubbing in the same location
 - * Local impact



MARPOL Legislation

- * Emissions
 - * NOx
 - * SOx
 - * CO2
- * Fuel
 - * Residue
 - * Distilled
 - * LNG
 - * Methanol
 - * Bio
- * Abatement technology (scrubbers)



MARPOL Legislation

- * Ballast water
 - * Elimination of invasive species
 - * BWTS
 - * Produce non-viable organisms
 - * Kill all organisms
 - * How to measure?
 - * BWMS
 - * Pass Through
 - * Comparison of species carried by ocean currents vs shipping



MARPOL Legislation

- * Garbage
 - * Retained on board
 - * Reception Facilities



MARPOL Legislation

- * Scrapping/Recycling
 - * Hazardous materials index
 - * Beach vs recycling facilities
 - * HKG Convention
 - * EU Legislation



MARPOL Legislation

- * Cargo Washings
 - * What can be discharged over board
 - * Where can it be discharged
 - * What are the alternatives?



MARPOL Legislation

- * Grey Water
 - * Bio-degradable washing detergents
 - * Significant quantities from passenger ships!



MARPOL Legislation

- * Stern Tube Lubricants
 - * Stern seals will leak oil!
 - * Environmentally Acceptable Lubricants (EAL)
 - * Compatibility with sealing material
 - * Water lubricated



Challenges

Challenges

- * High resistance to new requirements
- * Lack of information - why?
- * Lack of information regarding intended outcome
- * Perceived lack of robust science
- * Perceived political ends rather than environmental
 - * Carbon Tax
 - * Market Based Measures
 - * Traded Carbon Credits

Challenges

- * Technological Lag
- * Fit for purpose solutions not available
 - * BWTS
 - * Antifoulings
 - * Engines
 - * Abatement technologies

Challenges

- * Unintended consequences
- * Calculating the true energy balance
 - * Holistic approach



Thank You

