

# Ship Happens: Admiralty Law & Insurance Update



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# OUTLINE



## Overview of the World's Insurance Market



## Legal Factors Affecting Oceanographic Research Vessels

- Safety Issues
- Security Issues



## Legal Issues Affecting Scientific Diving

# **Overview of the World's Insurance Market**



# Global Marine Insurance Report 2008

Astrid Seltmann

Facts & Figures Committee

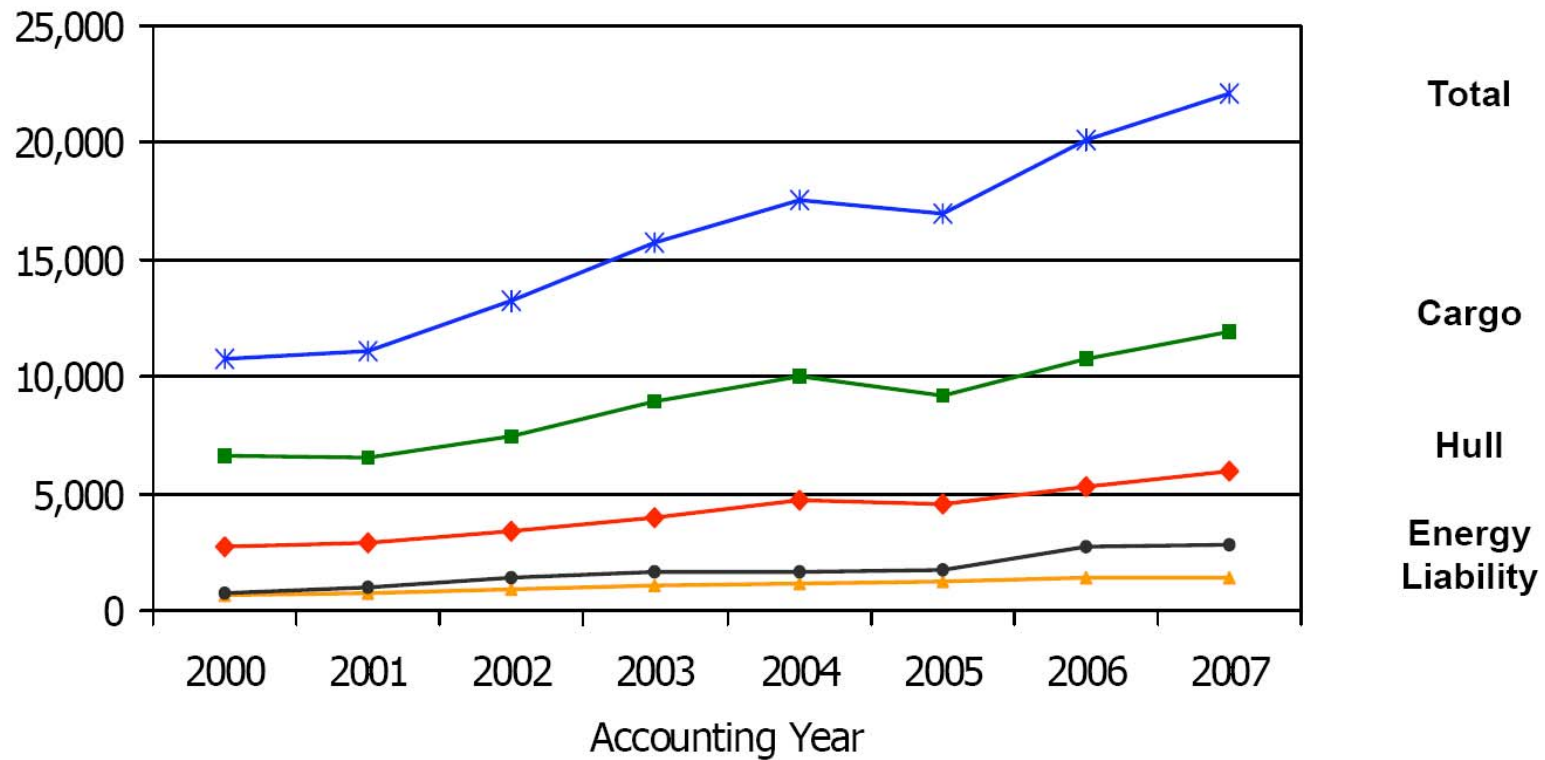
*Analyst/Actuary, CEFOR, Norway*

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# Global Marine Premium 2000 - 2007

(USD Million), as reported

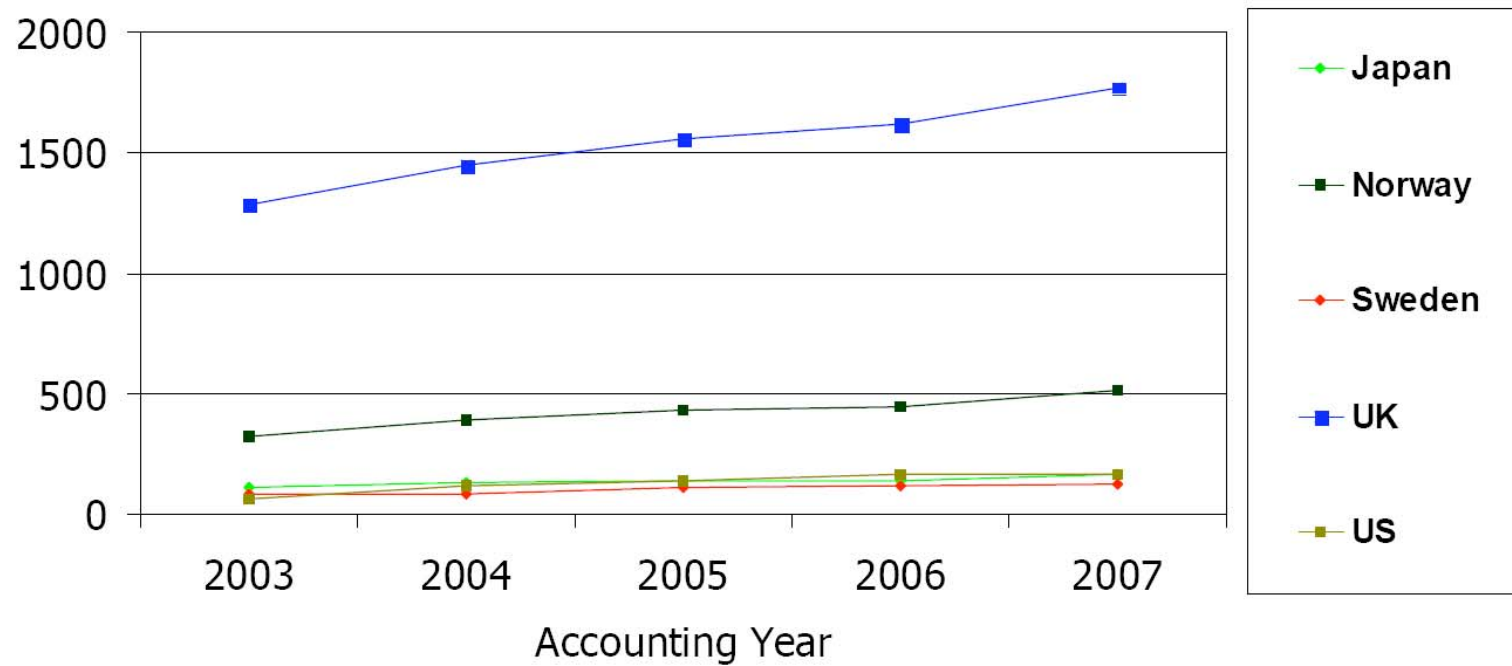




# MARINE MUTUAL MARKET SECTOR

## Gross Calls (Premium) – Operational location

Per accounting year – USD Million



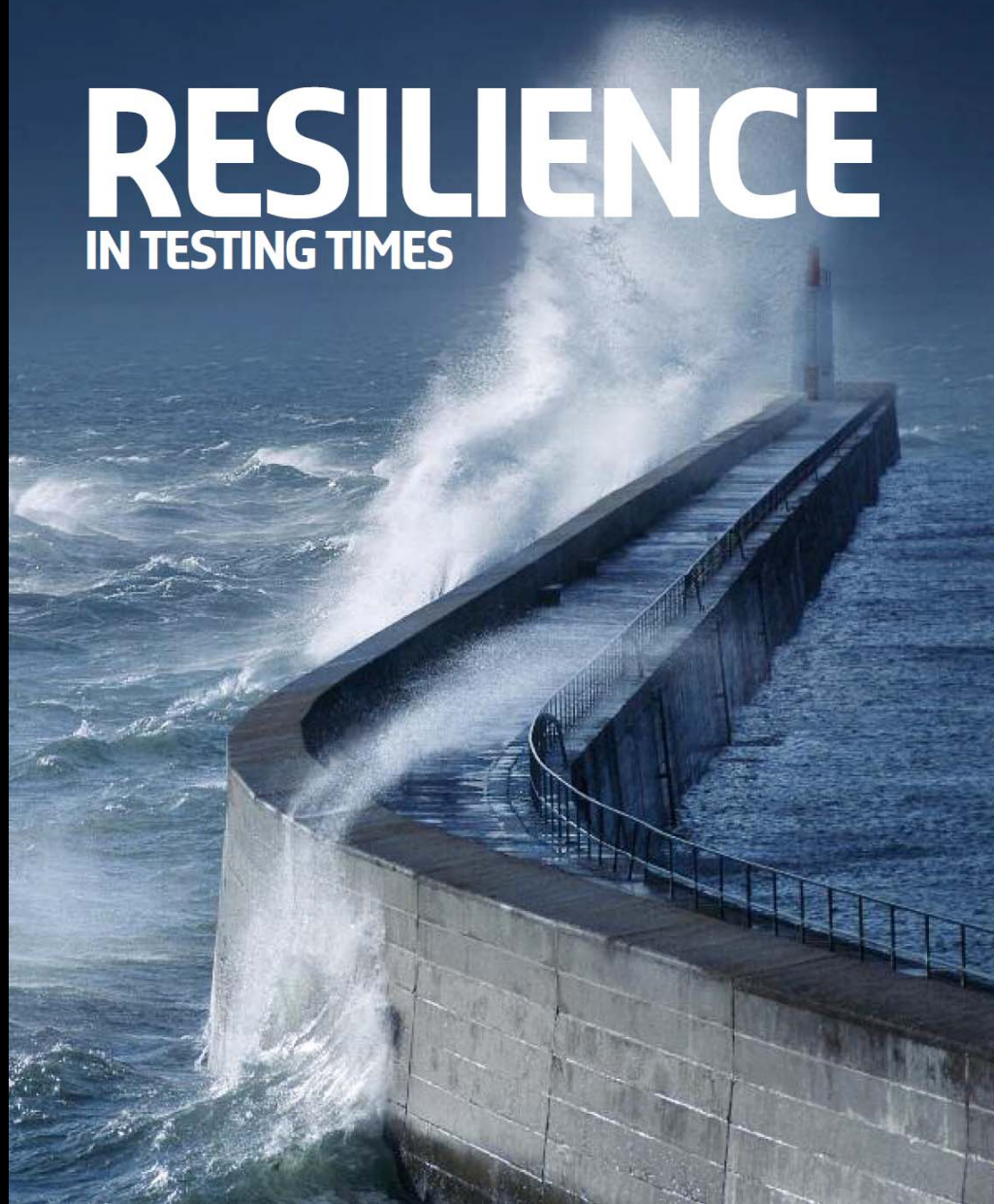
Source: Standard & Poors Marine Mutual Report 2008

LLOYD'S

ANNUAL REPORT 2008

# RESILIENCE

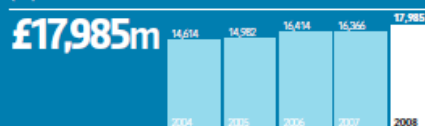
IN TESTING TIMES



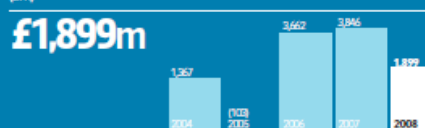
## 2008 FINANCIAL HIGHLIGHTS

- Lloyd's achieved a profit before tax of £1,899m (2007: £3,846m) and a combined ratio of 91.3% (2007: 84.0%). This was a solid performance during an exceptionally turbulent year for the financial sector. Higher levels of catastrophes and attritional claims were partially offset by currency movements and prior year releases.
- Return on investments of 2.5% (2007: 5.6%) benefited from a conservative investment strategy.
- Surplus on prior years of £1,265m (2007: £856m) based on strong reserves.
- Central assets increased further to £2,072m (2007: £1,951m).

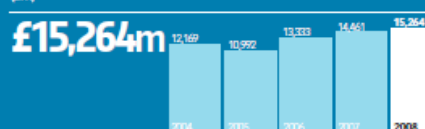
Gross written premium\* (£m)



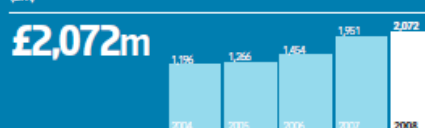
Profit/(loss) before tax (£m)



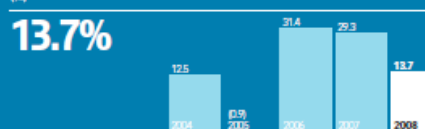
Capital, reserves and subordinated debt and securities (£m)



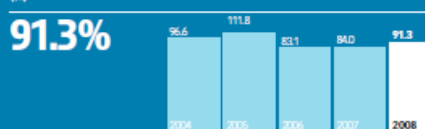
Central assets\* (£m)



Return on capital (%)



Combined ratio\* (%)



\*See Glossary on page 140

Welcome to Lloyd's

Strategic review

Performance

Market results

Society report



## PERFORMANCE

### MARINE RECENT STRONG PERFORMANCE UNDER THREAT AS WORLD ECONOMIES CONTRACT



#### 2008 highlights

- Premiums continued to rise on the back of spiralling commodity prices earlier in the year.
- Limited incidence of total losses.

#### 2008 combined ratio

Accident year	92.4%
Prior year reserve movement	(7.8%)
Calendar year	84.6%

The most significant classes of business within the Lloyd's marine sector are hull, cargo, marine liability and specie.

#### 2008 PERFORMANCE

The marine sector achieved gross written premium of £1,334m (2007: £1,226m), an increase of 9%.

The earlier part of the year saw the escalating cost of raw materials and this fed through into higher cargo and hull premium volumes.

The marine market remained soft throughout 2008 as an abundance of capacity more than offset any reaction to the increase in attritional losses. The general economic downturn caused freight rates to plummet in the second half of 2008 and this has led to reducing fleet values. The industry has therefore been faced with the problem of insured values being greater than current market value.

#### ACCIDENT YEAR PERFORMANCE

The accident year combined ratio was 92.4% (2007: 95.0%) reflecting the absence of significant total losses. Major partial losses, however, continued to increase, both in frequency and in cost. The rise in frequency can be attributed, at least in part, to the shortage of trained crews. Lack of experience can cause losses through poor navigation or poor vessel maintenance.

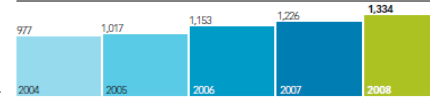
Towards the end of 2008 there was a rise in pirate activity off the coast of East Africa. It was not just the rise in the number of vessel hijackings that caused concern, but also the size of the ships being targeted. The hijacking of the oil tanker Sirius Star took these events to a new level – both in the size of the ship the pirates were prepared to tackle, and the fact that it was 450 nautical miles off the coast of Kenya when it was boarded.

The marine liability account has suffered from the escalating cost of claims settlements – wreck removal costs on the Napoli and the New Flame have increased – and higher reinsurance costs.

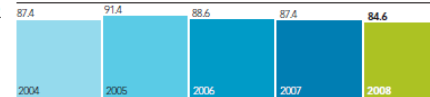
#### PRIOR YEAR RESERVE MOVEMENT

An overall release from prior years' reserves reduced the combined ratio by 7.8% for the year (2007: 7.6%). This has continued the trend for prior years to develop within expectation, with a surplus arising for the fifth consecutive year.

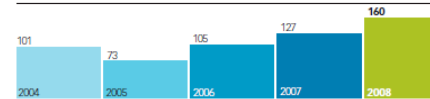
#### Gross written premium (£m)



#### Combined ratio (%)



#### Underwriting result (£m)



#### LOOKING AHEAD

Hull underwriters are undertaking critical price renegotiations after the collapse of ship values amid the crisis that stalled capital markets. Most of the world merchant fleet, estimated to be US\$1.3trn shortly before the upheavals at the end of last year, has fallen in value, giving rise to 'moral hazard' – the temptation for less scrupulous ship operators to commit fraud. Reassessment will reduce global marine hull insurance premium; it will also reinforce the need for tighter underwriting.

Against this background, the market is hardening very slightly and rate increases are expected to gather pace through 2009. However, hull premium income may decline due to the reduction in agreed values. There is still no sign of upward movement in deductibles, which have not changed since the mid '90s.

The economic downturn will also impact the cargo market. The value of cargoes to be transported is reducing – oil in particular, but also all other commodities from foodstuffs to metals. While cargo rates remain flat, this will reduce premium income for underwriters.

# 2008 Second Costliest Year for Insured Losses

- Insured and uninsured catastrophic losses totaled \$225 billion
- Property insurance covered \$50 billion
  - Natural disasters accounted for \$43 billion
    - US/Caribbean hurricanes Ike and Gustav
    - Europe's winter storms Kyrill and Emma
    - China's earthquake in Sichuan region
  - Man-made disasters accounted for \$4.8 billion

# **Legal Issues Affecting Oceanographic Research Vessels**

# Kidnap and Ransom Insurance

- Increase in piracy attacks has created demand for a new insurance product to protect mariners
- Current premium for a ONE TIME passage through the Gulf of Aden for a \$3 million policy on a commercial vessel is \$30,000

# **GEOSOUNDER**



**Owner: Geoshipping, Norway**

**Gross Tonnage: 1008**

**Operator: DOF Subsea, Australia**

**Length: 59.5 m**

**Vessel: Research survey ship**

**Beam: 10.2 m**

# GEOSOUNDER



Photo by ATSB, Marine Occurrence  
Investigation No. 246, 2008

- In August 2007, crewman fell overboard after pretending to vault a handrail
  - Had consumed 10-12 cans of beer at vessel barbeque
  - Never found
- Another crewman broke his ankle after the rescue craft was deployed improperly

# Findings and Safety Actions

## **Australian Transport Safety Bureau**

- Ship's no alcohol policy was violated
- In attempt to find missing crew member, the crew performed tasks not regularly practiced in emergency drills

## **DOF Subsea and DOF Management**

- Alcohol and Drug Policy amended and redistributed to personnel
- Emergency Training and Drills are performed regularly and in tune with schedule and personnel movements

Source: ATSB, Marine Occurrence Investigation No. 246, 2008

# ERRV Viking Islay



**Owner:** Viking North Sea Ltd., UK

**Gross Tonnage:** 928

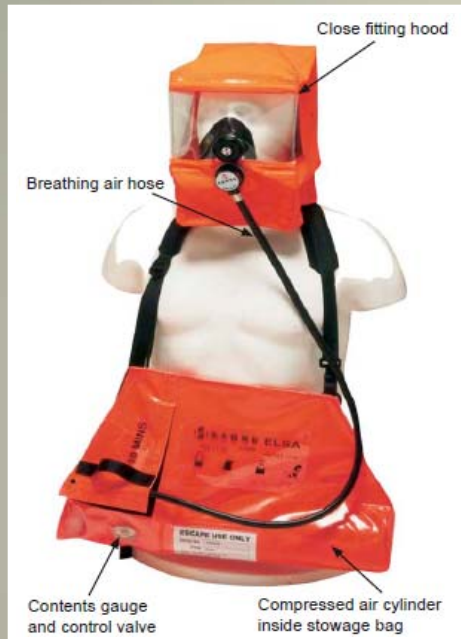
**Operator:** DOF Subsea, Australia

**Length:** 53 m

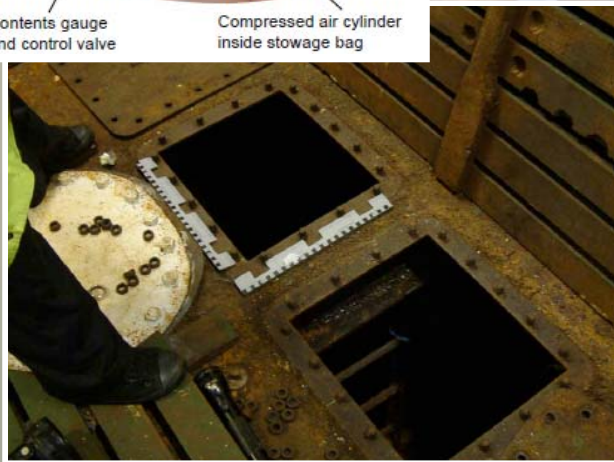
**Vessel:** Emergency Response Rescue Vessel



# ERRV Viking Islay



- In September 2007, three seamen were killed after entering an oxygen deficient atmosphere in the chain locker
  - First seaman entered to secure anchor chain and collapsed
  - Second seaman entered to offer aid and collapsed
  - Third seaman entered with an EEBD and collapsed when the device became dislodged



EEBD (upper left), ship's chainlocker (right), and access hatches (lower left), Photos by UK MAIB, Report No 12/2008

# Findings and Safety Actions

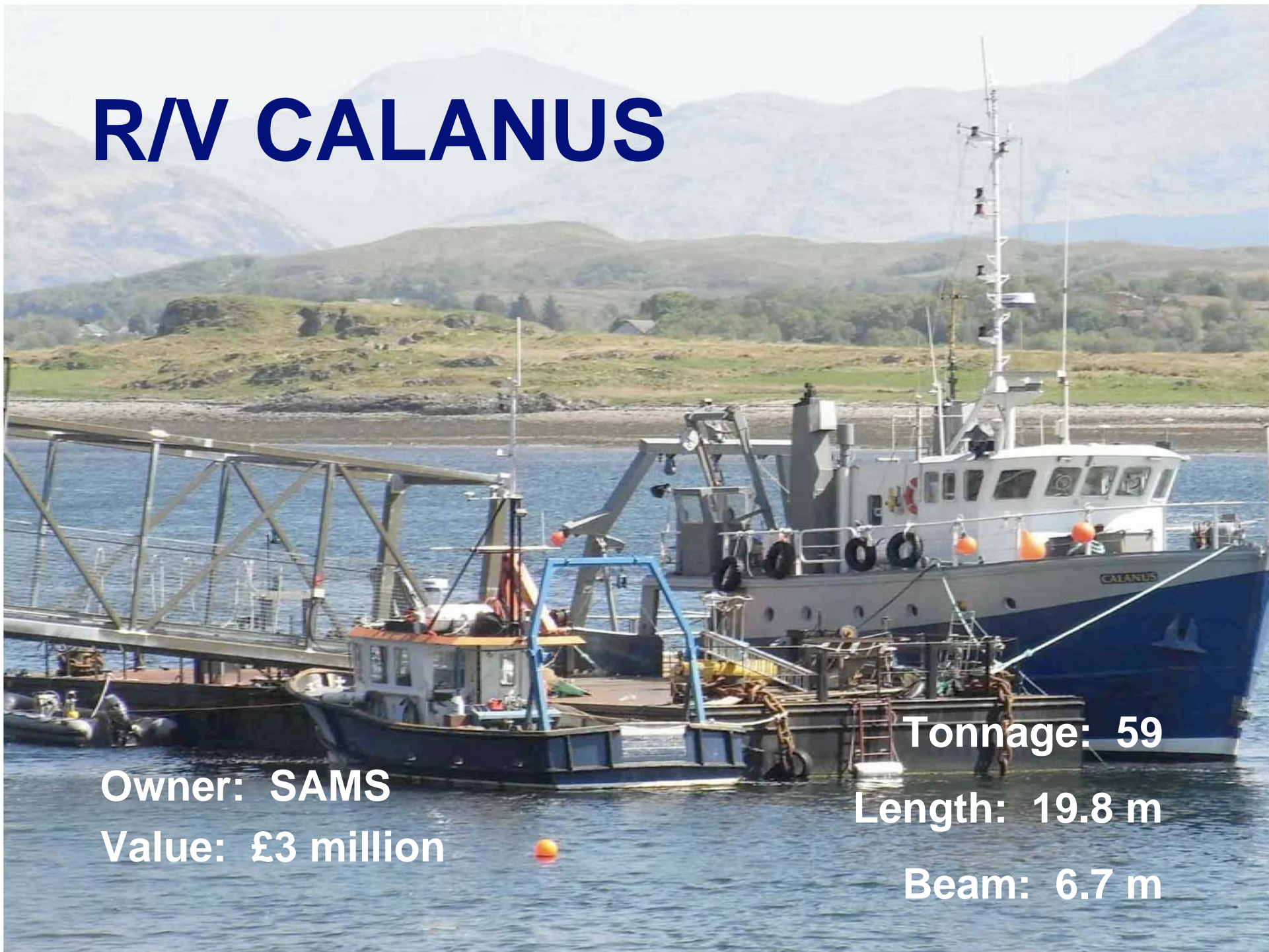
- Permit to work measures were not considered
  - Dangerous spaces should only be entered while in port
  - Entry at sea is last resort
  - Atmosphere should be tested first
- Training in the use of EEBDs was not sufficient
- Never carry out an entry alone
- Take all appropriate precautions before carrying out a rescue
- At the time of this report (July 2008), MAIB was investigating 2 other similar accidents causing the deaths of 3 crewmen in similar circumstances

Source: UK MAIB, Report No 12/2008

# R/V CALANUS

Owner: SAMS  
Value: £3 million

Tonnage: 59  
Length: 19.8 m  
Beam: 6.7 m



# CALANUS

- Drunk man released mooring ropes in November 2007
- Vessel drifted into busy shipping lanes before running aground
- Over £ 8500 in damage
  - towing costs
  - dry dock and inspection costs
  - repairs
  - lost wages
- In March 2008, man was sentenced to 220 hours community service and ordered to pay compensation



R/V Calanus, Photo by SAMS

# Violations of EEZ waters

- In January 2008, Nord Stream research vessel violated Estonian waters
  - Conducting research for building a gas pipeline
  - Estonian government refused permission for such research
  - Two weeks before incident, same vessel entered Finnish economic waters without permission
- In July 2008, a Taiwanese research vessel entered Japanese waters
  - Had intentions of collecting water samples
  - Failed to gain prior consent

# R/V Rude



R/V Rude, Photo by NOAA

- US EPA recently purchased vessel from NOAA
- EPA intends to use vessel for pollution and water quality monitoring

# R/V Rude

- In October 2008, vessel leaked 1,400 to 1,700 gallons of diesel fuel into the Elizabeth River
- Rusted cooling tube was culprit
- Crew surrounded spill with boom and began applying absorbent pads



Oil sheen on the Elizabeth River in Oct. 2008, Photo by Cindy Clayton, The Virginian-Pilot

# M/V Hebei Spirit & Samsung No 1



- In December 2007, drifting crane barge, Samsung No 1, collided with M/V Hebei Spirit while it was moored
- 12,000 tons of crude oil were spilled on western Korean coast
  - Fisheries suffered 206 billion won (\$144.1 million)
  - Clean-up cost 162 billion won (\$113.3 million)

Puncture hole in Hebei Spirit (above) and deck awash with oil (below), Photo from NOAA Emergency Response Division 2008



# Korean Court Finds Hebei Spirit Responsible

- In June 2008, lower South Korean court found Samsung group accountable for incident and Hebei Spirit Shipping was acquitted on all charges
- In December 2008, South Korean appeals court overturned verdict
  - Captain and Chief Mate of Hebei Spirit received jail sentence and fine
  - Hebei Spirit Shipping also fined
  - After significant international pressure, the Captain and Mate were recently released

# Compare to Omega Protein v. Samson Energy

- Recent 5<sup>th</sup> Circuit opinion
- Large menhaden seiner allied with Samson's fixed oil platform on a clear night, found at fault at trial under Oregon rule; captain was distracted and wheelhouse was illuminated
- Appeals Court overturned verdict on the grounds that oil platform was unlit and damages were divided
- Seiner was allowed to limit liability

# Ocean Fertilization

- Meeting of Contracting Parties to 1972 London Convention and 1996 London Protocol:  
October 2008
  - Resolution adopted limits ocean fertilization activities to legitimate scientific research
  - Other activities violate aims of Convention and Protocol and do not qualify for exemption from dumping



Phytoplankton bloom in North Sea,  
Satellite image by ESA 2008

# UNEP Convention on Migratory Species

- Resolution on Adverse Anthropogenic Marine/Ocean Noise Impacts on Cetaceans and Other Biota: December 2008
  - “*Noting* the OSPAR Code of Conduct for Responsible Marine Research in the Deep Seas and High Seas of the OSPAR Marine Area and the ISOM Code of Conduct for Marine Scientific Research Vessels; providing that marine scientific research is carried out in an environmentally friendly way using appropriate study methods reasonably available”

# IMO Code of Safety for Special Purposes Ships

- 2008 Code aims to provide an international standard of safety for new construction of special purpose ships
- Covers:
  - Stability and subdivision
  - Machinery and electrical installations
  - Periodically unattended machinery spaces
  - Fire protection
  - Life saving appliances
  - Radio communications
  - Safety of navigation

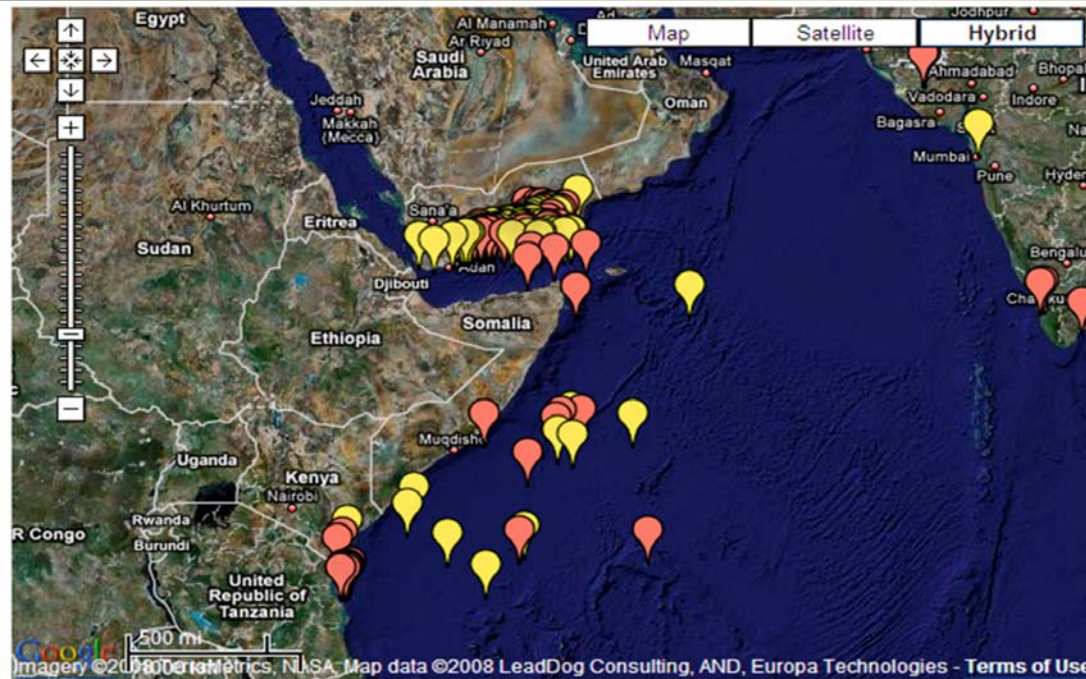
# Proposed Coast Guard Rule on Passenger Vessel Stability

- Baltimore and Lake George casualties caused reassessment of stability standards
- Average weight of U.S. citizens has grown from 160 to 185 pounds
- Under proposed rules, all small passenger vessels will have to be re-assessed this year
- Coast Guard estimates the total cost will be \$32.5 million for the 6,073 subchapters

# ISOM Issues Discussed

- Alcohol: no consensus internationally; South African example “sobering:” bottle of wine led to knife fight and death, killer put off at Tristan de Cunha, brother of victim also on crew
- Belgian vessel sustained fatal fall down stairs
- Helicopter crash embarked from research vessel raised insurance questions
- Increasing importance of environmental

# Piracy off Somalia Coast



2008 Piracy Map by ICC International Maritime Bureau

- Conditions have worsened
  - Increasing ransom payments fueling piracy
  - 2008 IMB Annual Piracy Report reports a total of 111 incidents off the east coast of Somalia and Gulf of Aden
    - A 200% increase from 2007



# Maersk Alabama

- March 2009 saw a surge in pirate attacks in the region with 25 reported attacks resulting in 7 successful hijackings
- The Maersk Alabama was the first American vessel to be captured



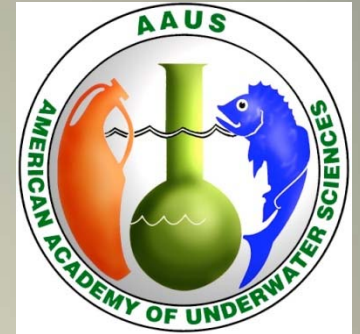


# UN Security Council

- Authority against piracy has been hindered
  - Operational difficulty
  - Implementing state authority
- Resolution 1846: December 2, 2008
  - Gives foreign states right to take action against criminal acts in territorial sea of another state
  - Calls on states, IMO, and the shipping and insurance industries to advise and guide ships on how to avoid, evade, and defend against pirate attacks

# **Legal Issues Affecting Scientific Diving**

# AAUS History



- 1951 deaths of two scientific divers at Scripps leads to the formation of the first scientific diving program in the U.S.
- Like UNOLS, the goals were to facilitate science while managing risk and liability exposure
- 1977 OSHA Commercial Diving Regulations had major impact on scientific diving
- AAUS formed in 1977 to petition OSHA for a scientific diving exemption, succeeding in 1982

# Seamen Scientists and Diving Scientists

- ORVA holds that scientists are not entitled to the Jones Act and ORVs are not passenger vessels
- OSHA exemption permits scientific diving to take place if an institution has a Diving Safety Manual and a Diving Control Board
- In both cases, safety record is outstanding – but not perfect
- Burden of proof is on the institution to prove that either exemption is appropriate

# Role of Safety Standards

- UNOLS RVSS now 58 pages, and incorporate many other standards by reference (Like AAUS)
- AAUS Scientific Diving Standards now 76 pages, and operationally more complex to follow
- Although both have a positive effect on safety, they are the primary tool used against an institution when a casualty does occur

# The Coast Guard and Commercial Diving Regulations

- January 6, 2009, Advanced Notice of Proposed Rulemaking to amend commercial diving regulations
- Actually reopens controversial rulemaking process stopped in 1998 after industry could not agree
- NOSAC advised the Coast Guard they should try again, since standards have not been revised since 1978

# Summary of Proposed Coast Guard Rule

- Strongly encouraged industry to develop one set of safety standards
- Encouraged the use of third party audits to reduce impact on Coast Guard inspectors
- The use of compliance documentation needs further encouragement
- Recommendations from the 1996 investigation of the Cliff's Drilling Rig #12 diving casualty will be incorporated



# Recent Casualties – 2006

## Healy

- Two divers lost, including the dive officer
- Despite highly detailed safety protocols, a shallow water Arctic familiarization dive turned tragic as the result of human error
- The Commandant's 29 page Final Decision Letter was a shocking indictment of Coast Guard diving operations and should be read by every AAUS Diving Safety Officer



Photos by USCG (above) and NOAA (below)

# Recent Casualties – 2007 Alaska SeaLife Center

- Student diver lost during scientific training dive
- Diving partner was the Diving Safety Officer, who was the only witness
- Alaska SeaLife Diving Control Board conducted an investigation, as required under the OSHA scientific diving exemption, but OSHA attempted to assert violations of commercial diving rules
- Litigation is pending

# Recent Casualties – 2008

## NOAA



Photo by NOAA

- Very experienced NOAA diver lost in the Dry Tortugas after running out of air while ascending
- Findings included: “NOAA should more clearly delineate what constitutes scientific diving” and “the NDP should cease NITROX diving in SCUBA gear as they currently stand in direct violation of federal law.”
- Issued 33 “Corrective Recommendations” that should be required reading for this audience

# Conclusions

- According to a report by Advisen Ltd.:
  - Underwriting losses and anemic investment returns are putting pressure on rates, and absent a major catastrophe, insurance buyers should expect to start paying more for their commercial insurance beginning in the fourth quarter of 2009 or first quarter of 2010
- *Financial Times* says reinsurance prices will rise because:
  - losses from hurricanes Gustav and Ike
  - erosion of capital by weak stock and bond markets
  - turbulent stock markets and constraints on borrowing making it difficult for reinsurers to replenish their balance sheets
- Number of reported accidents and injuries increased
  - Dramatic increase in void space fatalities
  - Safety issues and human error are direct contributors
  - Alcohol a factor in many of the casualties; a dry ship policy alone does not solve the problem

Due to recent casualties, scientific diving is under scrutiny today; NOAA is currently seeking a new exemption from OSHA

**Questions?**