

Risk Management & Insurance for Responsible Ship Recycling Operations

Canadian Board of Marine Underwriters Conference

St. John's, Newfoundland & Labrador | May 14, 2026

Agenda

01 **The Ship Recycling Landscape**
Global scale, environmental imperative, and market forces

02 **What is Responsible Ship Recycling anyway?**
Doing it right is a shared responsibility

03 **Regulatory & Contractual Framework**
Hong Kong Convention, Basel Convention, EU Ship Recycling Regulation, BIMCO

04 **Insurance Architecture & Risk Assessment for Underwriters**
P&I, H&M, environmental liability, and specialist coverages. Key considerations for underwriters

05 **Case Study**
Responsible Recycling of the CCGS Hudson

06 **Emerging Trends**
Ship recycling entering the modern era.

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The Ship Recycling Landscape

700+

Ships recycled annually worldwide

~90%

Recycled in South Asia (India, Bangladesh, Pakistan)

98%

Of ship materials recoverable

Ship recycling is the most environmentally sound disposal method

It embraces the cradle-to-grave concept, recovering almost all materials for reuse in the circular economy. Scrap steel from ship recycling feeds global steel production, reducing demand for raw iron ore and lowering CO_2 emissions.

Source: IMO, BIMCO, NGO Shipbreaking Platform

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Responsible Ship Recycling

- Hong Kong Convention (HKC) compliance and facility certification
- Inventory of Hazardous Materials (IHM) — Parts I, II, and III
- Approved Ship Recycling Plan (SRP) prior to commencement of work
- Facility Document of Compliance from competent authority
- Environmental management systems and impermeable containment infrastructure
- Worker health and safety programs including PPE, training, and emergency preparedness
- Safe handling and disposal of hazardous materials (asbestos, PCBs, heavy metals, ODS)
- Third-party oversight and Marine Warranty Surveyor assessment
- Downstream waste management with full material tracking and documentation
- Basel Convention compliance for transboundary waste movement
- Maximum material recovery and circular economy principles
- Comprehensive insurance architecture covering all phases from final voyage through dismantlement

Global Regulatory Environment

Hong Kong Convention (HKC)

In force: June 26, 2025

- IMO convention for safe, environmentally sound ship recycling
- Requires Inventory of Hazardous Materials (IHM) on all ships
- Ship Recycling Plans approved by competent authorities
- 115 of India's 130 yards already HKC-compliant

Basel Convention

In force since 1992

- Controls transboundary movement of hazardous waste
- Ban Amendment restricts exports from OECD to non-OECD
- Ships classified as hazardous waste when destined for recycling
- Compliance tension with HKC in some jurisdictions

EU Ship Recycling Regulation

EU Regulation 1257/2013

- Applies to EU-flagged vessels ≥ 500 GT
- Approved list of recycling facilities required
- IHM certificates mandatory for EU ships
- Extends beyond HKC with stricter facility standards

Three interlocking frameworks govern ship recycling globally — each explored in detail on the following slides

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Hong Kong Convention: Key Requirements

Ship Owner Obligations

- Maintain an Inventory of Hazardous Materials (IHM) — Parts I, II, III
- Obtain IHM Certificate from flag state or recognized organization
- Prepare a Ship Recycling Plan before recycling commences
- Ensure vessel is recycled only at authorized facilities
- Notify flag state administration of intent to recycle
- Provide ship-specific information to the recycling facility

Recycling Facility Requirements

- Document of Compliance from competent authority
- Ship Recycling Facility Plan (SRFP) covering worker safety & environment
- Safe handling procedures for all hazardous materials
- Training, PPE, and emergency preparedness programs
- Environmental monitoring and management systems
- Reporting obligations for incidents and downstream waste

Entered into force June 26, 2025 — 16 years after adoption. Flag states must now enforce compliance for all ships > 500 GT.

EU Ship Recycling Regulation (EU 1257/2013)

Key Requirements

- Applies to all EU-flagged commercial vessels of 500 GT and above
- Mandatory Inventory of Hazardous Materials (IHM) certificate for all covered ships
- Ships may only be recycled at facilities on the EU List of approved yards
- EU List updated regularly — currently includes yards in EU, Turkey, UK, and select others
- Ship owners must notify flag state and provide IHM before recycling
- Extends HKC obligations with additional reporting and enforcement mechanisms

Enforcement & Insurance Impact

- Port state control inspections can verify IHM compliance for visiting ships
- Penalties for non-compliance include fines, detention, and flag state sanctions
- EU List excludes most South Asian beaching yards — limiting recycling options
- Growing pressure to include HKC-compliant Indian yards on the EU List
- Underwriters should verify EU List status of intended recycling facilities
- P&I clubs increasingly require evidence of EU SRR compliance for EU-flagged vessels

The EU SRR is the most stringent global ship recycling regulation. As of 2025, 115 of India's 130 recycling yards are HKC-compliant, yet most remain excluded from the EU List — a key tension point for the industry.

Basel Convention: Transboundary Waste Controls

Core Provisions

- Controls transboundary movement of hazardous wastes and their disposal
- Prior Informed Consent (PIC) required before any hazardous waste export
- Ban Amendment (in force Dec 2019) prohibits OECD-to-non-OECD exports of hazardous waste
- Ships destined for recycling may be classified as hazardous waste under Basel
- Exporting states must ensure environmentally sound management at destination
- Parties must minimize hazardous waste generation and ensure adequate disposal facilities

Implications for Ship Recycling

- Creates tension with HKC where recycling occurs in non-OECD nations (India, Bangladesh, Turkey)
- EU interprets ships as waste under Basel when sold for recycling
- Flag state vs. export state jurisdiction creates compliance complexity
- Some OECD nations require export notification even for HKC-compliant yards
- Insurance underwriters must assess Basel compliance risk alongside HKC
- Non-compliance can result in criminal penalties and return of waste shipments

193 parties to the Basel Convention worldwide. The Ban Amendment adds another layer of compliance for OECD-flagged vessels headed to South Asian recycling yards.

BIMCO Recyclecon: Contractual Insurance

Sellers' Obligations (Pre-Delivery)

- Sellers must maintain full H&M and P&I cover through the vessel's P&I Club until physical delivery at the recycling facility
- Delivery voyage insured under H&M voyage policy (Institute Voyage Clauses) including collision liability and wreck removal
- Sellers indemnify buyers against all claims arising from events prior to delivery — pre-existing liabilities do not transfer
- Sellers must provide IHM (Inventory of Hazardous Materials) — essential for environmental liability underwriting
- Risk of loss remains with sellers until delivery is complete — the "delivery" moment is the critical insurance trigger

Buyers' Obligations (Post-Delivery)

- All risk transfers to buyers at delivery — buyers assume full responsibility for insurance during recycling operations
- Buyers must carry MGL, environmental liability, and workers' compensation for yard operations and dismantling
- Buyers indemnify sellers against all claims arising after delivery — including environmental contamination and third-party injury
- Recycling must occur at the named facility in compliance with HKC and national regulations — non-compliance voids protections
- Ship Recycling Plan must be approved before work begins — insurers increasingly require SRP review as a policy condition

Recyclecon (2012) is the industry standard, currently under revision by BIMCO (2024–2025) to reflect HKC entry into force and evolving ESG requirements. Supersedes the older Demolishcon (2001) form.

BIMCO Towcon — Contractual Insurance

Tug Owner Insurance Obligations

- Clause 18(a): H&M insurance on the tug for agreed value, including towage risks
- Clause 18(b): P&I cover via an IG Club or equivalent, including towage liabilities
- Clause 18(c): Wreck removal liability coverage for the tug
- Clause 18(d): Pollution liability insurance for bunker spills and hazmat
- Clause 19: Knock-for-knock indemnity — each party bears its own loss
- Clause 20: Limitation of liability capped at tow contract price

Hirer (Tow) Insurance Obligations

- Clause 18(e): H&M on the tow for full insurable value during the voyage
- Clause 18(f): P&I or equivalent liability cover for the tow vessel
- Clause 18(g): Wreck removal coverage for the tow
- Clause 18(h): Pollution liability insurance for the tow vessel
- Clause 21: Hirer indemnifies tug owner for damage to tow unless negligence
- Clause 22: Both parties to provide certificates of insurance before voyage

BIMCO Towcon is the standard international ocean towage contract. Clause 18 insurance provisions are central to underwriting the towage risk.

Risk Categories in Ship Recycling



Environmental

- Soil & water contamination
- Oil spills & hazmat releases
- Cleanup & remediation costs
- Third-party pollution claims



Health & Safety

- Worker injuries & fatalities
- Asbestos exposure & mesothelioma
- Fire & explosion risks
- Occupational disease latency



Legal & Regulatory

- Non-compliance penalties
- Criminal liability for owners
- Transboundary waste violations
- Flag state enforcement actions



Reputational & ESG

- Investor & lender scrutiny
- Media exposure of bad practices
- ESG rating downgrades
- Banking covenant triggers
- Social License



Operational Risk

- Industrial demolition
- Waste Management
- Metals recycling
- Marine
- Yard capacity & scheduling delays
- Equipment failure & downtime
- Subcontractor performance gaps

Insurance Coverage Architecture

Comprehensive protection requires layered coverage spanning the vessel's final voyage through complete dismantlement

P&I Coverage

Third-party liability, crew injury, pollution, wreck removal, towage, wharfingers

Mutual IG Clubs

Hull & Machinery

Physical damage, total loss, beaching coverage

Market Policies

Marine General Liability

Bodily injury, property damage, completed operations liability

Commercial Market

Environmental Liability

Pollution cleanup, remediation, soil/water contamination

Specialist Facilities

Property & Casualty Lines

Asset protection, business interruption, cargo loss

Commercial Market

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Marine Risk and Insurance Overview

Key Marine Risks

- Owned vessels - harbour tugs & barges used for vessel movement at the Ship Recycling Facility
- Chartered vessels – tugs, specialist barges, heavy lift vessels used for delivery and vessel movement at the Ship Recycling Facility
- ROV's used for pre-delivery and post delivery inspections
- Single Voyage Tows and dry deliveries
- Ship recycling operations on board vessels whilst waterborne
- ***When is a ship not a ship?***

Insurance Coverage Types

- Hull & Machinery (H&M): physical damage to the vessel, total loss, and salvage
- P&I (Protection & Indemnity): crew liability, pollution, cargo claims, wreck removal
- Charterers' Liability
- Cargo insurance: Covering dry delivery vessels whilst aboard heavy lift carriers
- War risks & strikes: separate cover for political violence, piracy, and sanctions

Marine insurance is one of the oldest forms of insurance, underpinning global trade by transferring risk from shipowners, operators, and cargo interests to specialist underwriters

P&I Coverage for Ship Recycling

Coverage Area	Scope	Key Considerations
Crew Liability	Injury, illness, death, repatriation	Skeleton crew risk; reduced medical access
Pollution	Oil spill, hazmat release, cleanup costs	Residual bunker fuel; ballast water risks
Collision & FFO	Third-party vessel damage, fixed objects	Reduced manoeuvrability on final voyage
Wreck Removal	Mandatory wreck removal obligations	Nairobi Convention compliance
Contractual	Recycling contract compliance	BIMCO Contracts compliance

Critical: P&I coverage typically continues through the final voyage but may be restricted or excluded once the vessel arrives at the recycling yard. The handover point — and the precise moment risk transfers from shipowner to yard — is a key underwriting consideration.

Source: International Group of P&I Clubs, Britannia P&I

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The Final Voyage: Unique Risk Profile

A vessel's last voyage to the recycling yard presents a distinct risk profile that demands specialized underwriting attention.

Navigation Risks

Reduced crew, potential mechanical unreliability, voyage through challenging waters. Marine Warranty Surveyors assess seaworthiness before departure.

Hull & Machinery

Aging hull integrity, deferred maintenance, stripped-down systems. H&M coverage must remain active through arrival at the yard.

Crew & Third-Party Liability

Skeleton crew exposure, port state detention risk, collision liability en route. P&I cover remains essential throughout the final voyage.

Pollution Exposure

Residual fuel oils, ballast water, hazardous cargo remnants. Environmental incident during transit can trigger massive cleanup costs.

Source: GMS Insurance, Britannia P&I

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Delivery Methods: Tow & Heavy Lift Insurance

Single Voyage Tows (Dead Ship Tows)

- Vessel's P&I cover typically ceases at delivery — a separate single voyage tow policy is required for the transit to the recycling yard
- H&M underwriters require a Marine Warranty Surveyor (MWS) to approve towage plan, sea-fastening, and weather windows
- Tow-hire agreement allocates liability between tug owner and tow — "knock-for-knock" clauses and TOWCON/TOWHIRE terms are standard
- Collision and pollution liability remain key exposures — dead ships cannot maneuver, increasing third-party risk in congested waters

Dry Delivery via Heavy Lift & Barge

- Heavy lift ships (e.g., semi-submersible) and flat-top barges transport vessels as cargo — insured under marine cargo policy, not H&M
- Cradle design, sea-fastening, and ballast calculations require MWS approval — inadequate securing is a major loss driver
- Float-on/float-off operations carry concentrated risk — grounding, ballast failure, and weather delays during loading and discharge
- Stevedore and terminal operator liability applies at load/discharge ports — separate coverage or contractual indemnity may be needed

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Delivery Methods: Tow & Heavy Lift Insurance

Single Voyage Tows (Dead Ship Tows)

- Weather routing and port-of-refuge provisions are critical — tow voyages can span weeks across open ocean
- Wreck removal and General Average exposures must be addressed in the tow policy — salvage costs for a dead ship can be substantial

Dry Delivery via Heavy Lift & Barge

- Cargo policy should cover the vessel's agreed value as a recycling asset, not its insured hull value — these can differ significantly
- Heavy lift carriers maintain their own H&M and P&I — but cargo interests must verify adequate coverage and review limitation of liability clauses

Key Factor is an experienced Marine Warranty Surveyor

- Insurance is contingent on approval from the appointed MSW
- Supervise tow/heavy lift
- Check and approve Crew, Equipment, Tugs/Heavy Lift Vessel/Bunkering
- There is always a discussion between underwriter and owner on who is acceptable as MSW – often over cost.

Marine General Liability for Recycling Yards

Vessel Delivery & Alongside Exposures

- Bodily injury and property damage to third parties during vessel arrival, mooring, and delivery to the yard
- Towage & Vessel movements
- Wreck Removal
- Damage to adjacent vessels, docks, and port infrastructure while tied up alongside
- Pollution Liability
- Injury to third party contractors, surveyors and visitors
- Fire and explosion risk from residual fuels, gases, and confined space hazards during initial assessment

Yard Operations & Underwriting Scope

- Premises liability for the entire recycling yard — wharves, dry docks, storage areas, and access roads
- Crane, heavy-lift, and equipment operations liability during vessel stripping and material handling
- Subcontractor and independent contractor liability — multiple trades working simultaneously on site
- Contractual liability assumed under recycling agreements, towage contracts, and facility leases
- Coverage for hot work, torch cutting, and welding operations — often the highest-frequency loss source
- Key exclusions to watch: asbestos, pollution (often separate policy), and professional liability gaps

MGL fills the gap between P&I (which typically ceases at delivery) and Commercial General Liability Insurance. Yards need broad-form coverage addressing the transition from maritime vessel to industrial demolition site.

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Pollution Liability – Marine Risks

During Final Voyage

- Bunker fuel spill during transit or at anchorage
- Ballast water discharge violations
- Cargo residue release at sea
- Grounding or foundering with pollution consequences

At the Recycling Yard

- Asbestos fiber release during demolition
- Heavy metal contamination of soil and groundwater
- PCB and ODS release during equipment removal
- Oil and fuel spills during tank cutting operations
- Long-tail environmental remediation liabilities

Controls

- Marine Warranty Surveyor
- Limited bunker fuel on board
- Pre-Delivery cleaning and hazmat removals
- Ballast water tested and treated accordingly
- Compliance with Canada's Ballast Water Regulations
- Bilge Alarms & Pumps

- Processing on impermeable slab with treatment device
- Surface water management
- Dedicated fueling station
- Ground water testing
- Emergency response protocols
- Environmentally Accepted Lubricants

Property & Casualty Risk

At the Recycling Yard

- Injury to employee(s)
- Buildings & Equipment
- Mobile Heavy Equipment – Cranes & Excavators
- Business Interruption
- Third Party Bodily Injury & Property Damage
- Commercial Automobiles
- Environmental Impairment Liability
- Vessel/O&G Structure

At Remote Sites

- Injury to employee(s)
- Contractors Pollution Liability
- Mobile Equipment/Waterborne
- Third Party Bodily Injury & Property Damage
- Commercial Automobiles

Controls

- Quality Management System under the direction of professional Health & Safety lead
- Engineered dismantling sequence supervised by competent person
- 24 Hour Security
- In house fire fighting capability
- Controlled site access
- Traffic controls
- Specialty Contractors for Environmental Removals & Abatement
- Emergency Response Protocols

Landing Method Risk Register

Hazard / Activity	L	S	Initial Risk	Primary Controls	Residual Risk
Vessel beaching and grounding	4	5	Extreme	Engineered landing plan, tidal controls, tug support	High
Vessel instability during dismantling	4	5	Extreme	Stability calculations, phased dismantling	High
Explosion during hot work	4	5	Extreme	Gas-free certification, permit-to-work system	Medium
Structural collapse	4	5	Extreme	Engineered cutting sequence, supervision	High
Falling steel sections	4	4	Extreme	Exclusion zones, crane plans	Medium
Worker falls from height	3	4	High	Fall arrest systems, scaffolding	Medium
Confined space entry	4	5	Extreme	Gas testing, ventilation, rescue plans	Medium
Asbestos exposure	3	4	High	Licensed removal teams, PPE, air monitoring	Medium
Oil spill to marine environment	4	4	Extreme	Spill barriers, containment systems	Medium
Heavy equipment collision	3	4	High	Traffic management plans, spotters	Medium
Fire spread across yard	4	5	Extreme	Fire watches, firefighting systems	Medium
Heat stress and fatigue	3	3	High	Hydration, work/rest cycles	Low
Manual handling injuries	4	2	High	Mechanical lifting aids, training	Medium
Hazardous waste mismanagement	3	4	High	Waste segregation and tracking	Medium
Tidal movement affecting operations	4	4	Extreme	Tide-based work scheduling	Medium
Ground instability on beach	4	4	Extreme	Ground assessment, restricted loading zones	

Risk Assessment Framework for Underwriters

1 Vessel Assessment

- Age, type, flag state, maintenance history
- IHM status and known hazardous materials
- Previous voyage routes and cargo history

2 Facility Evaluation

- HKC / EU SRR compliance certification
- Safety record and incident history
- Environmental management systems

3 Voyage Risk Analysis

- Marine Warranty Surveyor assessment
- Route hazards and seasonal conditions
- Crew competence and vessel seaworthiness

4 Contractual Review

- Recycling contract terms and conditions
- Risk transfer and indemnity provisions
- Insurance requirements and evidence

5 Exposure Quantification

- Maximum probable loss scenarios
- Long-tail environmental liability estimates
- Worker compensation exposure assessment

6 Terms & Pricing

- Coverage scope and exclusions
- Deductible structure and limits
- Premium reflecting facility quality

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Canadian Context & Considerations

Maritime Heritage

Canada's significant coastal fleet and aging vessel population creates growing demand for responsible end-of-life solutions. Atlantic and Pacific coast operations face distinct recycling challenges.

Regulatory Alignment

Canada is a Basel Convention party and IMO member state. Canadian underwriters must navigate both international conventions and domestic environmental legislation (CEPA, CSA 2001). **Canada has not ratified the Hong Kong Convention, nor has it enacted any Ship Recycling legislation/regulations. Domestic ship recyclers operate under the authority of provincial industrial permits.**

Underwriting Standards

Canadian marine underwriters can lead in setting responsible recycling conditions. Facility certification, IHM compliance, and environmental liability coverage should be standard requirements.

Industry Collaboration

The CBMU is well-positioned to develop industry guidance on ship recycling insurance, coordinating with P&I clubs, classification societies, and regulatory bodies.

Case Study: CCGS Hudson (1963–2024)

- Coast Guard removed all spares and items they wish to retain. Vessel prepared for hand over to successful recycling contractor
- Tender awarded to RJMI. Government of Canada contract issued. Complete Ship Recycling Plan developed and delivered to owner by RJMI.
- Inventory of Hazardous materials supplied by owner and confirmed by RJMI. Parts I, II & III
- Marine Warranty Survey completed for tow from Bedford Institute of Oceanography to Richmond Yard <1 NM.
- Atlantic Towing executes to from BIO to Richmond Yard.
- Tied up alongside at Richmond Yard overwinter. Complete array of sensors including cameras, motion detectors, water ingress and GPS Positioning with monitoring in real time in shared application.
- Asbestos abatement, bagged and left on board and equipment removals at Richmond yard.
- 2nd Marine Warranty Survey completed by ABL for tow from Halifax Harbour to Sheet Harbour.
- Atlantic Towing completes tow to RJMI facility at Port of Sheet Harbour.
- Vessel tied up alongside at RJMI facility.
  - Waste removals
  - Hazmat removals
  - Equipment removals
  - Superstructure removal with cranes
- Pulled into slipway stern first onto impermeable floor for hull processing.
- Project completed May 2024 — a model for responsible domestic ship recycling with full regulatory compliance

The Hudson illustrates the full insurance lifecycle of a vessel heading for recycling — from P&I cessation through care & custody, dead ship tow, and yard operations. A Canadian case with direct relevance to CBMU members.

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Danger


KOMATSU
ATLANTIC FIR

Case Study: CCGS Hudson (1963–2024)

- 97% material recovery by weight
- Kitchen equipment donated to regional high school for their culinary program
- 3,500MT quality marine scrap steel recovered for electric arc furnace steel production feedstock
- Zero Lost Time Injuries
- Zero Environmental incidents
- Fully documented declining balance with every item traced and tracked.
- Canadian Coast Guard provided oversight throughout the recycling project

The Hudson illustrates the full insurance lifecycle of a vessel heading for recycling — from P&I cessation through care & custody, dead ship tow, and yard operations. A Canadian case with direct relevance to CBMU members.

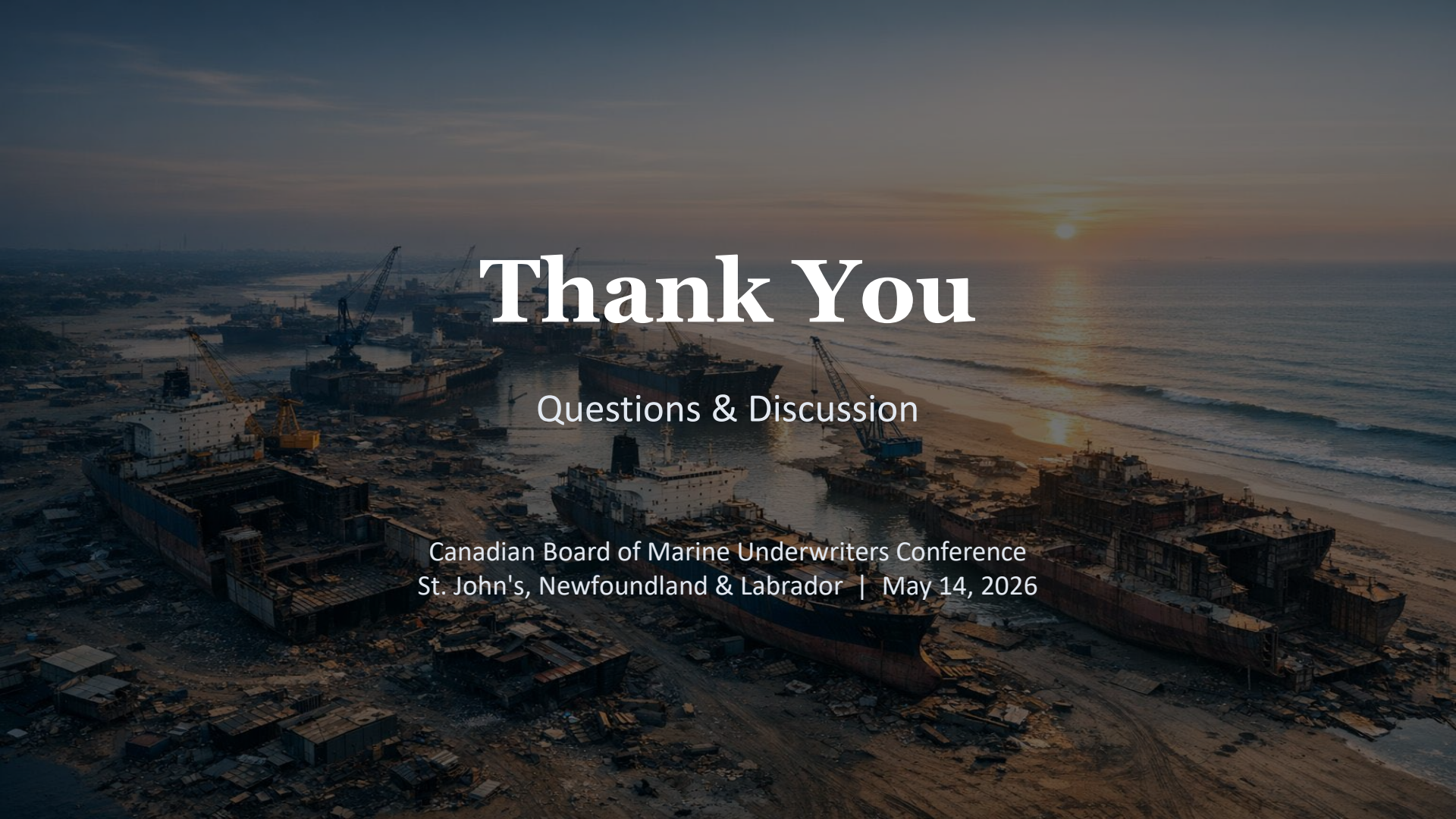


Emerging Trends

- **Greater HKC adoption – Will Canada ratify the convention**
- **Regulatory convergence – HKC/EUSRR/Basel**
- **Competent 3rd Party oversight**
- **Improved infrastructure** – Dry Docks, Engineered Slipways, Lifting Systems
- **3D Modelling**
- **Robotics**
- **Vessel owners investing in ship recycling facilities.**
- **Ship Recycling as a key component in vessel owner's Environmental & Social Governance**
- **More sophisticated underwriting**

Key Takeaways

- The Hong Kong Convention is now in force — compliance is no longer optional. Underwriting must reflect this new reality.
- Ship recycling presents a unique, multi-dimensional risk profile spanning the final voyage through complete dismantlement.
- Environmental and occupational health liabilities carry long-tail exposure that demands specialist coverage.
- ESG expectations are reshaping the insurance landscape. Facility quality and responsible practices directly influence risk.
- Canadian marine underwriters have an opportunity to lead in setting standards that reward responsible ship recycling.



Thank You

Questions & Discussion

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