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Information Paper

Ports, Terminals, and Carriers Global Restricted Cargo Database

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To discuss how your organization can participate in and benefit from this global safety solution, please contact:

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Information Paper Ports, Terminals, and Carriers Global Restricted Cargo Database

Executive summary:

This paper highlights the necessity of a centralized Restricted Cargo Database that captures the cargo restrictions of ports, terminals, and carriers. Such a database would facilitate the acceptance of containers carrying restricted cargo at every stage of their journey—enhancing safety, reducing the likelihood of voyage disruptions, minimizing cargo delays, and lowering the risk of miscommunication or improper handling.

The maritime industry continues to face significant challenges managing restricted cargoes—a broad category that includes Dangerous Goods, Military Cargo, Sensitive Cargo, Self-Reactive Cargo, and both Hazardous and Non-Hazardous Waste. These cargoes, while essential to global trade, pose significant risks when not properly declared, handled, or communicated across the supply chain. Incidents involving restricted cargo can result in severe consequences, from environmental damage and operational disruption to threats to life.

While much attention is often focused on vessel-based incidents, shore-side facilities such as ports and terminals face equally critical risks. The increasing complexity of global logistics, coupled with varying restricted cargo acceptance criteria across carriers, ports, and terminals, has created a fragmented compliance landscape. This leads to inefficiencies, delays, and in some cases, the abandonment of containers due to improper documentation or misaligned restrictions. These issues are exacerbated by the absence of a centralized and unified system to capture cargo restrictions across the global network, stemming from a lack of transparency in identifying whether port regulations are issued by governmental bodies or private terminal operators.

Recognizing this urgent need, the National Cargo Bureau (NCB) is developing a centralized restricted cargo database designed to consolidate and standardize cargo restrictions and requirements across the maritime ecosystem. This platform provides stakeholders real-time access to cargo restriction data, reducing the reliance on static information. By offering a scalable and secure infrastructure, the database supports more accurate bookings, minimizes the risk of non-compliance, and enhances overall supply chain transparency. Significantly, the database would be continuously updated and maintained by the issuing bodies to reflect restriction changes, ensuring users always have access to the latest information.

The maritime industry has long needed a solution that mirrors the centralized cargo restrictions systems used in aviation. With the NCB platform, that solution is now within reach. What is needed now is a unified commitment across the industry to adopt, contribute to, and collaborate through the platform. By embracing this opportunity, stakeholders can transform restricted cargo management into a safer, smarter, and more connected process—one that meets the demands of modern logistics while safeguarding people, property, and the environment.

Introduction

In 2024, 250 container fire incidents were reported, and TT Club estimates that a serious ship fire occurs approximately every sixty days.[1] These incidents, along with numerous safety, operational, and financial consequences highlight the urgent need for improved safety protocols and regulatory oversight. They

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[1] commercial-safety-shipping-review-2025.pdf
Day 1 - Introduction and IMDG Code Amendment Cycle - ICHCA International

pose serious risks to life, the environment, and property, while also disrupting supply chains and causing substantial financial losses. Safely and effectively managing restricted cargo shipments is a complex endeavor that requires coordinated efforts from ports, terminals, carriers, as well as global authorities.

The criteria for acceptance of restricted cargo vary significantly between carriers, ports, and terminals. These differences often extend to documentation requirements, potentially leading to additional administrative handling or, in the worst-case scenario, improper stowage of containers on the vessel or stowage on the terminal. Such mismanagement increases safety risks and can create operational challenges for stevedores and drivers. In some cases, this results in the abandonment of containers, leading to cargo degradation if not promptly retrieved.

Considering ongoing proactive efforts by organizations such as the World Shipping Council (WSC), the maritime industry still lacks a centralized, real-time platform for managing restricted cargo requirements and regulations. This gap leaves carriers, ports, and terminals to navigate a complex and constantly shifting regulatory and restriction landscape—often relying on manual updates and inconsistent communication. The NCB restricted cargo database will not only close this critical information gap but also promote greater transparency, consistency, and collaboration throughout the supply chain.

Stakeholders

The active participation of key industry stakeholders—ports, terminals, and container carriers—is crucial for the success of this project. According to Alphaliner™, there are ten major container carriers worldwide and approximately 1,200 Container Terminals globally.[2] In 2024, the container market surpassed growth expectations, with global container volumes increasing by 10.7 million TEU, reaching a total of 183.2 million TEU. This growth was driven by a 6.2% increase in volumes and a 21% rise in demand for TEU-miles.[3]

Current Challenges: Complexity of Restricted Cargo Regulations Across Ports and Terminals

Managing restricted cargo in the shipping industry requires navigating a complex web of regulations and restrictions imposed by ports, terminals, and individual container carriers. Each entity maintains its own unique rules governing the loading, unloading, transshipment, and transit of restricted cargo, designed to ensure compliance with local, national, and international safety standards. When the "wrong" restricted cargo is stored at a terminal or stowed on board a vessel, it can cause major disruptions. With thousands of restricted cargo bookings made daily across a vast global network of ports and terminals, the scale and complexity of managing compliance becomes evident. The absence of a centralized database means that shipping lines must independently monitor and update these ever-changing restrictions. This fragmented approach often results in divergent restrictions creating significant operational challenges, costs, increases in the risk of non-compliance, and adds unnecessary complexity to global logistics operations.

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[2] Top 100
[3] Global Container Volumes Increased by 10.7 Million TEU in 2024 – Shipco Transport Media

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Potential Consequences of Non-Compliance

Non-compliance with restricted cargo requirements across ports, terminals, and carriers can lead to severe and wide-ranging consequences, affecting both operational efficiency and the reputation of shipping lines. Key impacts include:

- **Berthing**: Ports may refuse entry to vessels carrying restricted or improperly declared cargo, causing significant delays and operational disruptions. Berthing denial will result in operational challenges for the entire rotation, jeopardizing subsequent berthing windows. The carrier will need to identify alternative routes, adjust rotations, or omit ports, leading to costly disruptions of the original schedule, affecting scheduled cargo delivery, and potentially resulting in claims. Non-compliance may result in stricter pre-berthing inspections, loss of berthing priority, and additional regulatory requirements for future calls.

- **Voyage**: Non-compliance can derail voyage plans, resulting in schedule delays and rerouting, rejection of pre-approved restricted cargo containers, terminal congestion due to lack of dedicated storage, and additional requirements such as firefighting equipment or security personnel. The presence of unplanned restricted cargo can severely impact terminal operations and vessel scheduling. Scheduled voyage execution is at risk if transit, discharge, or transshipment is prohibited. Any unplanned additional port calls would increase time and costs, and further delay the original schedule.

- **Legal and Financial**: Violations—especially involving hazardous waste—can lead to vessel arrests, heavy fines, and legal proceedings due to non-compliance for hazardous waste shipments. Future berthing procedures may become stricter, insurance premiums could rise and agreed handling costs might come under pressure.

- **Operations**: Non-compliance can disrupt terminal operations and lead to increased terminal move counts, crane splits, bunker delays, and additional requirements for tug and firefighter assistance.

- **Reputation**: Failure to comply with restricted cargo requirements can harm a carrier's reputation, affecting relationships with terminals, customers, partners, and authorities. Past non-performance often leads to heightened scrutiny and reduced trust, which can impact existing contractual agreements and renewals, business development opportunities, and operational flexibility.

The absence of a centralized restricted cargo database forces each container carrier to maintain its own records—an effort that requires significant resources and incurs recurring costs due to frequent restrictions changes across global networks. This fragmented approach increases the risk of oversight and adds to the administrative burden.

Compounding this complexity is the widespread use of Vessel Sharing Agreements (VSAs), where carriers share vessel space to optimize service coverage and flexibility. These agreements require seamless coordination across multiple carriers, ports, and terminals—making consistent restricted cargo compliance even more critical.

The NCB restricted cargo database offers a transformative solution that will not only enhance safety and compliance but also benefit shippers, NVOCCs, freight forwarders, and brokers by enabling more accurate and feasible cargo routing. Failed shipment plans frustrate all stakeholders, highlighting the urgent need for a unified restrictions framework. Having a unified restricted cargo database, that can be updated in real time, can eliminate many of these issues.

Proposed Solution: A Global Restricted Cargo Database for Port, Terminal, and Carrier Requirements

NCB is establishing a centralized global database for restricted cargo requirements across ports, terminals, and carriers, delivering substantial benefits to the shipping industry. This platform enables stakeholders to upload, maintain, and access real-time information on restricted cargo acceptance, restrictions, and specific handling requirements. The restricted cargo database benefits would be:

- **Improved Safety**: A unified database would enhance compliance with restricted cargo requirements, reducing the likelihood of incidents, improving overall safety standards, and ensuring transparency and reliability in the supply chain.

- **Operational Efficiency**: Centralized access to restricted cargo requirements would streamline voyage planning, reduce approval times, and minimize disruptions. A consistent set of acceptance criteria is especially critical for the success of Vessel Sharing Agreements (VSAs), which involve coordination among multiple carriers, ports, and terminals.

- **Real-Time availability of Restricted Cargo Requirements:** The database would be dynamic, ensuring that any changes to restricted cargo rules are immediately available to all users, reducing the risk of outdated or incorrect information.

- **Cost Savings**: By minimizing administrative overhead and reducing the complexity of managing disparate restricted cargo requirements, carriers can achieve significant cost efficiencies. Costs related to wrong or missed restrictions leading to frustrated shipments can be minimized or eliminated for all.

- **Ease of Business**: The global database fosters better collaboration among ports, terminals, carriers, and shippers, simplifying compliance and enabling more predictable and transparent cargo routing.

The NCB Hazcheck Restrictions Portal already serves as a foundational resource for restricted cargo management. Expanding and supporting such initiatives can help the industry move toward a fully integrated global system—enhancing safety, streamlining operations, and mitigating risks associated with restricted cargo shipments through real-time data access.

Call to Action

The foundation for a centralized global database for restricted cargo requirements is already in place. Now, we need the industry's support to make this functional.

We invite ports, terminals, and carriers to join us in transforming restricted cargo compliance and safety by contributing their data to the existing platform and leveraging its capabilities. By participating, stakeholders can eliminate the inefficiencies of repeated manual communication, reduce risk, and improve operational clarity across the supply chain. To accelerate adoption and maximize value, we encourage the following actions:

- **Contribute Your Cargo Requirements**: Publish and maintain your port or terminal's restricted cargo guidelines directly within the platform. This enables real-time access for stakeholders and removes the need to repeatedly distribute the same information to individual carriers—simplifying compliance and communication.

- **Leverage the Platform for Compliance**: Carriers can access up-to-date restricted cargo requirements from all participating ports and terminals, improving booking accuracy, reducing shipment delays, and enhancing safety through proactive visibility. Automated updates ensure immediate and seamless distribution across the network.

- **Integrate with Confidence**: Incorporate the platform into your daily operations. Supporting integration not only future-proofs your workflows but also drives long-term operational gains, risk reduction, and enhanced decision-making.

The tools are ready. The need is urgent. Let's work together to make restricted cargo management safer, smarter, and more connected starting now.

Conclusion

The transportation of restricted cargo presents significant safety, operational, financial and regulatory challenges for the maritime industry. The absence of industry participation in the NCB restricted cargo database exacerbates these issues, increasing the risk of non-compliance, delays, and financial loss.

A centralized restricted cargo database is available—ready to be used, expanded, and integrated. We invite industry stakeholders to take the next step: contribute your data, adopt the platform, and help shape a safer, more efficient future for restricted cargo management. By embracing this unified approach, the maritime industry can move from reactive risk management to proactive, collaborative safety and compliance.

The **Safety of Life, Cargo and Environment** is paramount. Implementing this database globally will significantly enhance safety for all participants in the maritime supply chain. To further its success, the active participation of supply chain stakeholders is essential.

The infrastructure is in place. The industry's need for safety is clear. Now is the time to act and join NCB's pursuit of safety. [4]

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[4] Information paper was prepared by the National Cargo Bureau.