Synergies Between Military and Commercial Shipping

Combined Naval Event

MAY 2023

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Commercial and Military Deliveries

Goods and Products

Combat Power

Different customers, but both require access to the commons

The Maritime Lifeline

72% of the world's surface are oceans ...
80% (volume) and **70** % (value) of all transport is by sea …

2,800 + Ports worldwide
… **835** of those handle **99**% of the world trade

"Whosever commands the trade of the world, commands the riches of the world and hence the world itself" Sir Walter Raleigh, 1554 - 1618

Impacts to Maritime Traffic

Mine Strike off VACAPES 1942

Suez Canal 2022

Mine Strike in Black Sea 2022

Black Sea premium insurance rates from 0.025 % prior to invasion to 1-5 % post invasion
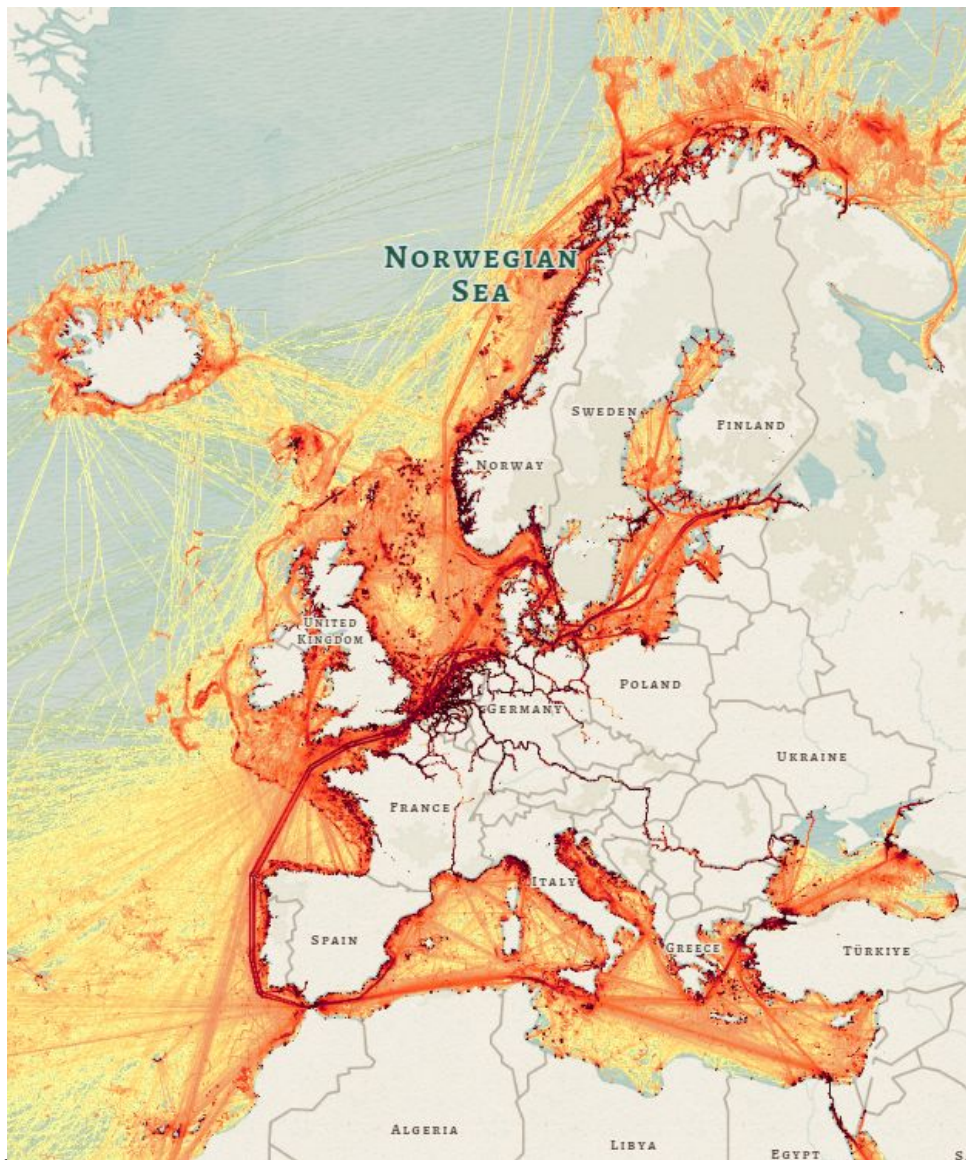40 to 200 times as expensive to insure !

Convoy near Iceland 1942
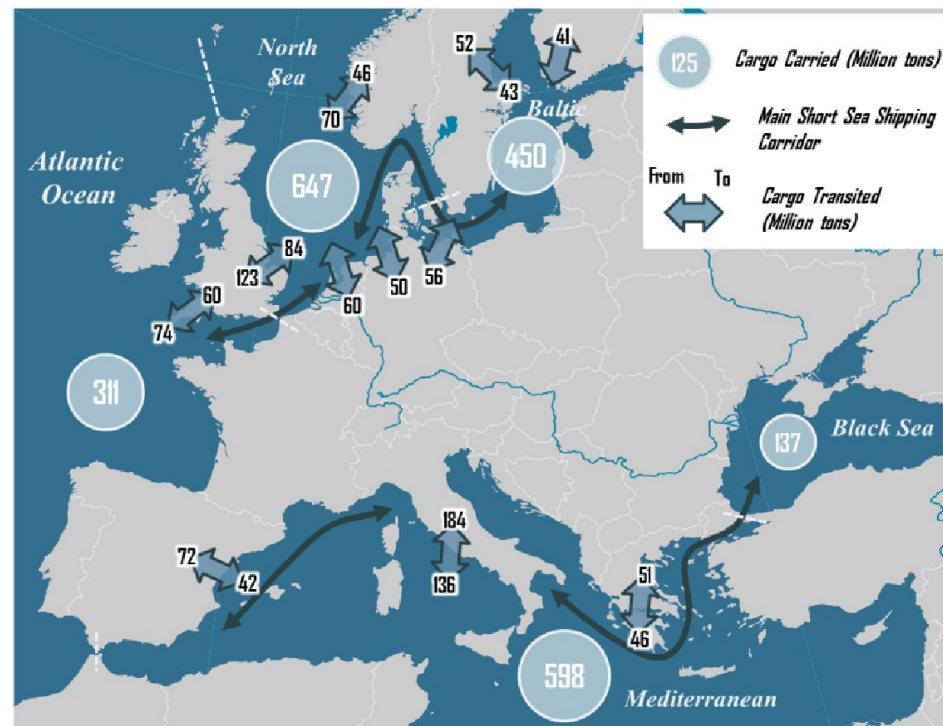
Delays have commercial and military consequences

Vulnerabilities in Europe

AIS Data Showing Traffic Density for March 2023

Mine Inventory
Russia: 250,000

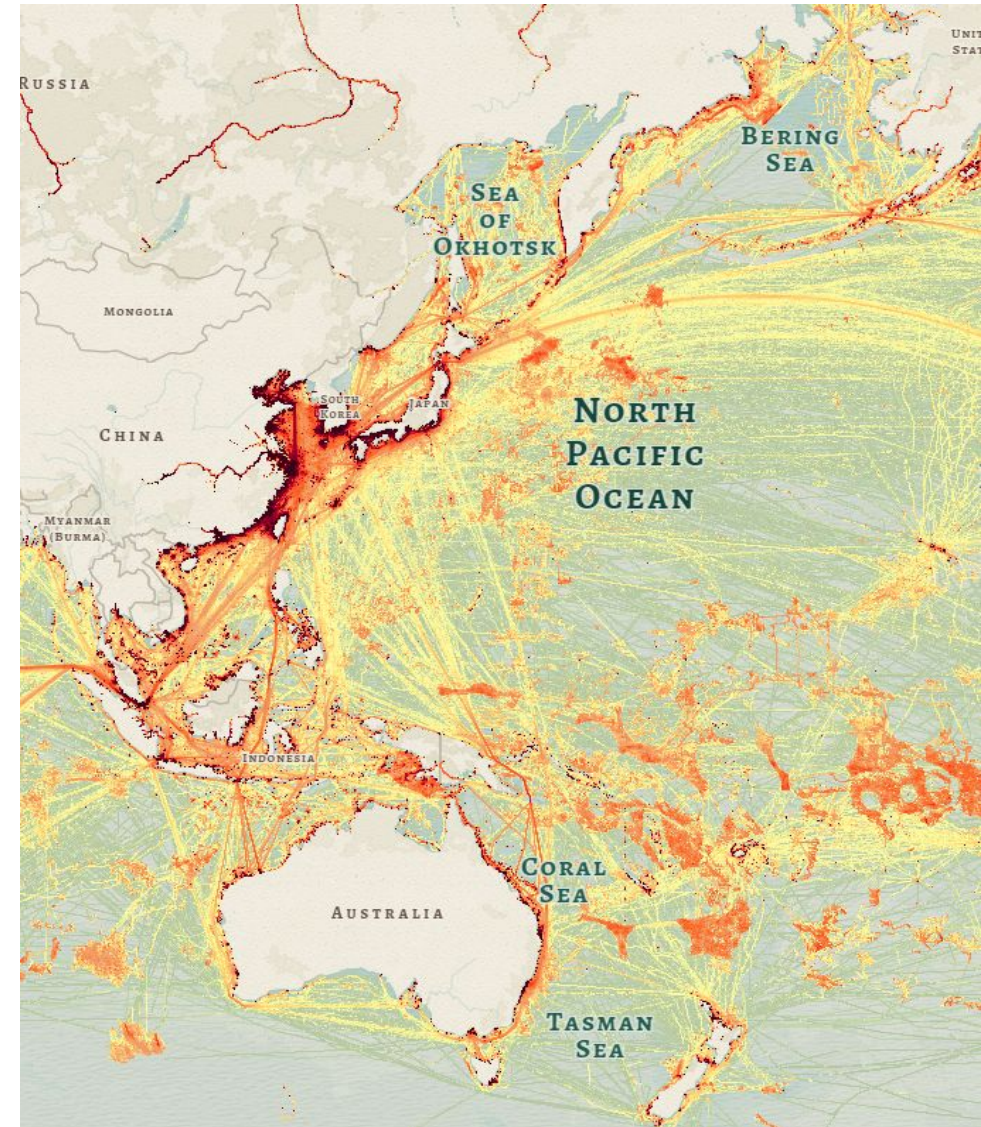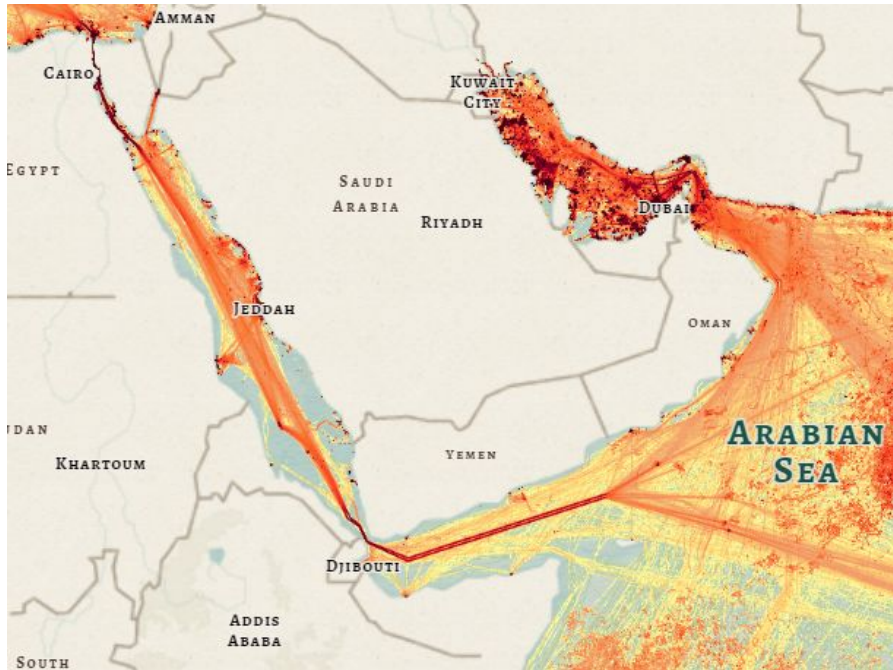# Vulnerabilities in the Middle East and Asia Pacific

Mine Inventory
Russia: 250,000
China: 100,000
North Korea: 50,000
Iran: 6,000

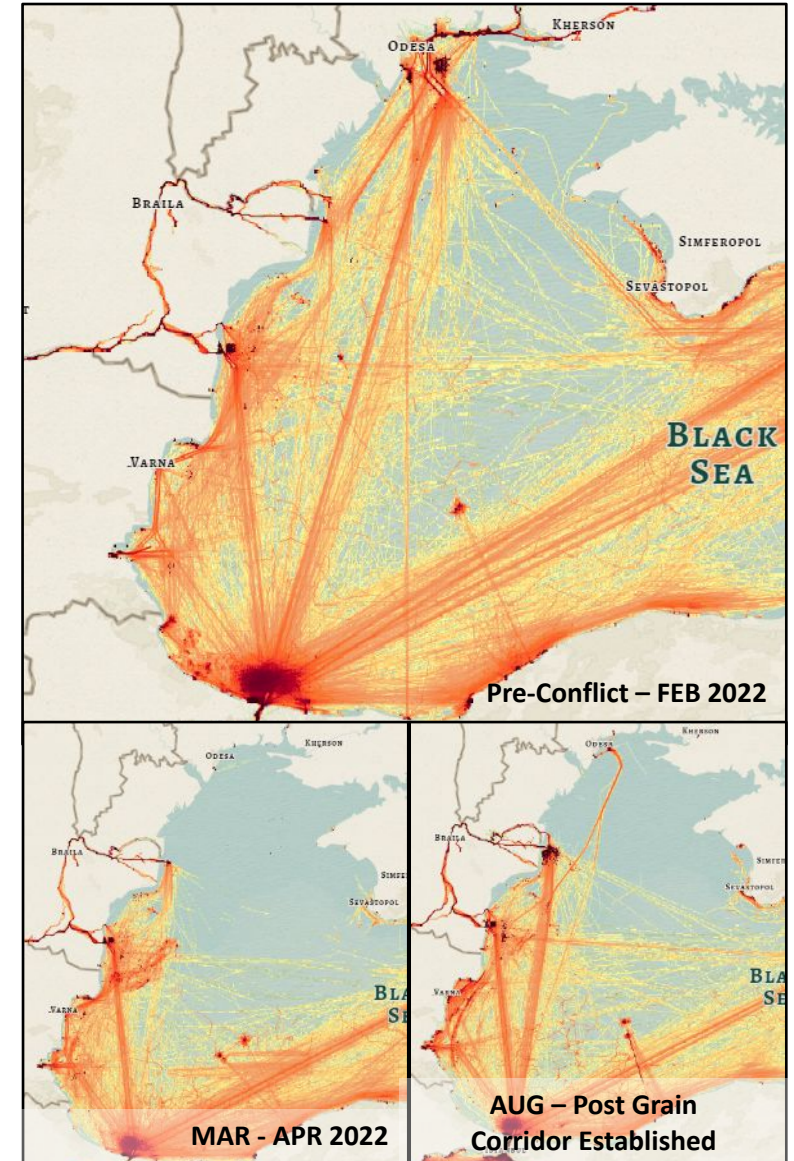**AIS Data Showing Traffic Density for March 2023**

Black Sea Shipping Impacted by Conflict

Key

Declared MTA:
Safe Loiter Area:
Transit Corridor:
Transit Zone:
Discovered Mines:
Suspected Mine Strike:
*Locations Approximate

Probable drifting mine damage to structures near Odessa

Probable mine strike damage to hydrographic vessel SHLYAHOVIK

Mine Related Activity in the Western Black Sea

Pre-Conflict – FEB 2022

MAR – APR 2022

AUG – Post Grain Corridor Established
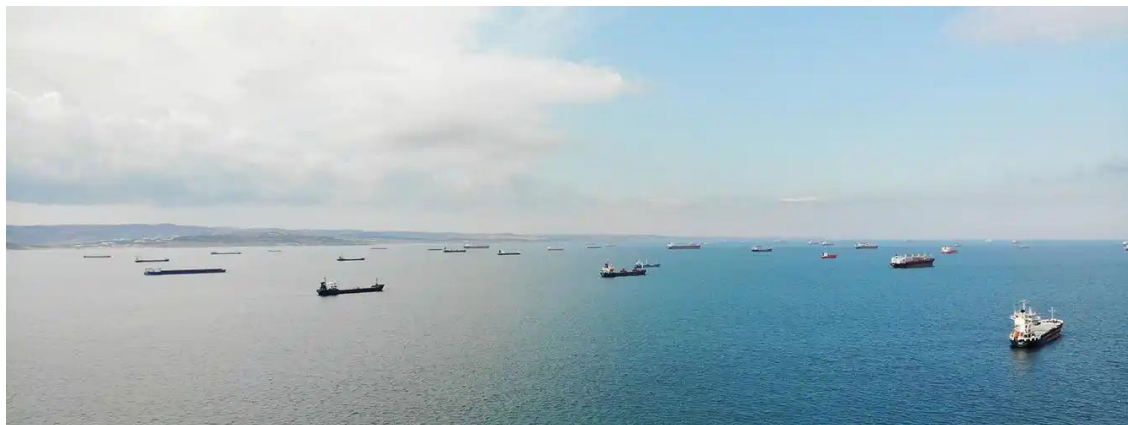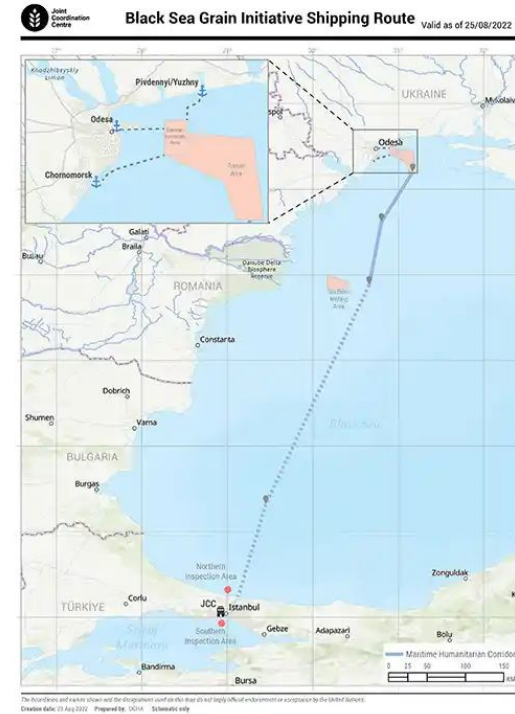
AIS Data Showing Impact to Shipping

Synergy: Black Sea Grain Initiative

As of 27 Mar 23:
849 departures / 827 Arrivals
25,888,435 tons shipped

Truck unloading corn in Ukraine

Black Sea Grain Initiative Shipping Route

Grain Ships off Istanbul Feb 2023

Cooperation in time of conflict in order to move vital food products
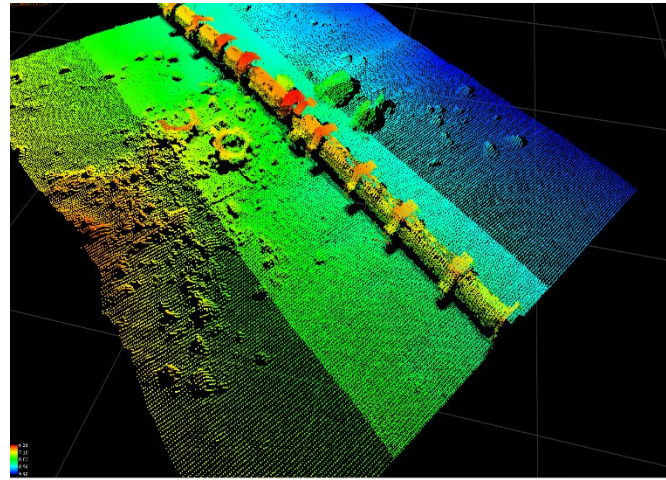
Where can we achieve synergy?

IMX 2013 Convoy

Commercial survey vessel

Pipeline sonar survey

U/W ROV ops

Standing NATO MCMGRU-1

Mine Countermeasures is 90 % a research project

How do we…

- **Make MCM faster ?**
  - In stride data transfer
  - Automatic Target Recognition (ATR)
  - Single Sortie Detect to Engage (DTE)
  - Shorten the Post Mission Analysis (PMA) timeline

- **Make MCM forces more agile ?**
  - **Hosted on multiple platforms**
  - Improved Modularity - Agile, Flexible
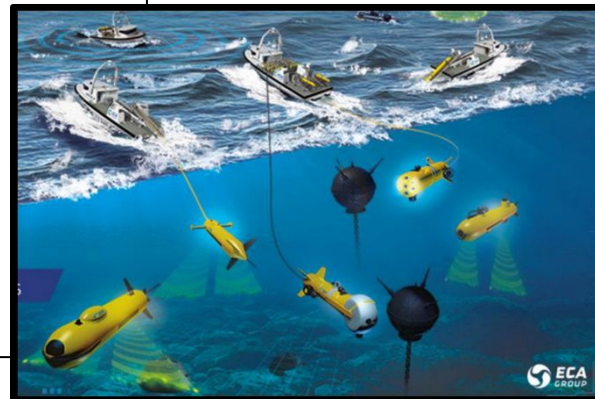 - **Scalable Capability / Capacity**

- **Improve UUV/USV/ROV ?**
  - **Improved Sensors / Depths**
  - Reduced Signatures
  - **Networked**
  - Clandestine
  - **Endurance**

- **Operate in Challenging Environments ?**
  - **Positioning, Navigation, Timing**
  - **Comms Resilience**
  - **Cold and hot weather**
  - **Currents**

- **Improve Interoperability?**
  - **Share information and knowledge**
  - True Common Operating Picture (COP)
  - Integrate all P

Change is the law of life. And those who look only to the past or present are certain to miss the future.
John F. Kennedy