

# Seabed Mining and Security of Seabed Assets

**Digvijay Rewatkar**

Research Associate

Centre for International Law

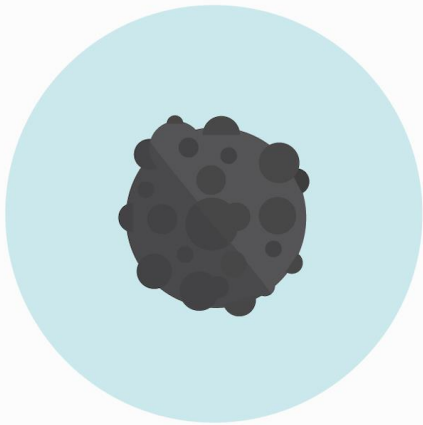
National University of Singapore

7<sup>th</sup> Alexander Cushing International Law Conference: Security At Sea

Manila, the Philippines

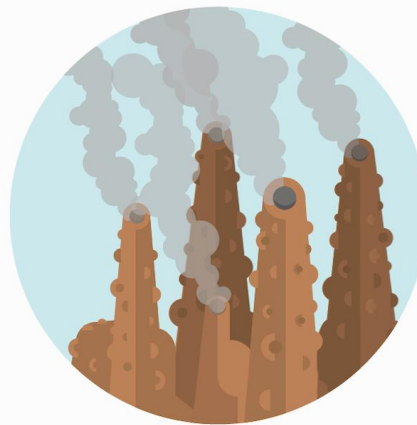
14 May 2025

# Deep-sea mineral deposits and the metals they contain



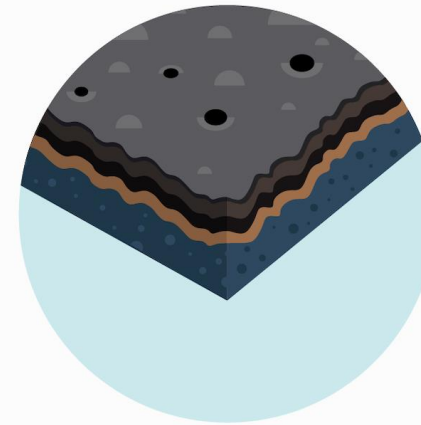
## Polymetallic nodules

Source of nickel, cobalt,  
copper and manganese



## Polymetallic sulphides

Copper, lead, zinc, gold  
and silver

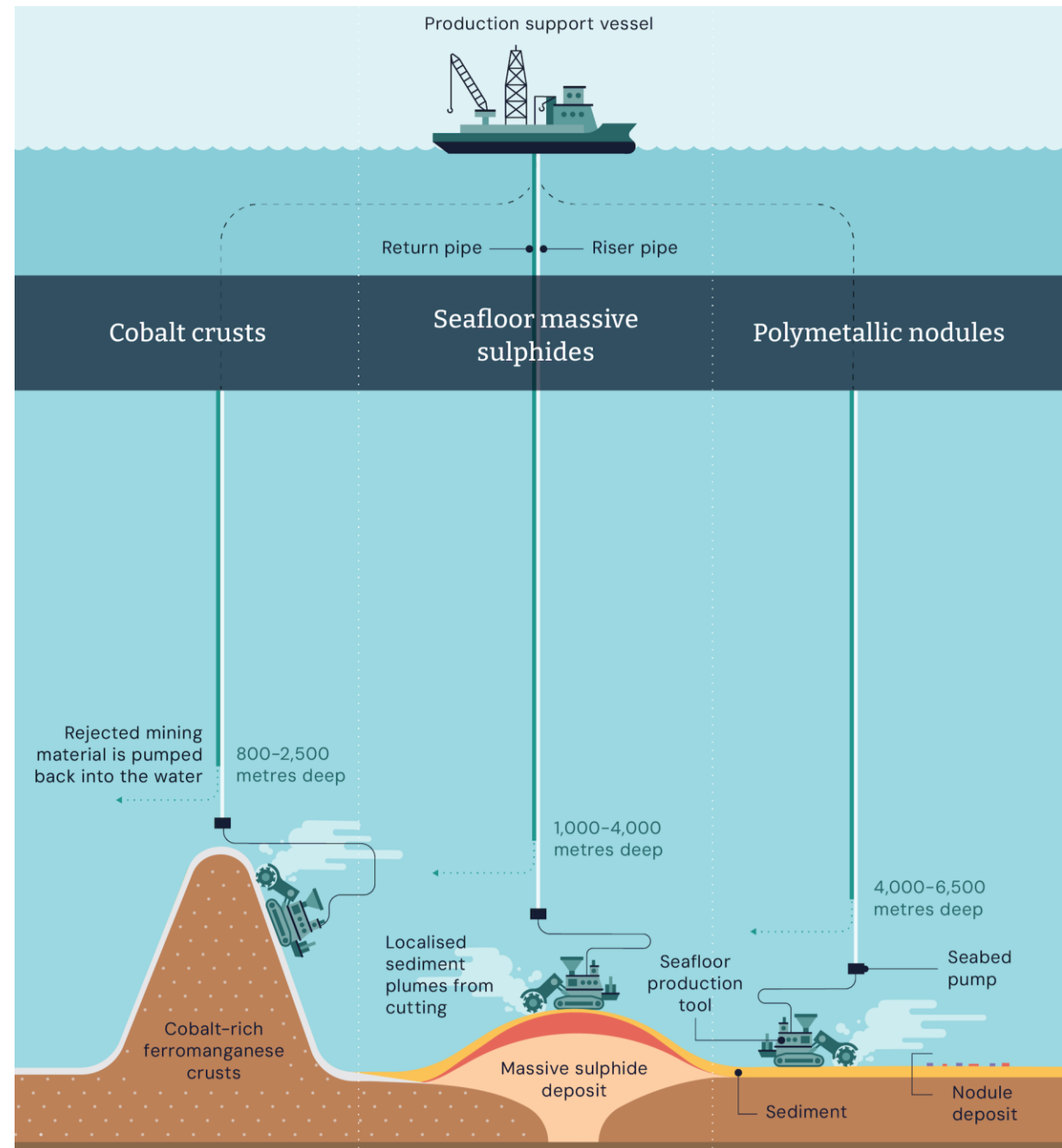


## Cobalt-rich crust

Cobalt, vanadium, molybdenum,  
platinum and tellurium

Graphic: [Ed Harrison](#) / Dialogue Earth

# How Minerals could be mined from the Seabed



# Case of GSR Protests

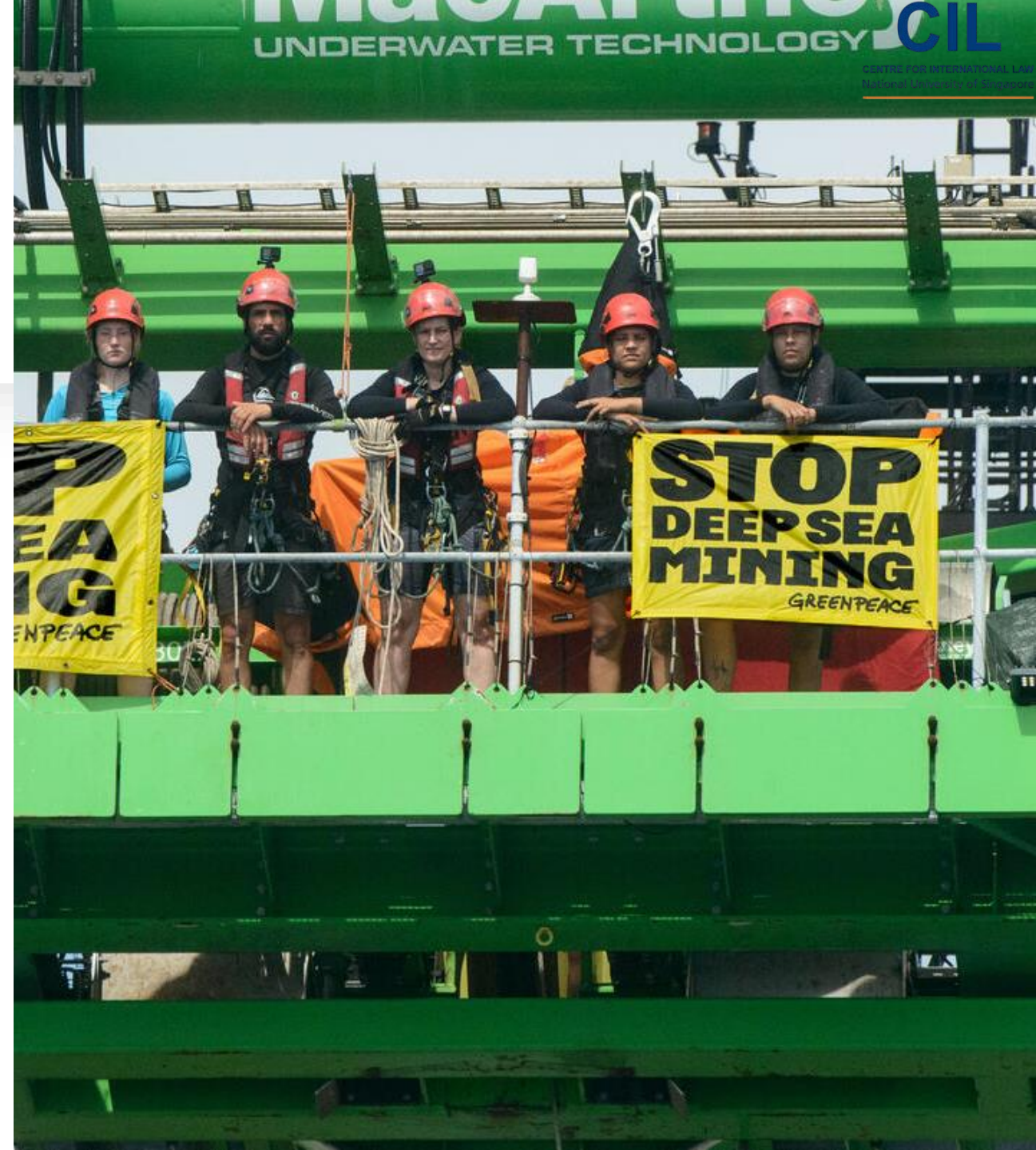


Protestors interrupt exploration operations of Global Sea Minerals Resources.



# NORI v. Greenpeace and Phoenix

- Boarding on the MV Coco by protestors
- Interruption of operations for 2-weeks
- ISA SG – Temporary measures
  - Disembark
  - Refrain from interruptions
  - Safety zone
- Due regard [Art. 87]/ reasonable regard [Art. 147]
- Flag-state obligations – adequate?
- NORI Case before Amsterdam District Court
- Security Gap:
  - Lack of regulatory powers of the ISA or the Contractor to prevent interruption to its licensed operations.



# Maritime Security Strategies

SEABED WARFARE STRATEGY

**REPORT BY THE WORKING GROUP**

FEBRUARY 2022

**Memorandum of Understanding for Blue Partnership  
in the Field of Seabed Minerals Affairs  
Between  
the Seabed Minerals Authority, of the Cook Islands  
and  
Ministry of Natural Resources of the People's Republic of China**



# Areas to Reflect Upon

- UNIDIR - seabed mining activities may experience potential maritime security risks posed by state and state-sponsored actors.
- Legal options available to sponsoring states to protect such subsea *assets* including questions concerning the characterization of subsea *assets* such as the Remotely Operated Vehicles (ROVs) and Autonomous Underwater Vehicles (AUVs) used for seabed mining.
- Role of stakeholders especially for the sponsoring states and the jurisdictional responsibilities of these actors within UNCLOS for investigation and enforcement action.
- Reconciling overlapping jurisdictional responsibilities such as the ISA's role in monitoring mineral exploitation and the role of sponsoring states to protect *assets* dedicated for mineral exploitation.

# Characterization of Seabed Equipment?



- International law does not provide a bright-line test for whether a AUVs can be designated as a “ship” or “vessel” by the flag State.
- Every sovereign State decides “to whom it will accord the right to fly his flag and to prescribe the rules governing such grants.”
- Thus, domestic, not international, law governs ship registration, and many States agree that a AUVs can be designated a “ship” under their national laws.



# Scope of Due and Reasonable Regard

- What exactly does it mean to have “due regard” to the interests of others?
- **Article 87(2)** states that the high seas freedoms “shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas, and also with **due regard for the rights [under UNCLOS] with respect to activities in the Area**”.
- **Article 147** which **places an obligation on those conducting activities in The Area**. They must have “**reasonable regard**” for other activities in the marine environment.
- ***Mauritius v. UK*** case, “the extent of the regard required by the Convention will depend upon the nature of the rights held by Mauritius, their importance, the extent of the anticipated impairment, the nature and importance of the activities contemplated by the [U.K.], and the availability of alternative approaches.”

“due regard” obligation is to be understood as a **balancing exercise between the respective relevant rights and interests of each party**.

# Open Questions?

Attribution  
of Conduct?

Enforcement  
Measures?

# Thank you!

Digvijay Rewatkar  
rewatkar@nus.edu.sg