

# Energy Efficiency On Ships

How do we do it?



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Swire Shipping & Swire Bulk





## Agenda

- Swire Bulk & Swire Shipping
- Why decarbonization?
- IMO Targets
- Financial angle
- Sustainability & Decarbonization
- Three pillars
- Hull & Propeller
- Underwater Paint
- Effective drydock
- Performance Improvement
- Quiz + Q&A

# Swire Bulk



**Swire Bulk** and **Swire Shipping** are the two shipping trading arms of the multinational Swire group.

## **Swire Bulk**

Swire Bulk is a vessel owner and operator in the dry bulk sector, with a trading fleet of around 150 Handysize and Supramax vessels. Swire Bulk provides commercial services to transport commodities and breakbulk cargoes, including grains, steel, cement, logs and project cargoes. Swire Bulk was founded in 2012 and became a standalone company in 2021.

# Swire Shipping

## Swire Shipping

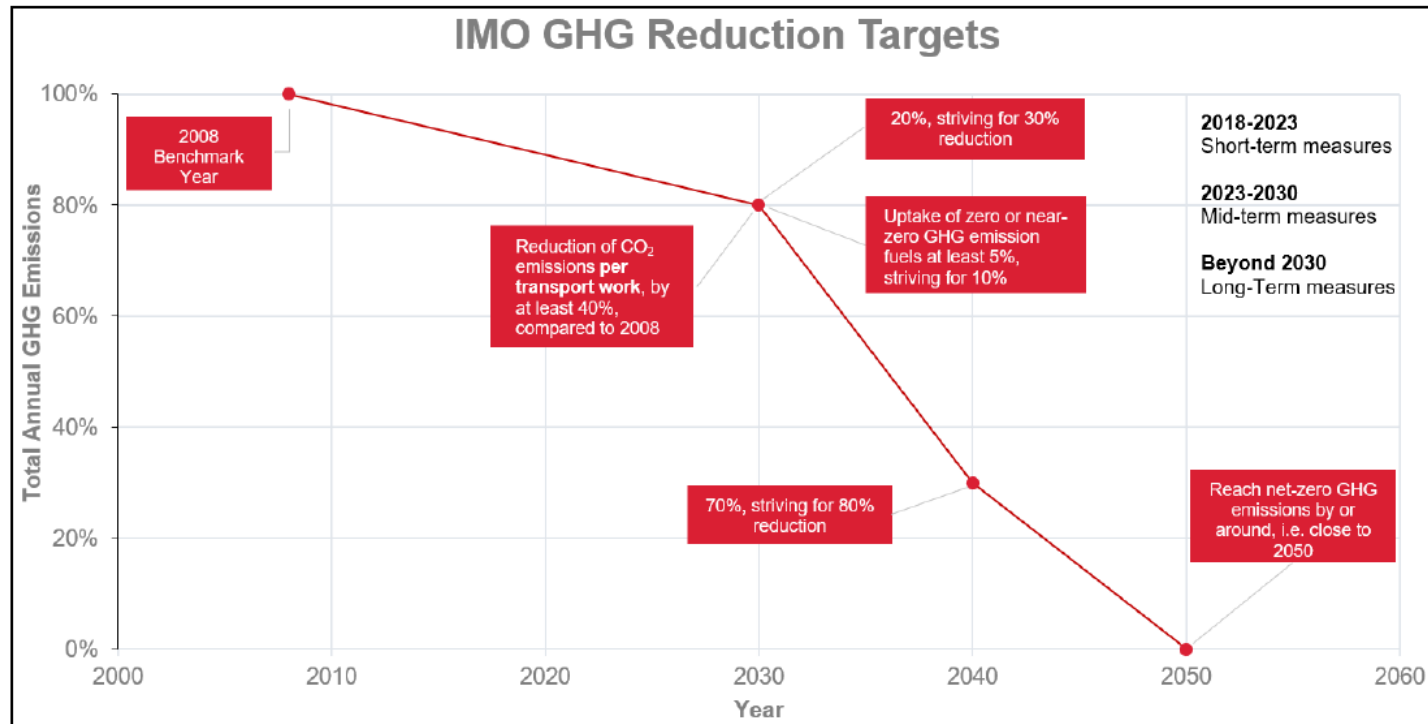
Swire Shipping is a leading provider of specialist customer solutions for a wide range of cargo and aims to provide a full suite of land and ocean solutions to our customers. The Company offers high frequency liner services for global transportation of containerized, refrigerated, breakbulk, heavy lift projects and mini-bulk cargoes. Swire Shipping has been in business since 1872 and over the years, the brand became synonymous with being a leader in providing sustainable liner shipping services in the Asia-Pacific markets.



# WHY??

**Why is everyone so concerned about decarbonization, lately?**

# IMO Targets



# Financial Angle

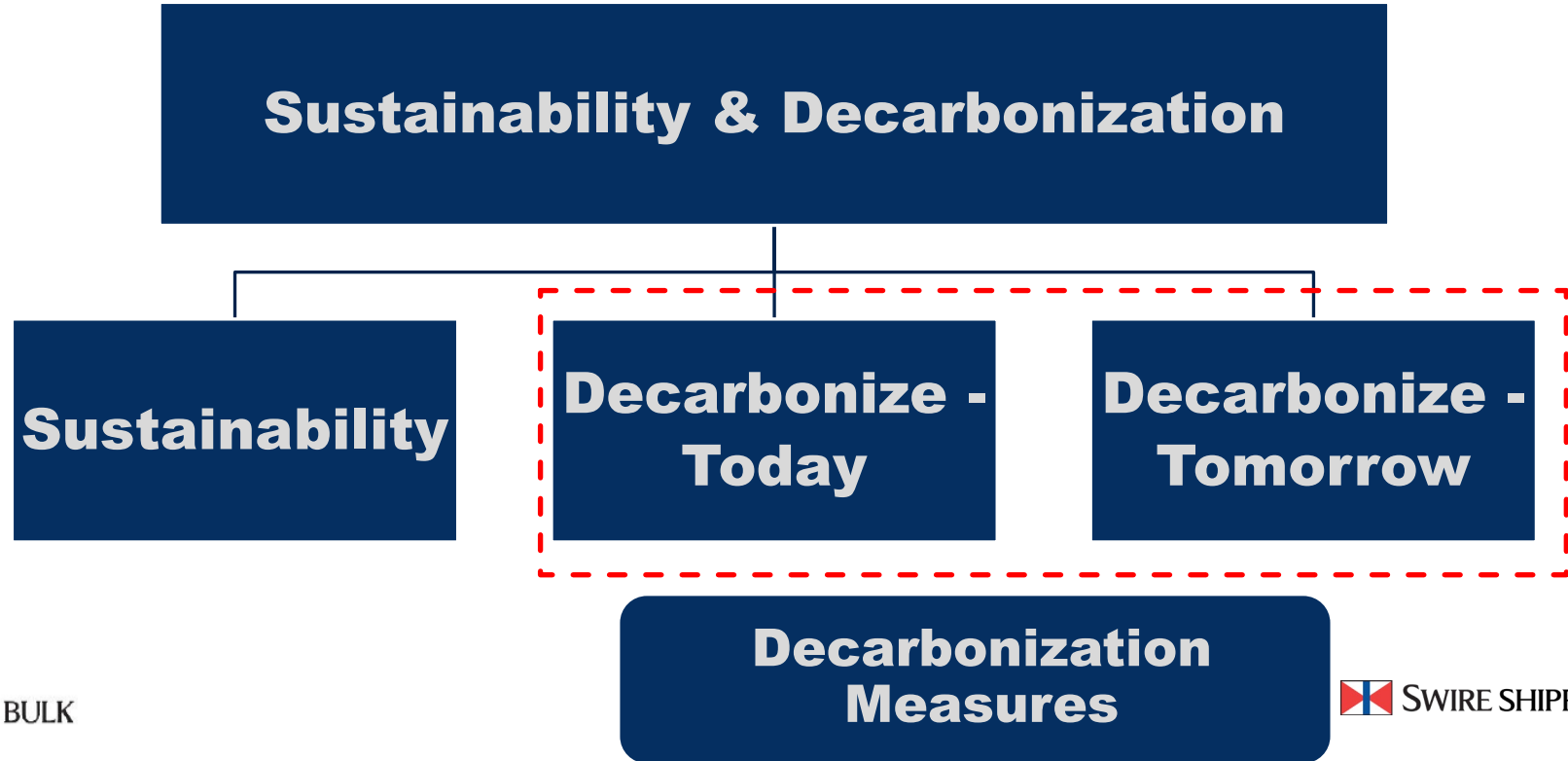
**Vessel's single largest operating expense is FUEL**

**Car driving  
continuously  
for 24 hours:  
128 ltrs fuel**

**World's biggest ship sailing for  
24 hours: 400000 ltrs fuel  
Fuel Cost: **\$250,000/day****

**Equivalent to more  
than 3000 cars  
driving together!**

# Sustainability & Decarbonization





# Three Pillars

## FLEET EFFICIENCY

**Fuel and voyage optimisation** for owned and chartered-in fleet

**Proactive management** of environmental compliance

**Use of data for continuous improvement** (digitalise to decarbonise)

## ENERGY EFFICIENCY TECHNOLOGIES (EET)

**Identification of suitable EET**  
What technologies can be used for incrementally decarbonise

**Optionality**  
How can efficiency be incrementally improved and emissions reduced through the use of new technologies

**Shore Power**

**Carbon Capture and Storage**

## NEAR ZERO EMISSIONS FUELS

**Fuel Strategy (2027 target)**

**Future alternative fuels**

- Supply chain
- Geographical availability
- Price and supply and adoption

**Green Corridors**

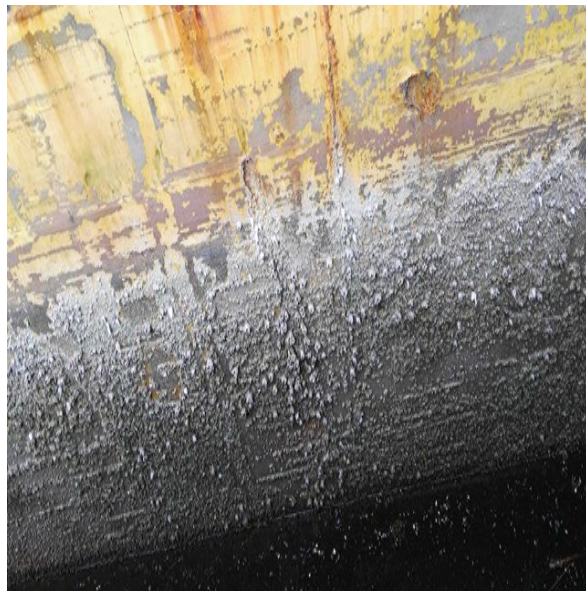
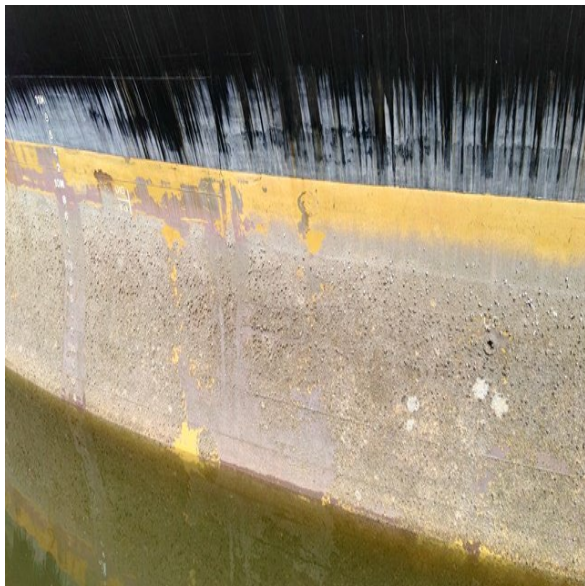


**Feasibility of adoption of dual fuel methanol technology fuels**

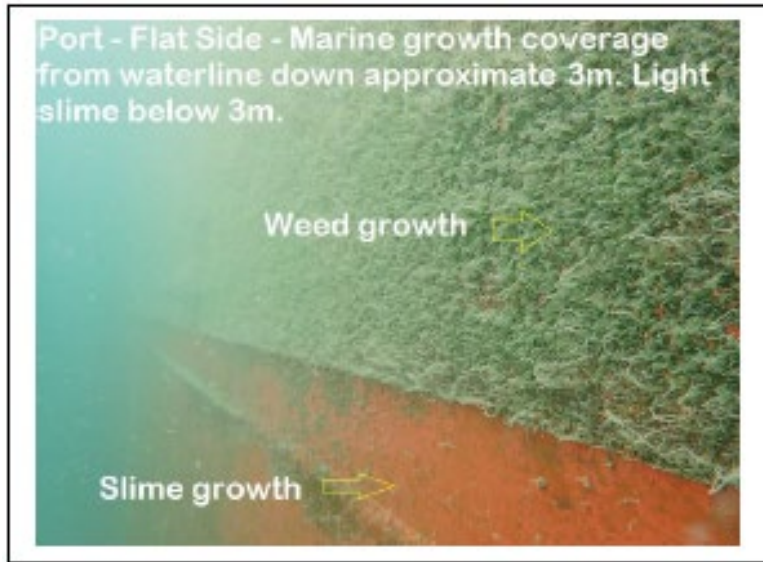
**Marine pilot of 3<sup>rd</sup> generation biodiesel**



# Hull & Propeller



# Underwater Paint

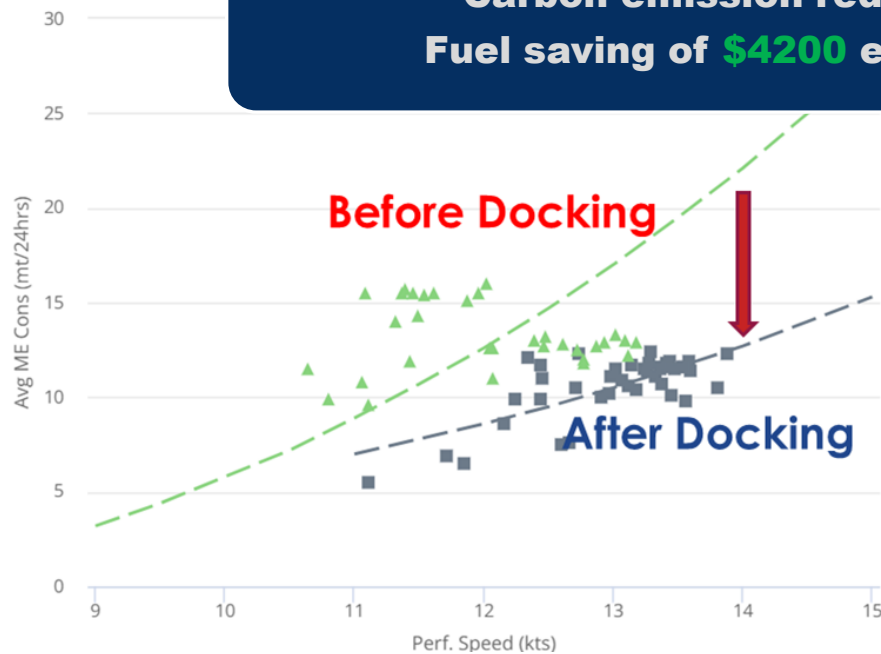


# Effective Drydock



# Performance Improvement

Consumption Chart



**Carbon emission reduction: 18 Tons/day**  
**Fuel saving of \$4200 every day at 13 Knots!**

Across the speed range, the overall improvement in fuel efficiency is estimated to be **between 20 and 40%!**

**Just for fun!**  
**Quiz Time**

# Types of Coffee....



# Types of Fuel....







# Q & A

# ***THANK YOU***

***“We do not inherit the earth from our ancestors, we borrow it from our children.”***

Native American Proverb

