



Markets for Carbon

Creating Value for Shipping

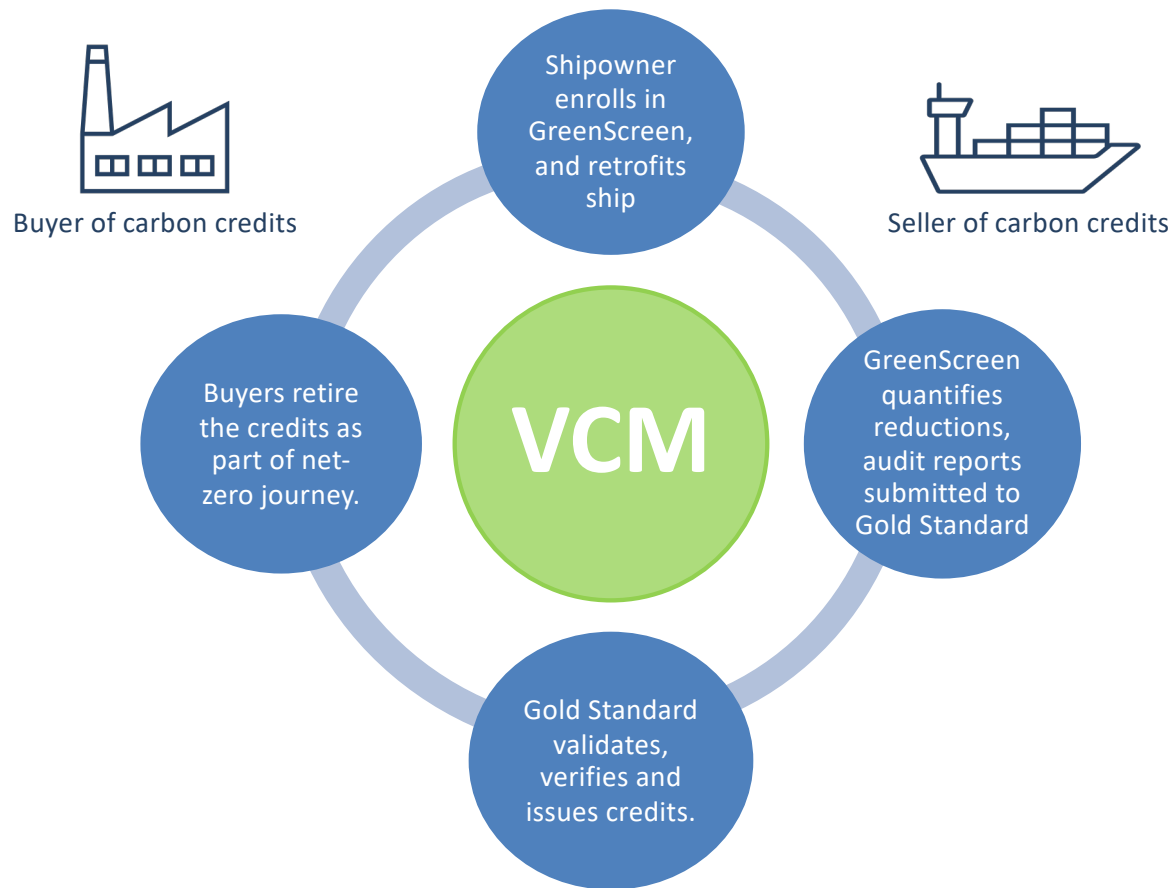
Marine Money Athens
October 2023

Marsoft

Emissions Trading System vs. Voluntary Carbon Market

	EU ETS	VCM
Market Type	Compliance	Voluntary
Financial Impact	Cost & Administrative Burden	Revenue
Price Driver	Government Intervention	Corporate Net-Zero Commitments
Price per tonne of CO2	\$100	\$5 - \$25
Scope	Emissions from intra-EU voyages 50% of emissions to/from non-EU 10% of Global Trade	Emissions Reductions from Retrofits Bio-Fuels (under consideration) 90% of Global Trade

Voluntary Carbon Market to Fund & Share Cost of Retrofits



GreenScreen™ Program

- Gold Standard verified
- 400,000 CO₂e
- Scope 1 for shipowner & potential Scope 3 for buyer
- Shipowner Benefits
 - Confidence in Savings
 - Support for investment
 - Share cost of retrofit with supply chain and beyond

Shipping Industry Ready, Highlights 5 Asks – Carbon Credits Can Deliver

Global Centre for Maritime Decarbonisation &
Boston Consulting Group Sep 2023

GreenScreen Benefit



Technical pilots and data sharing



Innovative financing mechanisms



Raise awareness and build capabilities



Build future fuels infrastructure



(under consideration)



Mechanisms to **share costs** of adoption



Carbon Markets Influence Behavior

Possible Reactions to ETS

- Avoid Europe
- Slow Down Even More
- Don't Worry, Charterer Will Pay
- Switch to Low-Carbon Fuel
- Retrofit

Notes to figure

Retrofit cost \$750,000 for 1,000 tonne annual fuel consumption reduction.
Fuel cost \$500/tonne. ETS cost \$100/tonne, carbon credits \$30/tonne.
Accounts for probability of sale (15% pa) & capital cost (10% pa).

Retrofitting Financial Case

Before & After ETS & Carbon Credits

