



BUYCO



searoutes

CO₂NTROL

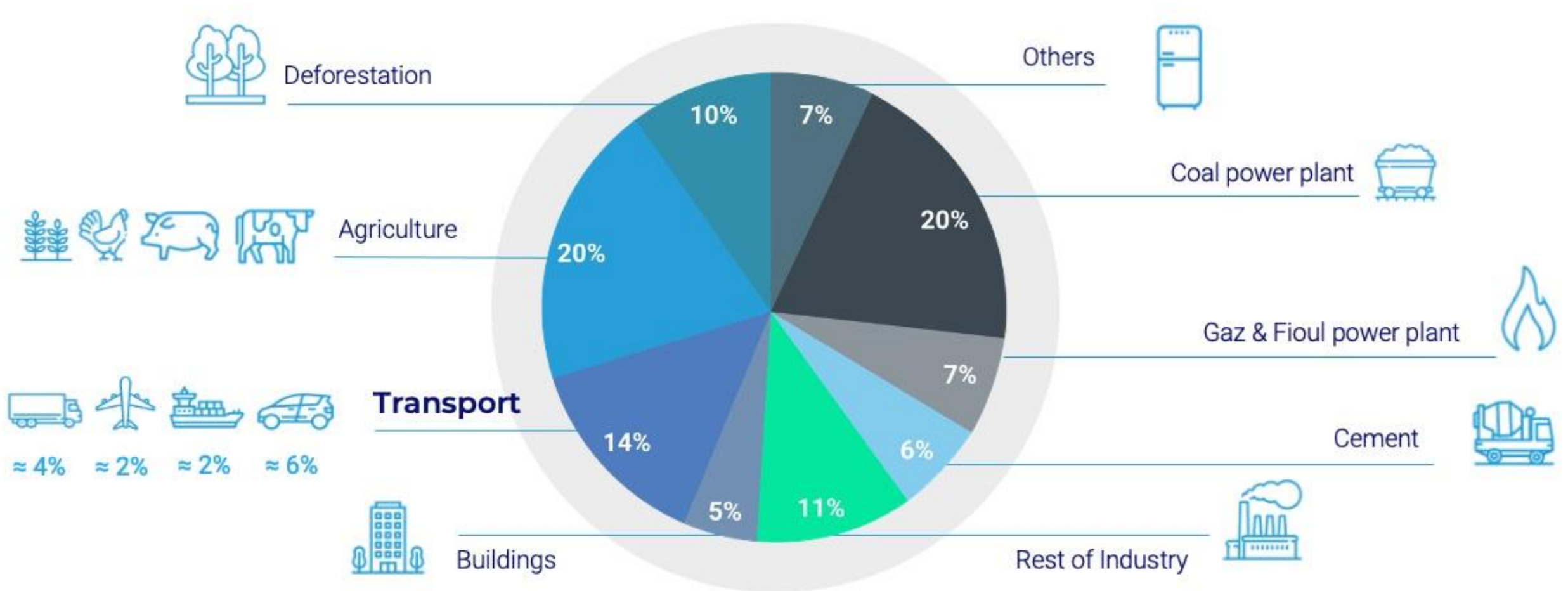
Collaborative platform for shipping container operators to take control of CO₂ emissions by route optimisation



BlueInvest Grants 2020
Ecomondo



Sea, air and inland transportation: 8% of CO₂ emissions



Challenge 1: Complex Container Shipping industry, digital entry barrier

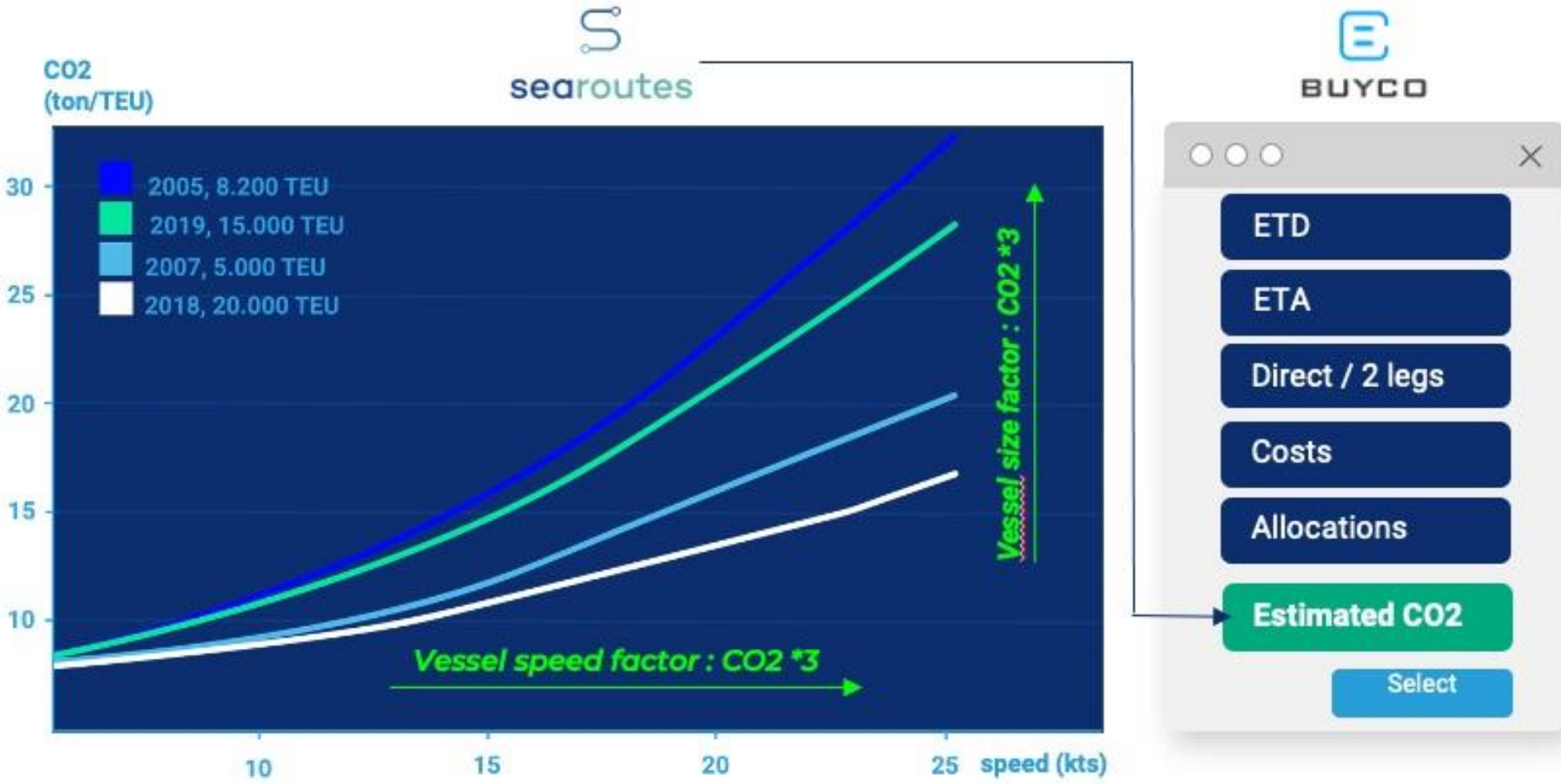


High Complexity

Lack of Visibility

Lack of Control

Select the best CO₂ emission vessels at each booking depending on vessel's engine, size, schedule and speed



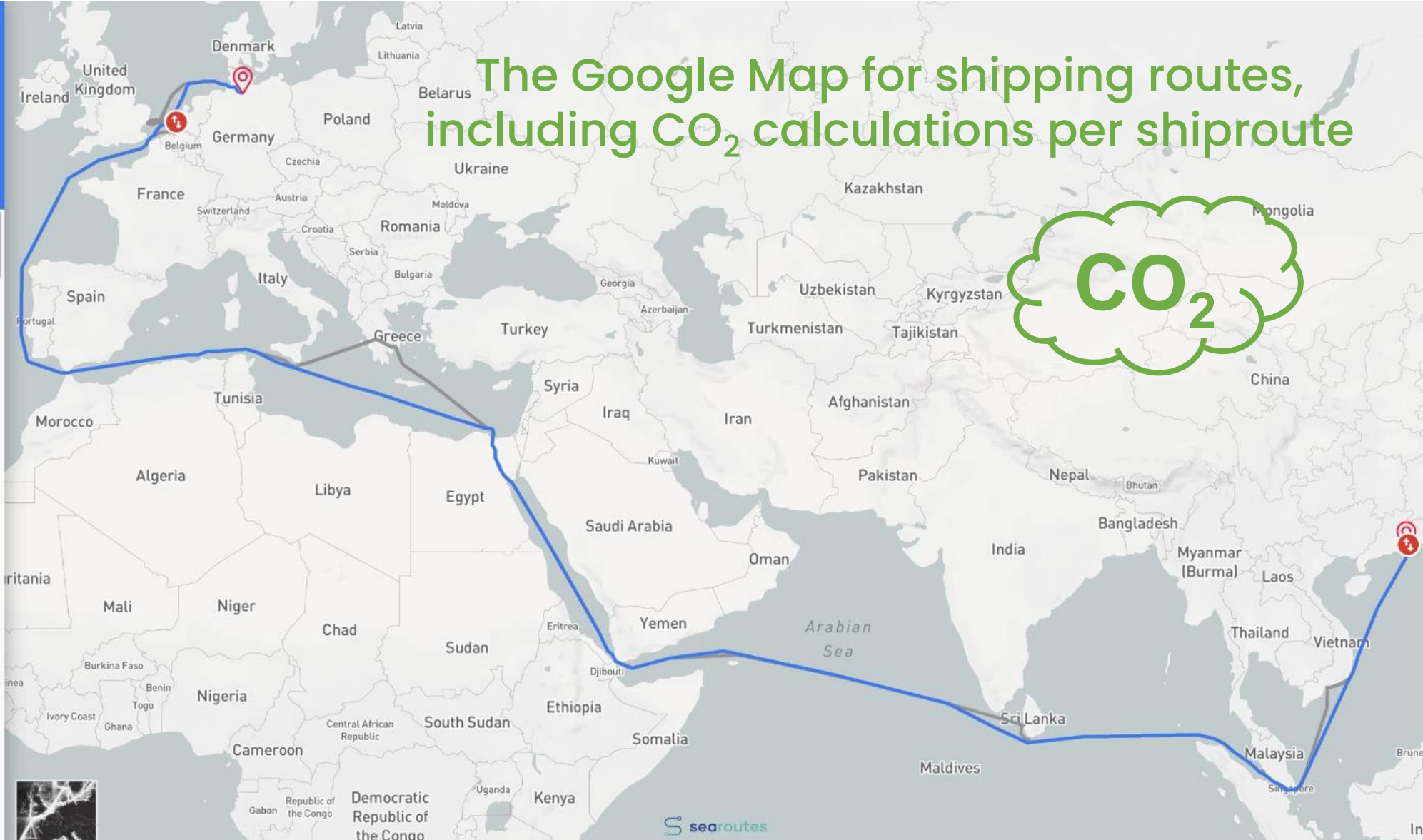
“The Google map”

The Google Map for shipping routes, including CO₂ calculations per shiproute



← Hong Kong Hamburg Sorted by best

Origin	Duration	Destination	Price	CO ₂ Emissions
HKHKG	26 days 9 hrs	DEHAM	3.24k€	0.79 t / TEU
HKHKG	26 days 19 hrs	DEHAM	3.13k€	1.19 t / TEU
HKHKG	26 days 22 hrs	DEHAM	3.00k€	1.15 t / TEU



Regulation pressure for the shipping industry

IMO - ONU

2023 : Short term measures EEXI/CII per vessel

2030 : - 40% of CO2 per TEU-KM vs 2008

2050 : - 70% of CO2 per TEU-KM vs 2008
- 50% GHG in Tons 2008

EUROPEAN GREEN DEAL

2022 : Inclusion of shipping in the EU ETS

2030 : - 40% of CO2 per TEU-KM per vessel vs 2018

2050 : EU Carbon neutral for all sectors

Applicable to own and chartered vessels

WHAT DOES IT MEANS FOR THE SHIPPING INDUSTRY

- Vessel power limitation
- Potential speed reduction
- Vessel retrofit or new design for efficiency optimization
- Use of low carbon alternative fuels (Bio fuel ,Bio LNG,...)
- Fleet deployment and network

Potential nonrenewal of navigation certificate incase target not achieved

CO₂NTROL maximizes the visibility of all other approaches

Shift to alternative energy fuel

26 LNG powered vessels by 2022



-92%
NITROGEN OXIDE

-91%
PARTICULATE MATTER

-99%
SULFUR OXIDE

UP TO -20%
CO₂

Supply chain optimization / Improve container utilization



65-95%



Current container filling factor

Supply chain optimization / Reuse of import and export containers - One way/street turn



Potential impact on road


50% truck legs are full



90% truck legs are full

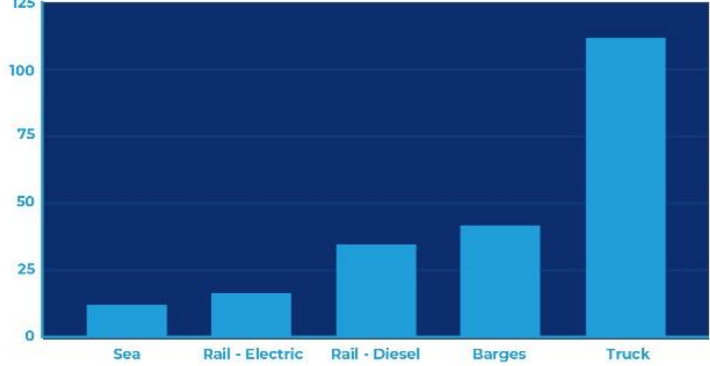


Shift to intermodal for pre & post carriage leg deliveries



Potential impact on inland emissions

Kg CO₂/Ton Km



Mode	Kg CO ₂ /Ton Km
Sea	~10
Rail - Electric	~15
Rail - Diesel	~35
Barges	~40
Truck	~110

SEA-MODE use case: New York - Busan			
	Other solutions	Build a greener supply chain	
Schedules	No schedule - Direct	CMA - CGM Manhattan Bridge	MSC Emerald
Distance (km)	18764.52	22671.23	25735.56
Default Vessel	CC Suez Max	CMA CGM Magellan	CPO Bremen
Design speed	48.9	44.6	47.4
Speed (km/h)	30.2	21	26.1
TEU	7000-14500	13344	8580
Co2/TEU (t)	1.27	0.7361644011	1.518418056

ADD THE CO₂ EMISSION CRITERIA TO THE BOOKINGS.
Compare services for the same trade lane

PORT SELECTION
can make a CO₂ difference on your d-2-d journey



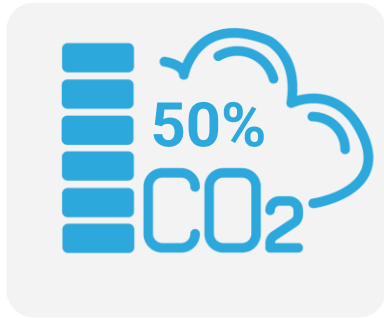
Mundra (India) -> Aschaffenburg (Germany)
via Marseille Fos:
219,1 kg/t CO₂ emissions



Mundra (India) -> Aschaffenburg (Germany)
via Antwerpen:
225,6 kg/t CO₂ emissions



Mundra (India) -> Aschaffenburg (Germany)
via Hamburg:
249,5 kg/t CO₂ emissions



**Tendering
Booking
Door-2-door
Reporting
Compensation
marketplace**



Thank you



BUYCO

Master your ocean freight

www.buyco.co



searoutes

Build a greener supply chain

discover.searoutes.com



Co-funded by
the European Union