

Expectations, requirements and actions from shippers towards transport decarbonization: Implications for Inland Navigation

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Logistics GHG Emissions in Context

Transport emissions: of man-made GHG emissions

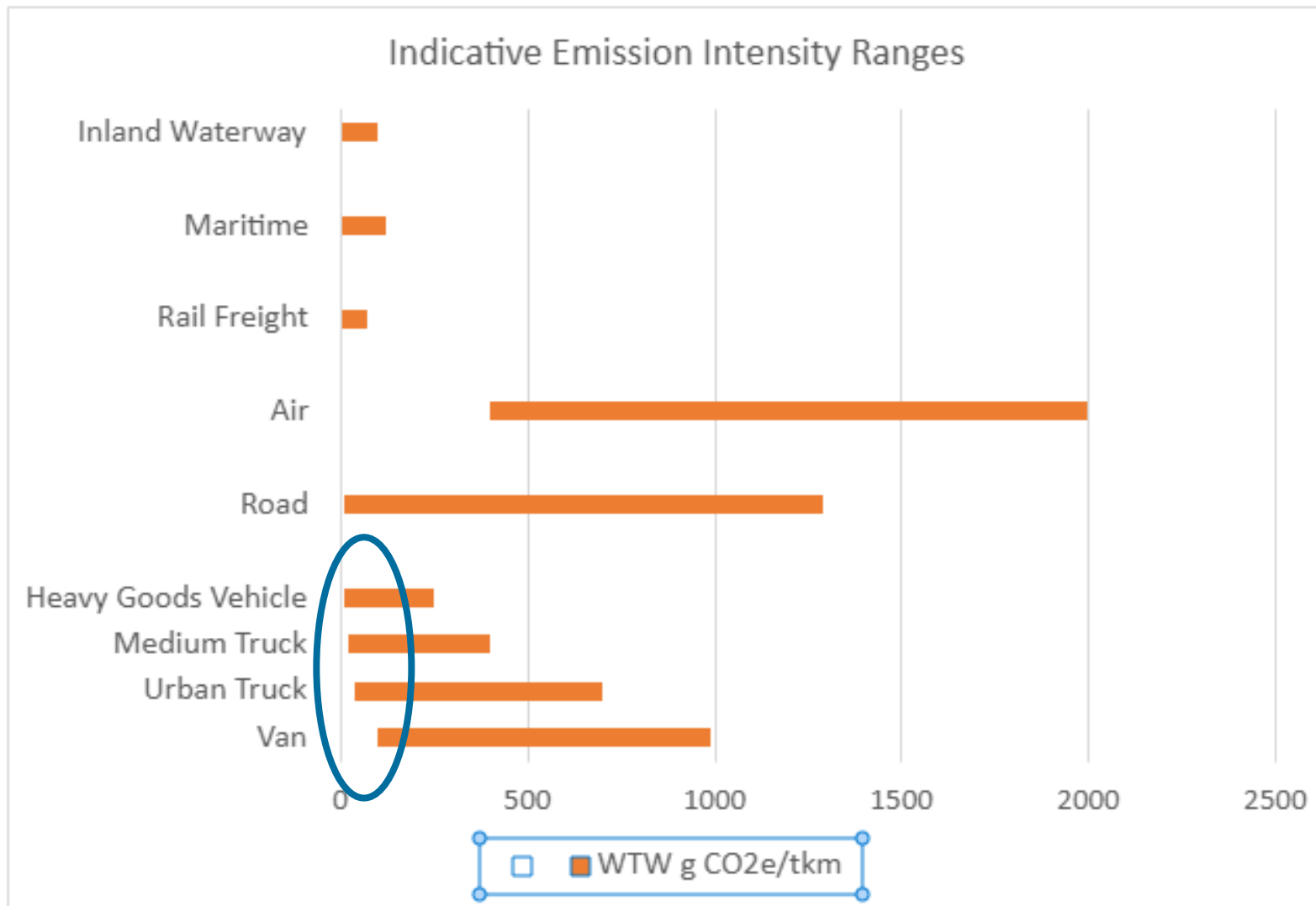
Logistics emissions: of transport GHG emissions

Both sets of numbers are increasing

Breakdown of Global Freight Transport GHG Emissions

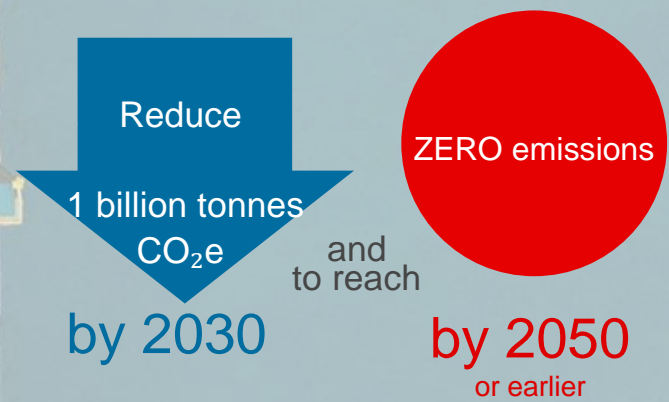


GHG emission credentials of different modes



Smart Freight Centre

SFC is a global non-profit organization focused on reducing the emission impacts of global freight transportation.



Mobilizing the global logistics eco-system

How we make an impact



Drive transparency and set the standard
to simplify, increase efficiency and measure performance



Facilitate solution pathways and catalyze collaboration
to share knowledge and act together



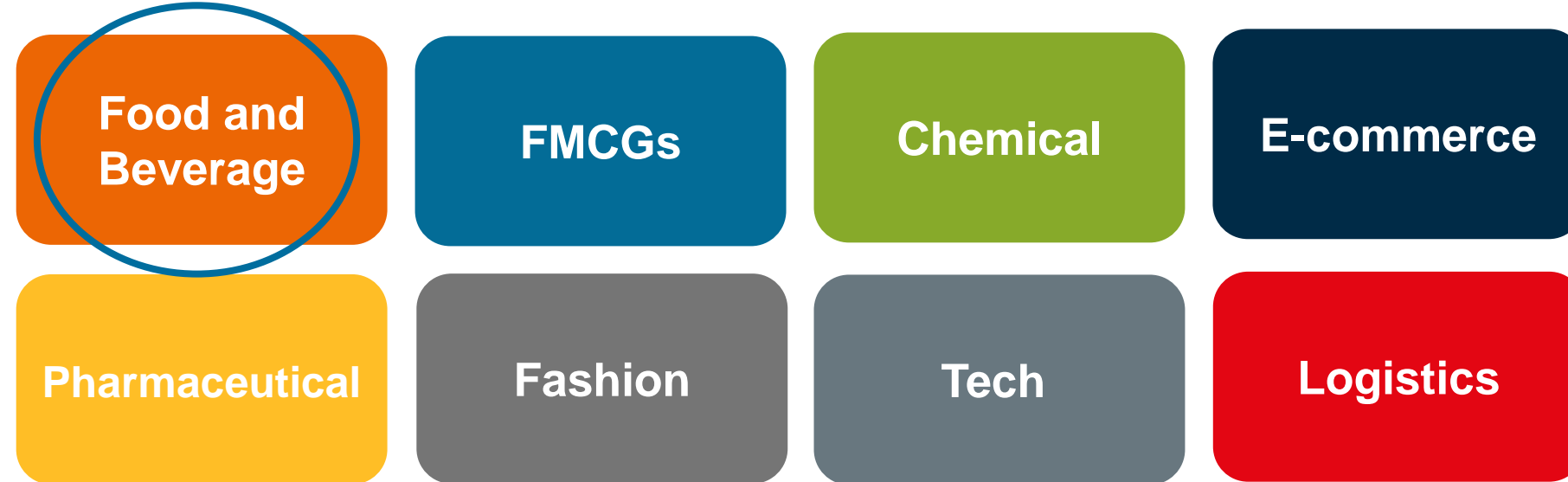
Educate, influence, and scale-up organizations
to allow the sector to accelerate decarbonization

SFC members

SFC has over 170+ members consisting of:



from a wide range of sectors these including:

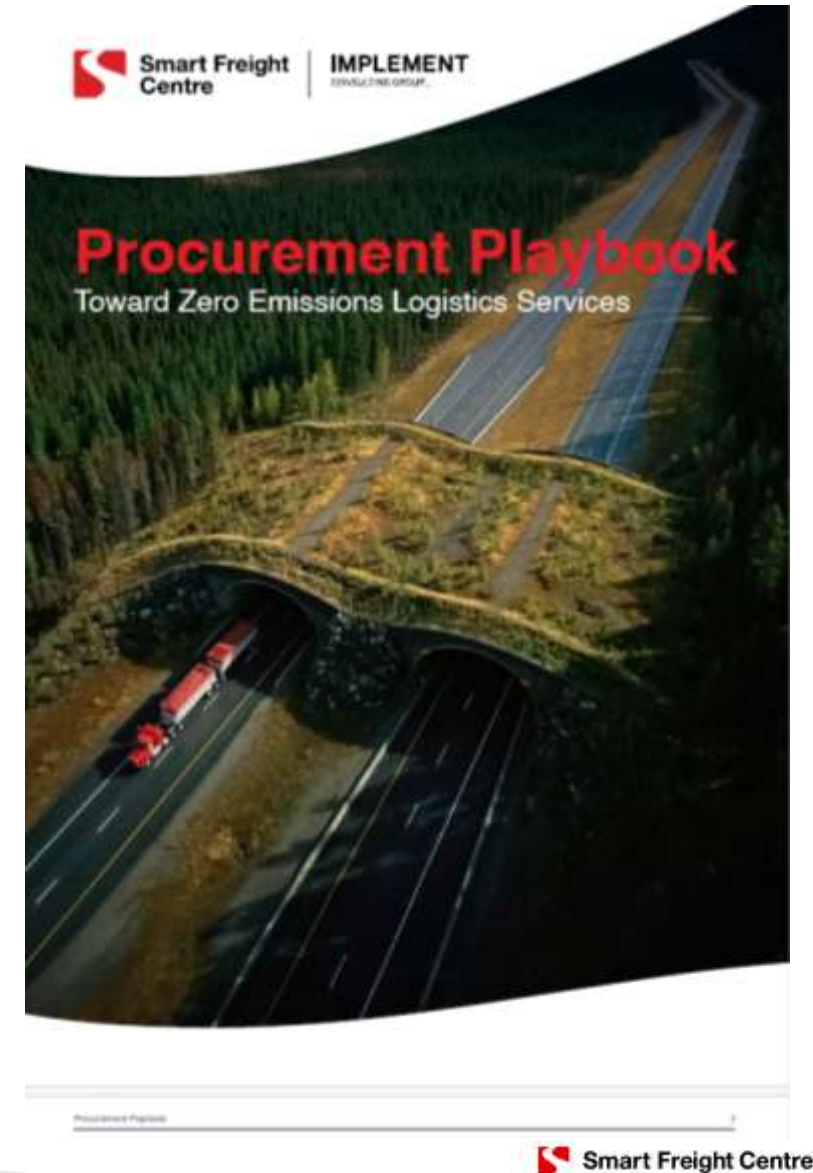


Requirements of Shippers (and Forwarders)

Procurement

Decarbonization Roadmaps

- What are you actually going to do and when?
- How are you going to involve your supply chain partners?
- What to include in your procurement process? (Standardization)
- Requirements for reporting



Reduce Transport Activity

t km / GDP

FREIGHT DEMAND
GROWTH IS
MANAGED



- Supply chain restructuring
- Localization and nearshoring
- 3D printing
- Dematerialization
- Consumer behavior

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Reduce Transport Activity

energy / t km

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TRANSPORT MODES ARE SMARTLY USED AND COMBINED



- Increased use of rail
- Increase use of short sea shipping and inland waterways
- Modular road transport
- Cargo bikes
- Multi-modal optimization
- Synchromodality

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Solutions exist that can reduce emissions >80% by 2050

t km / v km

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FLEETS AND ASSETS ARE SHARED AND USED TO THE MAX



- Load optimization
- Load consolidation and asset sharing
- Reduce empty moves
- Modular packaging and boxes
- Open transport networks and warehouses
- Increase storage density and energy efficiency

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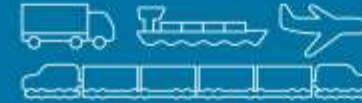
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FLEETS AND ASSETS ARE ENERGY EFFICIENT



- Cleaner and efficient technologies
- Efficient vehicles and vessels
- High capacity vessels, vehicles, duo-trailers
- Driving behavior
- Fleet operation
- Fleet maintenance

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CO₂e / energy

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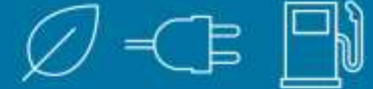
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FLEETS AND ASSETS USE LOWEST EMISSIONS ENERGY SOURCE FEASIBLE



- Electric / hybrids
- Solar / wind
- Biofuels
- Hydrogen
- CNG / bio-LNG
- Cleaner diesel
- Fuel management

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Focus on Low Emission Fuels

Need to look at the full fuel life-cycle “ Well-to-Wheel” emission factors

Fossil fuel WTT \approx 20-25% of tailpipe CO₂e emissions

Alternative options:

- LNG – theoretical benefits hard to achieve
- Bio-LNG (biomethane) beneficial, if you’ve already invested
- HVO: increasingly common drop in alternative
 - Good short-term savings (\approx 85%);
 - may become hard to get hold of
- Electrification?, E-fuels?

Requirements on Shippers (and Forwarders)

Emission Reporting

Legislation

- European and national commitments to reduce total GHG emissions
 - e.g. EU Fit for 55, CSRD, CountEmissions EU
- Policy packages to drive change
 - e.g. Renewable Energy Directive, Fuel.EU Maritime, Refuel Aviation, EU ETS expansion etc., CORSIA, IMO...
- All require calculation and reporting of GHG emissions

Voluntary reporting

- Driven by corporate policy, investors / financial institutions, societal pressure...
 - CDP
 - SBTi
 - GRI
 - etc.

GHG Standards Hierarchy

General GHG Accounting and Reporting Standards

GHG Protocol Standards:

- Corporate Reporting Standard
- Value Chain/Scope 3 Standard

ISO 14000 Series

- ISO 14040/ 14064
- ISO 14067

Transport-sector specific GHG Accounting and Reporting Guidance and Standards

GLEC Framework ← → ISO 14083



Example transport sub-sector GHG Accounting and Reporting Guidance Documents

e.g.
European chemical transport
Automotive logistics

Need to work with Corporate Finance and Financial Standards

Moves beyond corporate GHG reporting by, for example:



Rationalising investor-focused standards and frameworks



- European Sustainability Reporting Standards (ESRS)
- EFRAG (European PPP On Corporate Reporting)



Join our journey towards
efficient and zero emissions
global freight and logistics

