SCIENCE BASED TARGET-SETTING IN THE MARITIME TRANSPORT SECTOR

GUIDANCE LAUNCH WEBINAR

6 December 2022
VIDEO-CONFERENCE GUIDELINES

- This is a **zoom webinar**. Your camera and microphone are automatically muted.
- Participants can **send questions via the Q&A button**.
- **Slides from this webinar will be shared** after this meeting.
- Please note that this webinar will be **recorded** for the benefit of those who cannot attend.
AGENDA

1. Housekeeping and agenda
2. Introduction to the SBTi
3. The SBTi Maritime Guidance
   - Context
   - Development process, applicability and scenarios
   - Sector criteria and target boundaries
   - Examples
4. Q&A
5. Closing
TODAY'S WEBINAR TEAM

EMCEE

ZNIKO NHLAPHO
Engagement Manager
SBTi

PANELISTS

FERNANDO RANGEL VILLASANA
Head of Sector Development
SBTi

JEAN-MARC BONELLO
Principal Consultant
UMAS

ALAN LEWIS
Technical Director
SFC
INTRODUCTION TO THE SBTi

What is the Science Based Targets initiative?

The Science Based Targets initiative (SBTi) is a global body enabling businesses and financial institutions to set ambitious emissions reductions targets in line with climate science.
INTRODUCTION TO THE SBTi

Progress to date

2,019 companies with science-based targets

4,150+ companies taking action

1,537 net-zero commitments

To learn more about the progress of the initiative, consult the SBTi Progress Report 2021
Companies with science-based targets are delivering emissions reductions at scale

- Reduced emissions by **29%** between 2015-2020.
- **1.5B tonnes** of annual CO$_2$e emissions covered by the SBTi.
- **$38trn** of global market capitalization.
- **70 countries** and **15 industries**.

SBTi UPCOMING WORK

Cross-sector Standards
- MRV framework
- Financial Sector Net Zero

Cross-sector Guidance
- Beyond Value Chain Mitigation
- Scope 3 / Value Chain Alignment

Sector-specific Guidance

Energy
- Oil & Gas

Transport
- Power generation
- Shipping
- Aviation
- Transport

Industry
- Buildings
- Iron & Steel
- Chemicals

Land use
- Forest, Land and Agriculture (FLAG)

Others
- Apparel
- ICT
- Private Equity

FI
- Insurance underwriting
- Sovereign debt
- Securities underwriting

*Phase completed (WBCD aligned, Planned update to align to <1.5°C)
**Asset class alignment guidance / method
THE SBTi MARITIME GUIDANCE
THE CHALLENGE
Decarbonizing a critical link of global trade

- 80% of global trade by volume is carried by sea.
- 3% of global GHG emissions (~1GT of CO$_2$e).
- Completely reliant on fossil fuels.
- Highly heterogeneous (cargo categories, vessel types, vessel sizes, routes).
- Long asset replacement cycles.
INDUSTRY DEVELOPMENTS

Industry calls to action

Industry initiatives

COP27 Outcomes

- Green corridors development
- Repeated calls for 1.5 alignment/ambitions

Regulation

IMO

European Commission
WHAT DOES MARITIME TRANSPORT GUIDANCE COVER?

All movement of goods and people on shipping vessels

- Ship owners
- Ferry operators
- Commodity traders
- Consumer goods companies
- Cargo owners
- Charterers
- Cruise companies
- Commuters
- Logistics service providers
- Ship operators
- Other
- FIs portfolios, recreational, fishing not covered

A toolkit to measure carbon intensity of activity to inform decision-making around short-term actions towards a long-term goal
Development started with WWF, UMAS and Smart Freight Centre in June 2020

Setting up of Technical Working Group including industry & non industry stakeholders

Subsequent focus groups to field feedback and continuous engagement

First draft launch and public consultation in March 2021

SBTi approval and publication in November 2022
TECHNICAL GUIDANCE AND TOOL

SCIENCE BASED TARGET SETTING FOR THE MARITIME TRANSPORT SECTOR

Version 1.0
November 2022
PATHWAY DESIGN

Well Below 2°C

15°C

CARBON BUDGET

TRANSPORT WORK DEMAND

CARBON INTENSITY
CARBON BUDGET ALLOCATION - 1.5°C SCENARIO

- From IPCC: “In model pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO₂ emissions decline by about 45% from 2010 levels by 2030..., reaching net-zero around 2050...”.

- 2010 TtW levels from Third IMO GHG Study.

- Assumed equal fuel mix scenario from Lloyd’s Register and UMAS (2019) to get WtW emissions based on decarbonization in 2050.
● Well-to-Wake Emissions (Upstream + Operational).
● CO₂, N₂O, CH₄ (methane).
● IMO curve adapted to include WTT phase.
CARBON INTENSITY

- Metric: gCO\textsubscript{2}e / transport work.
CATEGORY SPECIFIC TARGET
Comparing apples with apples
EMISSIONS BOUNDARY

All targets must cover Well-to-Wake (WTW) emissions (in metric tonnes of CO$_2$ equivalent (CO$_2$e)).

WTW emissions are emissions generated across the life cycle of a fuel. They include both Well-to-Tank (WTT) emissions, generated in the fuel’s production and distribution, and Tank-to-Wake (TTW) emissions, generated in the combustion of the fuel.
## TARGET COVERAGE

<table>
<thead>
<tr>
<th>Type of shipping related emissions</th>
<th>WTW base year GHG emissions</th>
<th>Base year activity data*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vessel owners / operators</td>
<td>Passenger</td>
<td>Scope 1 Scope 3</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>Scope 1 Scope 3</td>
</tr>
<tr>
<td>Cargo shippers / Logistics Service Providers</td>
<td>Passenger</td>
<td>Scope 3 category 5 or 6</td>
</tr>
<tr>
<td></td>
<td>Freight</td>
<td>Scope 3 category 4 or 9</td>
</tr>
</tbody>
</table>

* Except cruises
SECTOR SPECIFIC REQUIREMENTS*

- For all companies, near-term target year must be **no earlier than 2030**.

  - Vessel owners or operators must also submit **long-term science-based targets** (net-zero targets) along with their near-term target submission.
  - For maritime transport emissions, a long-term science-based target means reducing emissions to a residual level **in line with 1.5°C scenarios** by no later than 2040.

* In addition to the SBTi general and Net-Zero criteria.
LIMITATIONS ON FOSSIL FUEL ACTIVITIES

- The SBTi Fossil Fuel Policy affects the extent to which companies engaging in fossil fuel businesses can commit to climate aligned targets.

- Currently the SBTi is unable to accept commitments or validate targets from companies in the oil and gas or fossil fuels sectors.

- Users of the SBTi Maritime Tool with activities related to transportation or extraction of fossil fuel products are advised to review the current status of this policy as well as the latest version of the SBTi Criteria.
WORKED EXAMPLES
EXCEL TOOL TO SUPPORT TARGET SETTING FOR THE MARITIME SECTOR

Calculates science-based targets for different vessel types and sizes following the SDA (convergence approach)

One interface for calculating SBTs for all maritime transport categories and one additional (non target setting) feature are included:

SBT tool

Vessel operators can model emission reduction targets for freight and passenger maritime transport activities. Shippers and Logistics Service Providers can also use this tool to model emission reduction targets for scope 3 category 4/9 emissions.

SBT aggregator

Additional feature to help companies combine targets across multiple maritime transport categories into a single metric.
CONTAINER SHIPPER, DEFAULT

Sectoral Decarbonization Approach - Maritime Transport Tool

Section 1. Select type of vessel used for transport activity

Choose vessel type from drop-down

Section 2. Select vessel size category

Choose vessel size or default

Section 3. Enter emissions and activity data

Input data associated with base year

State projected activity in target year

Select a base year: 2021
Select a target year: 2033

Well-to-Wake (WTW) emissions in base year: 1,750,000 metric tonnes of CO2 equivalent (tCO2e)
Activity in base year: 168,888,488,121 tonne-nautical mile (t nm)
Expected activity in target year: 236,457,863,369 tonne-nautical mile (t nm)
CONTAINER SHIPPER, DEFAULT

Section 4. Review target modelling results

Target modelling results - 1.5C

<table>
<thead>
<tr>
<th>Container Default</th>
<th>WTW emissions</th>
<th>tCO2e</th>
<th>Base year 2021</th>
<th>Target year 2033</th>
<th>% Reduction 2021 - 2033</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,750,000</td>
<td>643,348</td>
<td>63.2%</td>
</tr>
<tr>
<td></td>
<td>WTW carbon intensity</td>
<td>gCO2/t nm</td>
<td>10.36</td>
<td>2.72</td>
<td>73.7%</td>
</tr>
</tbody>
</table>

Convergence
CONTAINER OPERATOR

Sectoral Decarbonization Approach - Maritime Transport Tool

Section 1. Select type of vessel used for transport activity

- Container

Please select vessel type for transport activity

Section 2. Select vessel size category

- (TEU) 8,000 - 11,999

Please refer to guidance document for details

Section 3. Enter emissions and activity data

- Select a base year: 2021
- Any base year between 2018 and the current year is eligible

- Select a target year: 2033
- Near-term targets must cover a maximum of 10 years from the date the target is submitted to the SBTi for validation

- Well-to-Wake (WTW) emissions in base year: 171,058 metric tonnes of CO2 equivalent (tCO2e)

- Activity in base year: 10,891,144,708 tonne-nautical mile (tnm)

- Expected activity in target year: 12,829,373,650 tonne-nautical mile (tnm)

Operator selects relevant size categories and enters one by one
Section 4. Review target modelling results

Table: Target modelling results - 1.5C

<table>
<thead>
<tr>
<th>Container (TEU) 8,000 - 11,999</th>
<th>WTW emissions</th>
<th>tCO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base year 2021</td>
<td>171,058</td>
<td></td>
</tr>
<tr>
<td>Target year 2033</td>
<td>61,787</td>
<td></td>
</tr>
<tr>
<td>% Reduction 2021 - 2033</td>
<td>63.9%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Container (TEU) 8,000 - 11,999</th>
<th>WTW carbon intensity</th>
<th>gCO2t/ton nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base year 2021</td>
<td>16.00</td>
<td></td>
</tr>
<tr>
<td>Target year 2033</td>
<td>4.82</td>
<td></td>
</tr>
<tr>
<td>% Reduction 2021 - 2033</td>
<td>69.9%</td>
<td></td>
</tr>
</tbody>
</table>

Results calculated for each size category
### Optional - Target aggregation sheet

**Step 1:** List the vessel type, size, base year emissions (WTW), activity, and target year activity in columns D, E, G, H, and J for each different vessel type or size category for which targets are to be calculated.

**Step 2:** Calculate the targets for each different vessel type or size category using the "Tool" tab.

**Step 3:** Input the results calculated in step 2 into columns L through T of the SBTggregator tab. The aggregated results and prorated reduction target are shown in at the bottom of row of this table. Please note that only intensity targets with the same activity denominators (i.e., unit) can be aggregated.

<table>
<thead>
<tr>
<th>Vessel type</th>
<th>Vessel size</th>
<th>Emissions and activity data (as entered in tool interface)</th>
<th>Base year</th>
<th>WTW carbon intensity (gCO2e/Lnm or gCO2e/GTnm)</th>
<th>Target year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>WTW emissions (tCO2e)</td>
<td>Activity (Lnm or GTnm)</td>
<td>Activity (Lnm or GTnm)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Container</td>
<td>(TEU) ≥20,000</td>
<td>700.259</td>
<td>86,393,806,553</td>
<td>6.90</td>
</tr>
<tr>
<td>2</td>
<td>Container</td>
<td>(TEU) 14,000 - 19,999</td>
<td>449.028</td>
<td>45,365,371,490</td>
<td>9.90</td>
</tr>
<tr>
<td>3</td>
<td>Container</td>
<td>(TEU) 12,000 - 14,499</td>
<td>309.654</td>
<td>26,457,883,369</td>
<td>13.97</td>
</tr>
<tr>
<td>4</td>
<td>Container</td>
<td>(TEU) 6,000 - 11,999</td>
<td>171.058</td>
<td>10,891,144,706</td>
<td>16.00</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Combined results</strong></td>
<td></td>
<td></td>
<td>1,750,000</td>
<td>168,898,488,121</td>
<td>10.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Target modelling results - 1.5C</td>
<td>Base year</td>
<td>WTW carbon intensity (gCO2e/Lnm or gCO2e/GTnm)</td>
<td>Target year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WTW emissions (tCO2e)</td>
<td>Activity (Lnm or GTnm)</td>
<td>Activity (Lnm or GTnm)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>360.470</td>
<td>59.4%</td>
<td>2.55</td>
<td>71%</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>175.797</td>
<td>90.9%</td>
<td>2.98</td>
<td>70%</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>144.647</td>
<td>60.0%</td>
<td>4.21</td>
<td>70%</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>61.767</td>
<td>63.5%</td>
<td>4.32</td>
<td>70%</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Combined results</strong></td>
<td></td>
<td></td>
<td>690,611</td>
<td>60.3%</td>
<td>3.07</td>
</tr>
</tbody>
</table>
FERRY OPERATOR

Sectoral Decarbonization Approach - Maritime Transport Tool

Section 1. Select type of vessel used for transport activity

Ferry Passenger Only

Section 2. Select vessel size category

(GT) 1,000 - 1,999

Section 3. Enter emissions and activity data

Select a base year: 2022
Select a target year: 2033

Well-to-Wake (WTW) emissions in base year: 100,000 metric tonnes of CO2 equivalent (tCO2e)
Activity in base year: 1,000,000,000 gross tonne nautical miles (GT nm)
Expected activity in target year: 1,300,000,000 gross tonne nautical miles (GT nm)

Size categories expressed in GT
Section 4. Review target modelling results

Target modelling results - 1.5C

<table>
<thead>
<tr>
<th></th>
<th>Base year 2022</th>
<th>Target year 2033</th>
<th>% Reduction 2022 - 2033</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferry Passenger Only (GT) 1,000 - 1,999 WTW emissions</td>
<td>100,000</td>
<td>40,519</td>
<td>59.5%</td>
</tr>
<tr>
<td>Ferry Passenger Only (GT) 1,000 - 1,999 WTW carbon intensity gCO2e/GT nm</td>
<td>100.00</td>
<td>31.17</td>
<td>68.8%</td>
</tr>
</tbody>
</table>

[Graph showing emissions and carbon intensity over time with target emissions and intensity marked for 2033.]
Section 4. Review target modelling results

Target modelling results - 1.5C

<table>
<thead>
<tr>
<th></th>
<th>Base year 2022</th>
<th>Target year 2033</th>
<th>% Reduction 2022 - 2033</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferry Passenger Only (GT) 1,000 - 1,999</td>
<td>100,000</td>
<td>40,830</td>
<td>59.2%</td>
</tr>
<tr>
<td>Ferry Passenger Only (GT) 1,000 - 1,999</td>
<td>100.00</td>
<td>25.52</td>
<td>74.5%</td>
</tr>
</tbody>
</table>

Business growth / increase in activity share requires more ambitious targets.
CLOSING
THE TIME TO ACT IS NOW!

- In January 2023 we will start with a series of training webinars. Join our mailing list to receive updates.
- Should you have any questions, contact us at info@sciencebasedtargets.org.
- The new guidance and materials, as well as the recording of this webinar can be found on the NEW SBTi maritime webpage.
- We are urgently calling on all companies to set science-based net-zero targets.