Smart Freight Centre

19/03/2026

Future of the GLEC Framework



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Smart Freight Centre Introduction

- **We guide** the global logistics industry to track and reduce its GHG emissions to reach zero emissions consistent with 1.5º pathways
- **We are** an international non-profit organization focused on reducing greenhouse gas emission from freight transportation
- **We collaborate** with our global partners to quantify impacts, identify solutions, and propagate logistics decarbonization strategies



by **2030**



by **2050**

or earlier!

ISO 14083 / GLEC Framework

- The only globally recognized international and industry standards to **calculate** and **report** GHG emissions consistently across the multi-modal logistics supply chain.

Recognized by

BUILT ON GHG PROTOCOL

CDP DISCLOSURE INSIGHT ACTION

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

A basis for ISO standard

ISO

Member Users

200+
Multinationals

50+
Programs, tools, initiatives



Watch 3-min video

Download The GLEC Framework

Smart Freight Centre Academy

Building blocks towards **sustainable logistics**

1 Report and calculate credible emissions across the multi-modal supply chain



Where are we now?

2 Set targets for emission reduction that are science-based



Where are we going?

3 Reduce emissions by implementing solutions as buyer or supplier



How do we get there?

4 Collaborate and advocate for sector-wide action and supportive policy



What do we need?

What's new in GLEC Framework v3.3

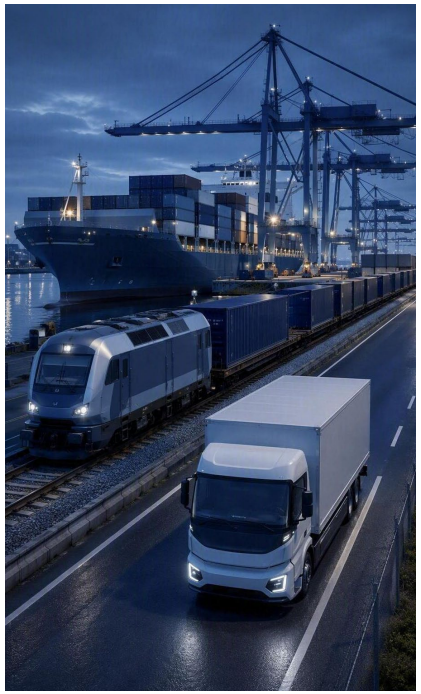
General highlights

Default values (Data Section 3)

- Updated default values in the Data Section 3
- Clean Cargo and Air emission intensity value with methodology update.
- EV guidance update
- Expansion on Indian specific values
- Inclusion of GRC emission intensity values
- Updated calculation example (Module 4)

Sectoral guidance (annex)

- Updating annex: Chemical guidance;
- New annex: Post and Parcel guidance



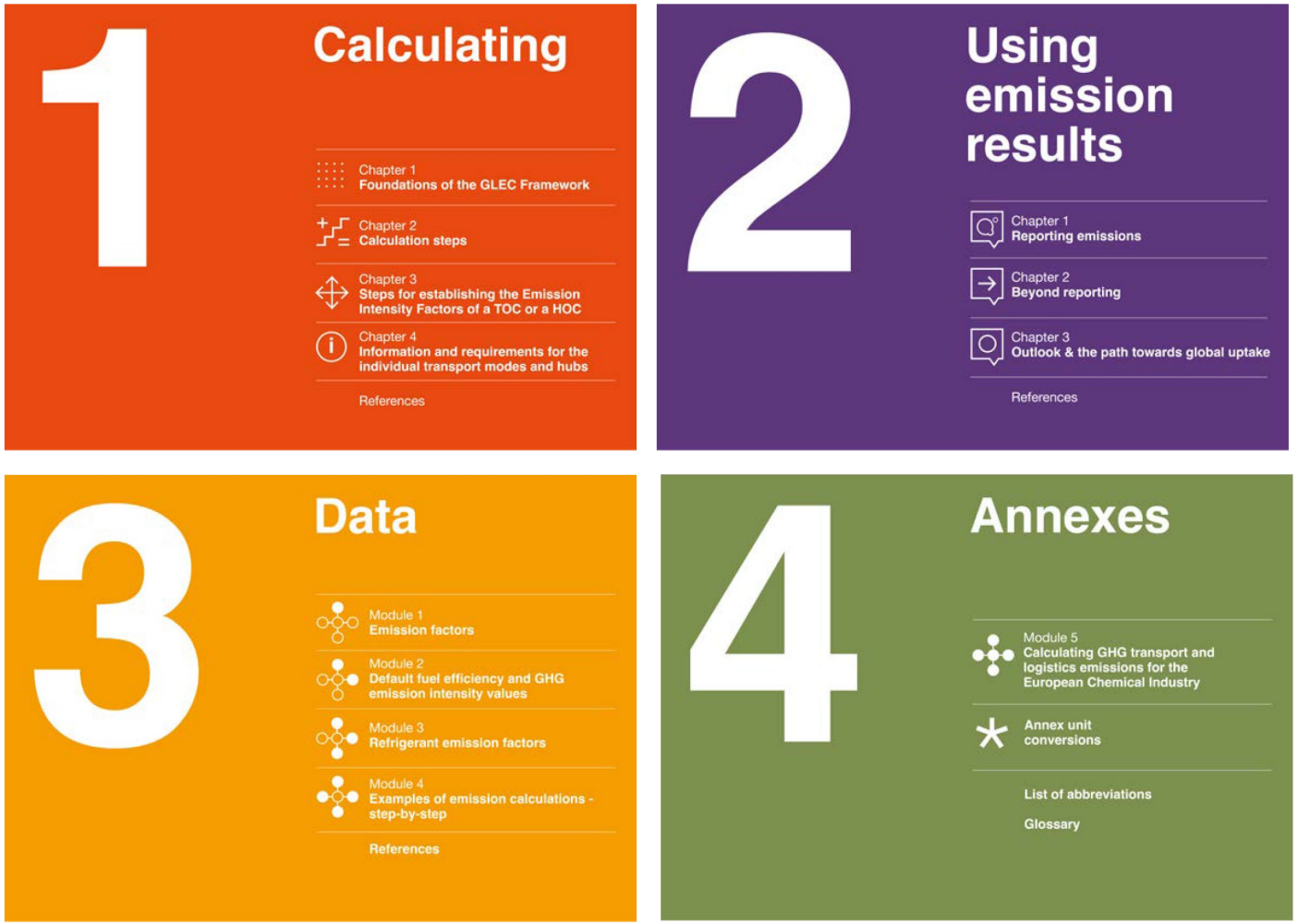
Implement the v3.3 with your 2027 inventory

While being published at the end of 2026, we are only expecting GLEC FW users to implement the new default values in their 2027 inventory. Application on 2026 inventory is encouraged, but not necessary.

Structure of the GLEC Framework V3

In this workshop we will focus on Chapter 1 of the GLEC Framework:

Chapter 1 - Foundations of the GLEC Framework



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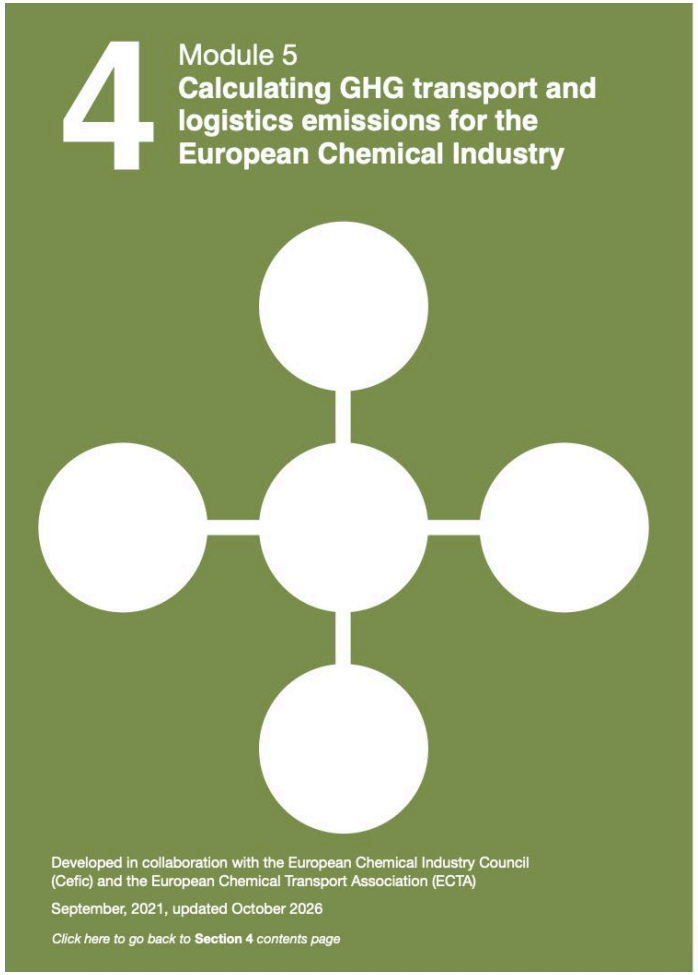
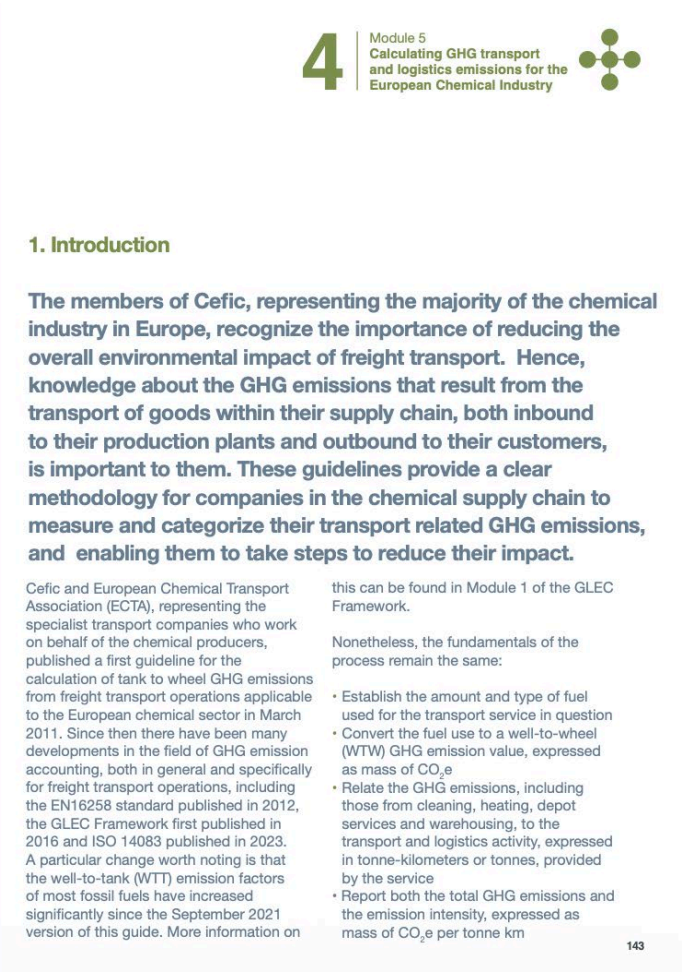
Chemical Sector Guidance





4 Module 5
Calculating GHG transport and logistics emissions for the European Chemical Industry

1. Introduction

The members of Cefic, representing the majority of the chemical industry in Europe, recognize the importance of reducing the overall environmental impact of freight transport. Hence, knowledge about the GHG emissions that result from the transport of goods within their supply chain, both inbound to their production plants and outbound to their customers, is important to them. These guidelines provide a clear methodology for companies in the chemical supply chain to measure and categorize their transport related GHG emissions, and enabling them to take steps to reduce their impact.

Cefic and European Chemical Transport Association (ECTA), representing the specialist transport companies who work on behalf of the chemical producers, published a first guideline for the calculation of tank to wheel GHG emissions from freight transport operations applicable to the European chemical sector in March 2011. Since then there have been many developments in the field of GHG emission accounting, both in general and specifically for freight transport operations, including the EN16258 standard published in 2012, the GLEC Framework first published in 2016 and ISO 14083 published in 2023. A particular change worth noting is that the well-to-tank (WTT) emission factors of most fossil fuels have increased significantly since the September 2021 version of this guide. More information on this can be found in Module 1 of the GLEC Framework.

Nonetheless, the fundamentals of the process remain the same:

- Establish the amount and type of fuel used for the transport service in question
- Convert the fuel use to a well-to-wheel (WTW) GHG emission value, expressed as mass of CO_2e
- Relate the GHG emissions, including those from cleaning, heating, depot services and warehousing, to the transport and logistics activity, expressed in tonne-kilometers or tonnes, provided by the service
- Report both the total GHG emissions and the emission intensity, expressed as mass of CO_2e per tonne km

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Chemical Sector Emission Intensity values

Table 3
Road transport TOC characteristics

Transport operation category		Empty running (% of total distance)	Typical load (tonnes)	Emission intensity (g CO_2e/t-km)		
				WTT	TTW	WTW
Level 1						
	Overall sector average	22	18	21	64	85
Packed goods – Level 2						
	Average, ambient	22	15	24	74	98
	Average, temperature controlled	22	15	27	83	110
Packed goods – Level 3						
FTL	Ambient	22	21	19	57	76
	Temperature controlled	22	21	21	64	85
Partial load	Ambient	22	8	41	125	165
	Temperature controlled	22	8	46	139	185
Groupage	Ambient	17	15	23	70	93
	Temperature controlled	17	15	26	78	105
Bulk goods – Level 2						
	Average, ambient	22	22	18	56	74
	Average, temperature controlled	22	22	20	63	83
Bulk goods – Level 3						
Tank truck	Ambient	19	21	18	56	74
	Temperature controlled	19	21	20	62	83
	Dedicated, ambient	50	21	27	80	107
	Dedicated, temperature controlled	50	21	30	90	120
Hopper/silo	Ambient	22	26	16	50	66
	Temperature controlled	22	26	18	56	74
	Dedicated, ambient	50	26	22	68	90
	Dedicated, temperature controlled	50	26	25	76	101
Tank container	Ambient	19	24	17	51	68
	Temperature controlled	19	24	19	57	76
	Dedicated, ambient	50	24	24	73	96
	Dedicated, temperature controlled	50	24	27	82	108

Bulk goods – Level 2						
	Average, ambient	22	22	18	56	74
	Average, temperature controlled	22	22	20	63	83
Bulk goods – Level 3						
Tank truck	Ambient	19	21	18	56	74
	Temperature controlled	19	21	20	62	83
	Dedicated, ambient	50	21	27	80	107
	Dedicated, temperature controlled	50	21	30	90	120
Hopper/silo	Ambient	22	26	16	50	66
	Temperature controlled	22	26	18	56	74
	Dedicated, ambient	50	26	22	68	90
	Dedicated, temperature controlled	50	26	25	76	101
Tank container	Ambient	19	24	17	51	68
	Temperature controlled	19	24	19	57	76
	Dedicated, ambient	50	24	24	73	96
	Dedicated, temperature controlled	50	24	27	82	108

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More to discuss? Feel free to send an email to
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