Webinar

'EN ISO 14083 - GHG emissions accounting for transport operations'

in the context of new Commission's proposal CountEmissions and other relevant EU legislation.

We start at 13:00 CET

Webinar moderator

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Get the most out of the webinar today

- You are muted
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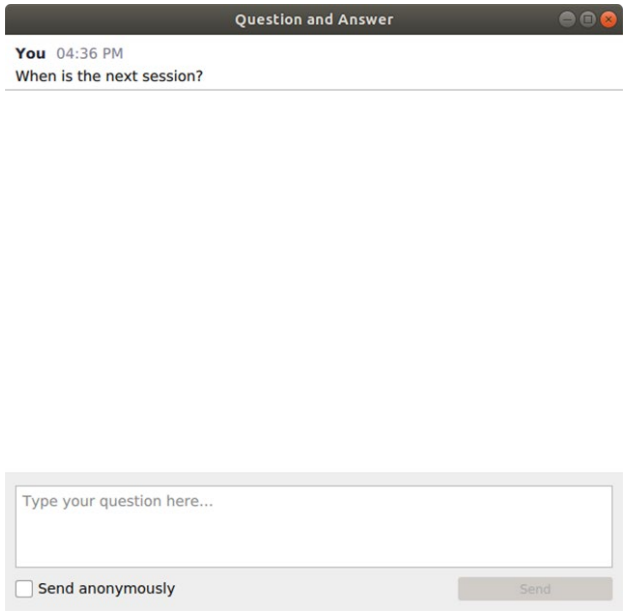

- Talk about us on Twitter #training4standards @Standards4EU

Your speakers

- Christina THORNGREEN, Project Manager at CEN and CENELEC
- Alan LEWIS, Chief Technical Officer at Smart Freight Centre (SFC)
- Niccolò PIERI, Policy Officer, European Commission, Directorate-General for Mobility and Transport (DG MOVE)

Introduction

Christina THORNGREEN
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European Standardization Organizations

CEN - European Committee for Standardization

CENELEC - European Committee for Electrotechnical Standardization

ETSI - European Telecommunications Standards Institute

→ Recognized by European law (EU Regulation 1025/2012)

Standardization happens at different levels

- Aim: identical standards in Europe and worldwide

National

European

International

CEN and CENELEC deliverables

European Standards (EN)

Prime deliverable by excellence

Technical Specifications (TS)

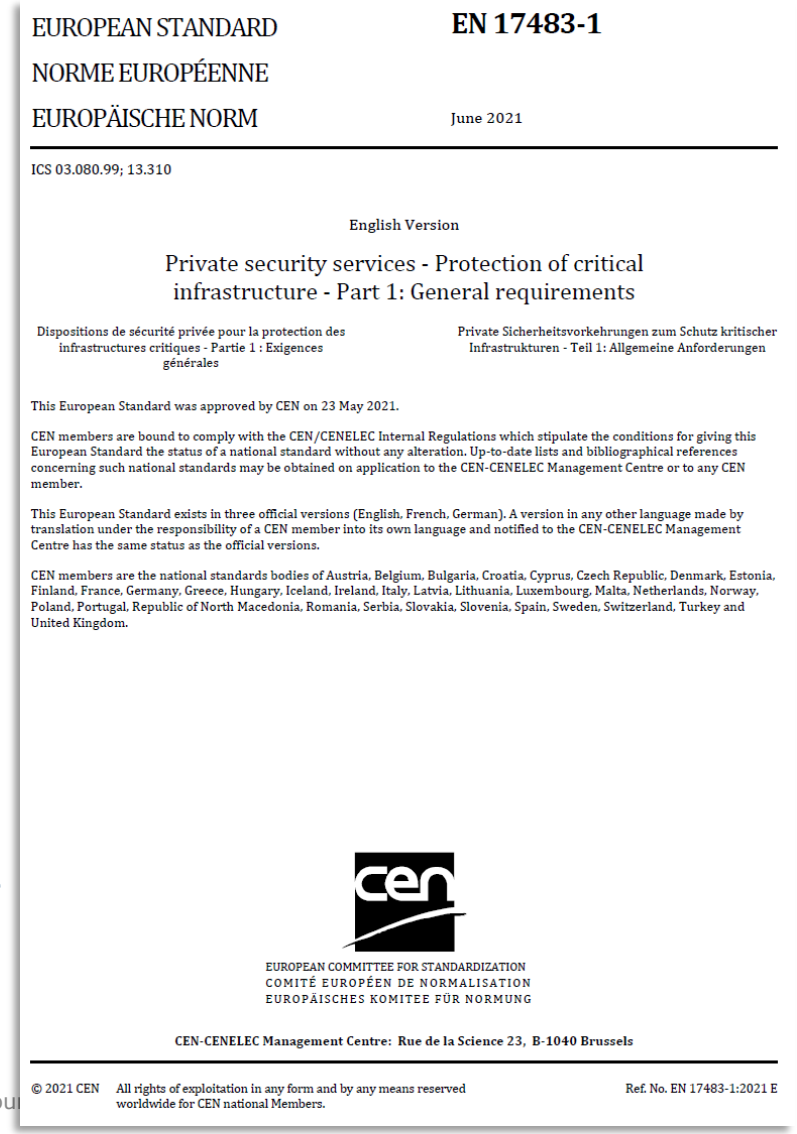
Pre-standard

Technical Reports (TR)

Informative document / Guide

Workshop Agreements (CWA)

Document, developed by a Workshop, which reflects an agreement between identified individuals and organizations responsible for its contents



EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 17483-1

June 2021

ICS 03.080.99; 13.310

English Version

Private security services - Protection of critical infrastructure - Part 1: General requirements

Dispositions de sécurité privée pour la protection des infrastructures critiques - Partie 1 : Exigences générales

Private Sicherheitsvorkehrungen zum Schutz kritischer Infrastrukturen - Teil 1: Allgemeine Anforderungen

This European Standard was approved by CEN on 23 May 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

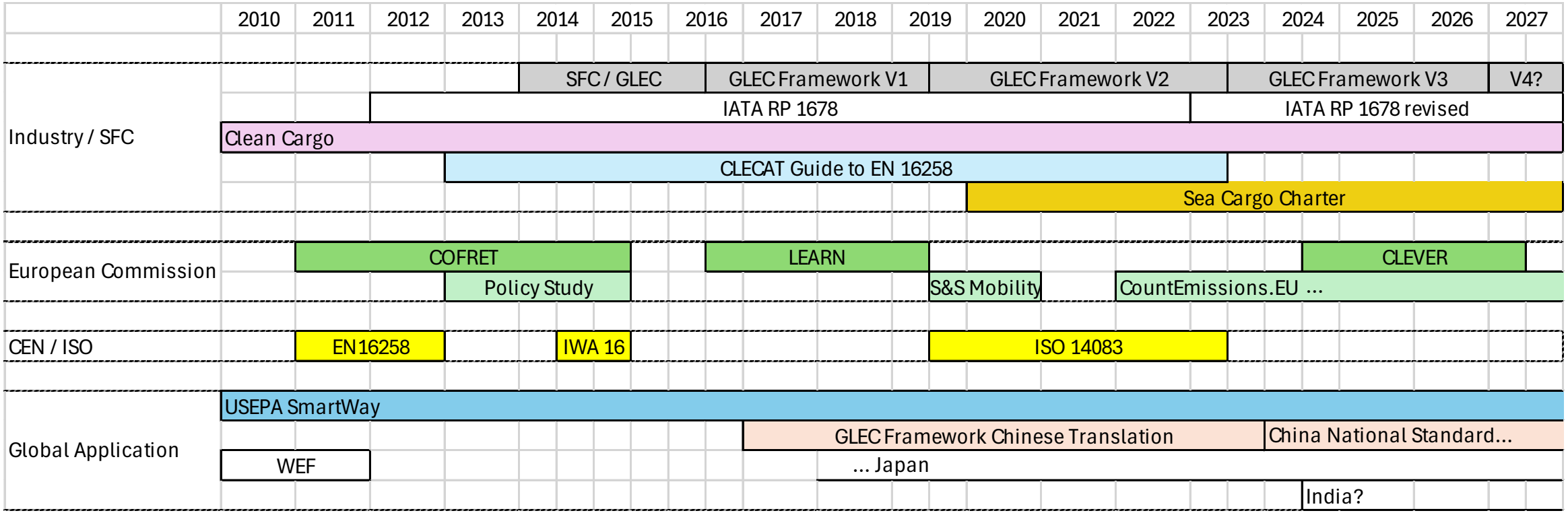
EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN 17483-1:2021 E

Methodology Development Timeline

by Alan LEWIS, Chief Technical Officer at Smart Freight Centre (SFC) and Project Leader of EN ISO 14083:2023



Methodology Development Timeline

2016 - 2022

GLEC was the only **globally recognized methodology** to calculate GHG emissions consistently across the **multi-modal logistics supply chain**

Recognized by

Used by

150+ Multinationals

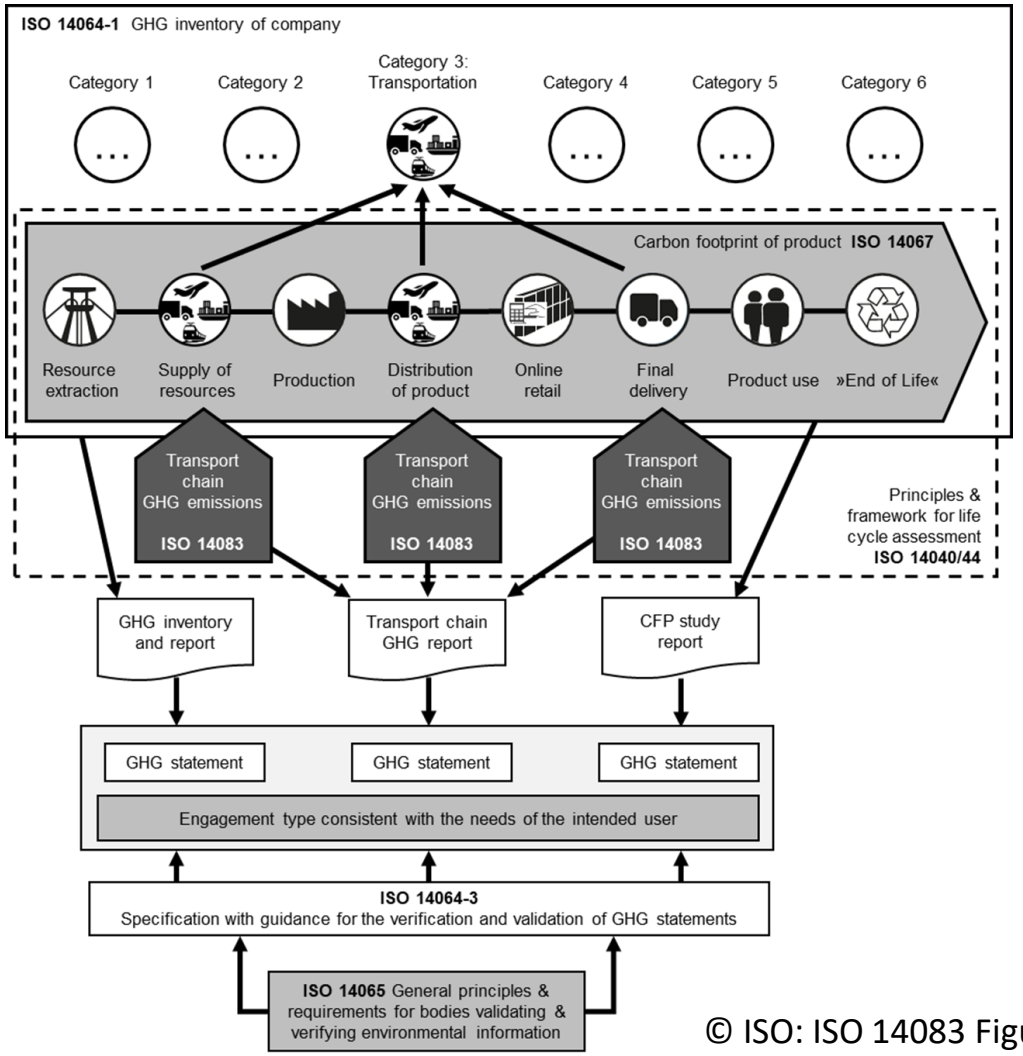
20+ Programs, tools, initiatives

2023 onwards

ISO 14083 was published in March 2023 and is **based on the GLEC Framework** to enable a tighter application structure.

EN ISO 14083: Background

- Objectives:
  - To provide an overdue update to EN 16258
  - To expand the official standard reference to a global perspective
  - To embed the principles and default factors of the GLEC Framework into the ISO 140xx family
  - To have an official reference point, with tight application structure, to ensure industry, governments and investors have a single methodology, consistent with GLEC Framework
  - Provide the opportunity for passenger transport sector to step up with a companion implementation guideline (similar to the GLEC Framework)



© ISO: ISO 14083 Figure 3

EN ISO 14083: What has been delivered?

- Title:
  - Greenhouse gases - Quantification and reporting of greenhouse gas emissions arising from transport chain operations
- Scope:
  - A common **methodology** for the quantification and reporting of **GHG emissions** arising from the operations of **transport chains** of **passengers and freight**, including hub operations
  - Does not include its own verification guideline
- Existing EN 16258 withdrawn and replaced by EN ISO 14083

EN ISO 14083: Scope, Boundary & principles

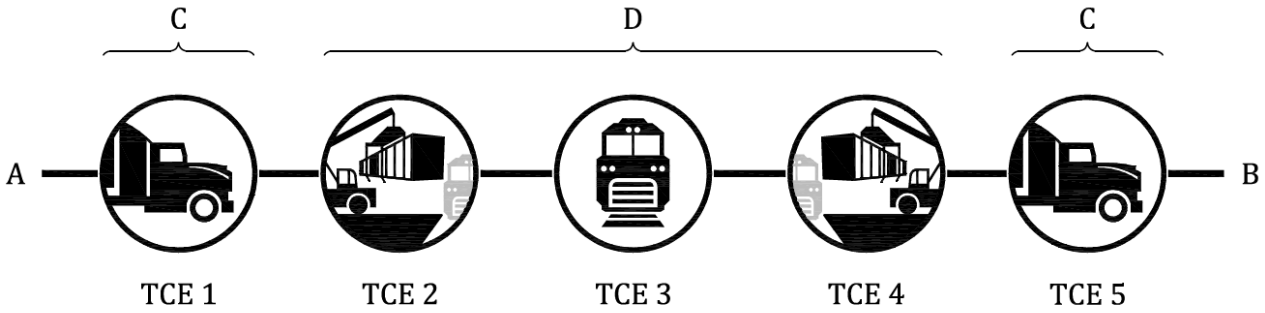
- Based on existing standards and established industry practice, including EN 16258 & GLEC Framework
- Full fuel cycle approach
- All UNFCCC GHGs: CO_2, CH_4, N_2O, NF_3 SF_6 PFCs & HFCs, but not black carbon or high-altitude emissions (yet)
- Transport chain operations only, no maintenance, storage, vehicle production, scrappage, infrastructure or overheads
- Does include repositioning, handling and transfer equipment and auxiliary engines
- Allocation by mass, well-established alternatives (passengers, containers, parcels) accepted in specific circumstances
- Excludes carbon offsets
- Signals direction for more complete climate assessment of transport operations

EN ISO 14083: What's new?

- Modes:
  - Pipelines & cable cars
- Terminology:
  - TOC (TSC), Hubs, Data types, Energy lifecycle: Energy Provision and Operation
- Equations!
  - More rigor in approach to allocation between different cargo types & passenger vs freight
- High-level emission factor methodology
  - Include construction and dismantling of energy infrastructure
- Emission factors (informative):
  - Newer & wider range of sources that EN16258 & GLEC F/w v2
  - Wider range of main energy carriers covered
  - But… EN ISO 14083 EFs are already outdated due to updated inputs

EN ISO 14083: System Approach

▶Focus is the Transport Chain



Key

A freight consignor
B freight consignee
C road services
D rail freight service

© ISO: ISO 14083 Figure 1

EN ISO 14083: System Approach

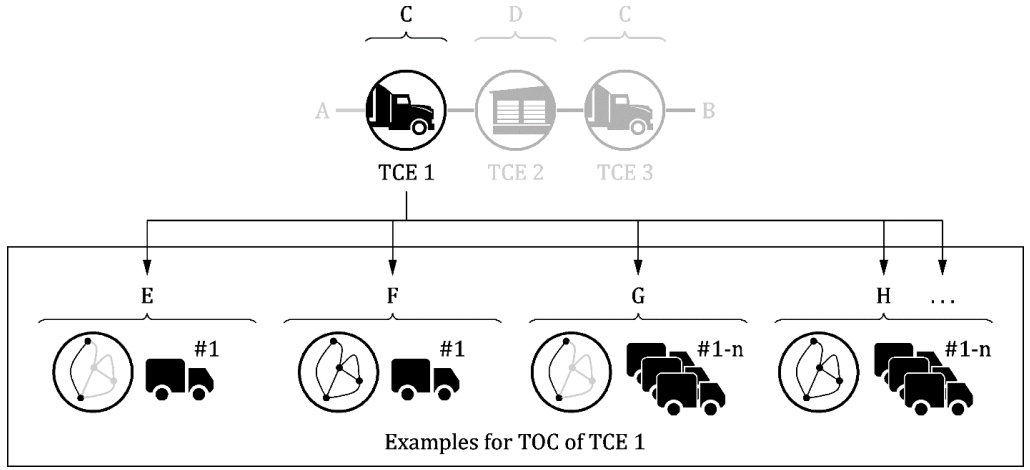
- Critical Concept – the TOC
- Transport Operation Category (TOC) provides the context for each movement of each consignment.
- Definition:
  - "A group of transport operations that share similar characteristics"

EN ISO 14083: System Approach

- Critical Concept – the TOC
- Transport Operation Category (TOC) provides the context for each movement of each consignment.
- Vehicle movements don’t happen in isolation:
  - Consignments for multiple customers
  - Clients with multiple carriers
  - Multiple vehicles at a depot
  - Multi-drop vs trunking
  - Specific handling requirements

EN ISO 14083: System Approach

- Linking TCEs and TOCs
- Decide between customer and operator how best to define the transport operation – this defines what's included (the level of data aggregation you'll work with) e.g.:
  - All vehicles of a specific class in a fleet if they share similar (or identical) characteristics on all routes operated
  - All vehicles of a specific class in a fleet if they share similar (or identical) characteristics only on routes operated for you
  - An individual vehicle within a specific network
  - An individual vehicle on a specific route – outbound and return



© ISO
ISO 14083 Figure 6

EN ISO 14083: Calculating for the TOC

- Make sure you include emissions associated with relevant empty mileage
  - Within a system approach the emissions associated with empty mileage are factored in as an overall average across the constituent trips
- Include emissions from ancillary equipment and refrigerant losses
  - Is ancillary fuel / energy on the same system?
  - Refrigerant losses only apply to some TOCs and likely to be only known over a long period → average additional value per tkm

EN ISO 14083: Reporting Requirements

- Two options
  - Supported by explanation of boundaries, deviations, exclusions and data type used

- Service Level
  - Total GHG emissions (WTW)
  - Overall GHG emission intensity (per tkm*)
  - Transport activity (tkm*)
  - Hub activity (t*)
  - Operational GHG emissions (TTW)
  - Operational GHG emission intensity (per tkm)
  - For multimodal transport service:
    - Total emissions & either transport activity or emission intensity for each mode
  - Reporting period is flexible

- Organizational Level
  - Total GHG emissions
  - Total GHG emissions per mode
  - Overall GHG emission intensity (per tkm* or per t*)
  - GHG emission intensity per mode
  - Total GHG emissions =
    - Energy provision + operational emissions (WTW)
    - Optional to report operational (TTW) separately
  - Default reporting period: annual
    - Shorter periods are allowed in addition

- * Other options possible in specific circumstances

Emission Factors

- Currently no standard for production of Emission Factors…
- … yet they are an input to every transport GHG calculation

- ‘CLEVER’ project (Creating Legitimate Emission Factors for Verified GHG Emission Reductions in Transport)
- 3-year project funded under HORIZON-CL5-2023-D6-01-08: “Future-proof GHG and environmental emissions factors for accounting emissions from transport and logistics operations”
- Expected to inform CountEmissions.EU implementation
- Aspirations towards more detailed international standardization
- Kick-off 1 June 2024
- Expert Forum an important part of the project
- If you think you have something specific to contribute and you haven’t heard about this before then please get in touch!

SUSTAINABLE & SMART
MOBILITY STRATEGY

CountEmissions EU: basic facts

by Niccolò PIERI

Policy Officer European Commission

Directorate-General for Mobility and Transport (DG MOVE)

European Commission | Mobility and Transport

CountEmissions EU: basic facts

- **Full title:** Proposal for a Regulation of the European Parliament and of the Council on the accounting of greenhouse gas emissions of transport services
- **Lead service:** MOVE – Maritime Transport and Logistics Unit (D1)
- **Type of initiative:** Legislative instrument – regulation
- **Impact assessment:** 2022 – 2023; supported by an external study by ECORYS, CE DELFT, TNO, prof. Alan McKinnon
- **Adoption by COM:** 11 July 2023
- **CL General Approach:** 4 December 2023
- **EP vote:** Plenary of 4 April 2024
- **Purpose:** To provide a harmonised framework for calculating GHG emissions of transport operations in the freight and passenger transport sector

Part of the Greening Freight package

- Focus on **improving sustainability and operational efficiency** of European freight transport – both at the **modal** and the **system** level
- Not a stand-alone package: **builds on initiatives already put forward** (Fit for 55, Efficient and Green Mobility Package, etc.).

Chapeau Communication

Rail Capacity Regulation
Adopted by COM

Weights and Dimensions Directive
Adopted by COM

CountEmissions EU
Adopted by COM

Revision of the Combined Transport Directive
Adopted by COM

Policy context

2011 White Paper on Transport	• Initiative No 29: harmonising carbon footprint practices and methodologies
2020 Sustainable and Smart Mobility Strategy	• Flagship 5, Action 33: EU framework for harmonised measurement of transport and logistics emissions
2021 Letter of Intent to the European Parliament	• Legislative proposal on an EU framework for harmonised measurement of transport and logistics emissions scheduled under the European Green Deal
Commission Work Programme 2022	• EU framework for harmonised measurement of transport and logistics emissions

Building on the legacy

- 2012 CEN EN16258: the methodology for calculation and declaration of energy consumption and GHG emissions of transport services
- 2011 - 2014 COFRET FP-7 EU project: inventory, review and gap analysis of existing carbon footprint methodologies
- 2013 - 2014 EC study: state of the art in the field of carbon accounting and preliminary set of possible policy options
- 2014 - ….. GLEC: industry platform for a global methodology for calculating freight emissions in the multi-modal supply chains
- 2016 - 2019 LEARN H2020 EU project: technical aspects and policy recommendations for the GHG accounting
- (EN) ISO 14083: 2023 Quantification and reporting of greenhouse gas emissions arising from operations of transport chains

Context

To provide **a common framework** for calculating GHG emissions of transport operations in the freight and passenger transport sector

- Multimodal door-to-door transport chain
- Individual transport and hub operations
- Freight and passenger
- No mandatory reporting

Objectives

General objective:	• Incentivise **behavioural change** among businesses and customers to reduce GHG emissions from transport services through the uptake and use of comparable and reliable GHG emissions data;
Specific objectives:	• Ensure the **comparability of results** from GHG emissions accounting of transport services; • Facilitate the **uptake of GHG emissions accounting** of transport services in business practice.

What we propose

Policy area	Specific provisions
Applicability	Article 2: Binding opt-in application of CountEmissions EU in the transport sector
Methodology	Article 4: ISO 14083 is set as common reference methodology at EU level
Input data	Articles 5 - 8: The use of primary data is recognized; centralised databases for default values for GHG emission intensity and GHG energy emission factors are established at EU level. Quality assurance of external databases of GHG emissions intensity, operated by third parties is provided at EU level (by European Environment Agency). Modelled data is used in conformity with the reference methodology;
Harmonised emissions output data and transparency	Articles 9 and 10: Minimum requirements for harmonised GHG output data metrics are provided at EU level, together with common rules on communication and transparency;
Sectorial implementation support	Horizontal guidelines for the harmonised implementation of CountEmissions EU in various sectors and segments of the transport market are provided at EU level;
Complementary measures	Article 11: Emissions calculation tools are provided by the market but they are certified at EU level;
Conformity	Articles 12 and 13: Mandatory process and data verification for entities above a certain size falling under the scope of CountEmissions EU is established at EU level

Scope and application: Article 2

- **Binding opt-in**: applies to any entity providing or organising freight and passenger services in the Union that **calculates greenhouse gas emissions of a transport service** starting or ending on the Union territory and **discloses disaggregated information** on those emissions to any third party **for commercial or regulatory purposes.**

Reference methodology: Article 4

- Methodology provided by **EN ISO 14083:2023** standard;
- **Assessment of the needs for an adjustment** of the methodology;
- **Compliance check** to assess **amendments** to the methodology;
- Possible **DA to exclude** certain elements of the standard;
- Possible **DA to formally request CEN** for revising the standard;
- Possible **IA to clarify the reference methodology**.

Input data: Articles 5 - 8

- Priority for using **primary data**;
- **Default values for GHG emission intensity** are derived from:
  - a **core EU database** of default values for GHG emission intensity,
  - **databases and datasets** of default values for GHG emission intensity **operated by third parties**, based on the quality check (defined in the IA);
- **Default GHG emission factors** for the transport energy carriers are derived from the **central EU database** of default GHG emission factors;
- **Access** to the EU databases is **open and free of charge**;
- **Modelled data** rely on a model established in accordance with EN ISO 14083;
- Role of the **European Environmental Agency**.

Output data: Article 9

- **Minimum requirements** for output data
- Output data **metrics**:
  - total mass of CO2e per transport service, and,
  - mass CO2e per tonne kilometre, or equivalent units, for freight transport; or
  - mass CO2e per tonne or equivalent units, for freight hub throughput; or
  - mass CO2e per passenger kilometre, or equivalent units, for passenger transport; or
  - mass CO2e per passenger or equivalent units, for passenger hub throughput;
- **Possible DA to complement the list of metrics** for output data.

Communication and transparency: Article 10

- **Disclosure** of output data;
- Requirements for **data intermediaries**;
- Communication of **primary data**;
- **Evidence** substantiating how the output data were established.

Calculation tools: Article 11

- **External** calculation tools;
- **Certification** by an **accredited conformity assessment body**;
- **Certificate of conformity**: valid 2 years;
- **IA to lay down rules on the certification** of calculation tools.

Verification: Article 12 and 13

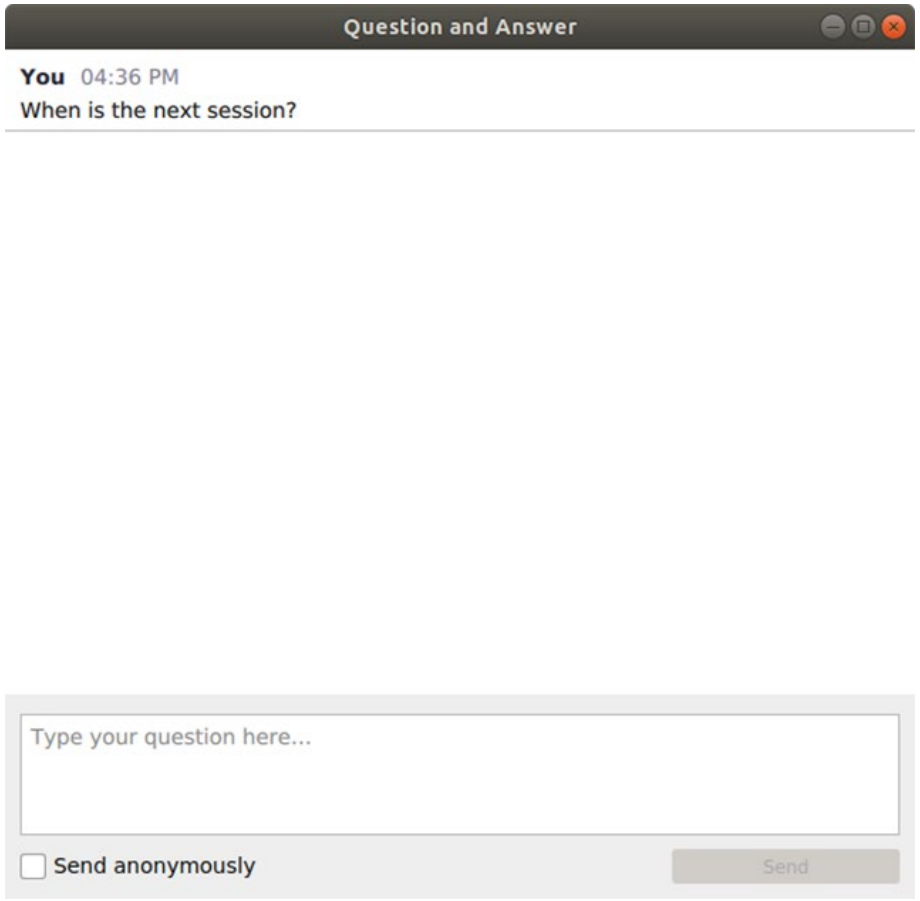
- **Conformity** with CountEmissions EU;
- Verification mandatory for large entities, **SMEs exempted**;
- Verification by an **accredited conformity assessment body**;
- **Proof of compliance**;
- **IA to lay down rules on the verification** of the output data.

Relevant documents

- **Proposal for a Regulation of the European Parliament and of the Council on the accounting of greenhouse gas emissions of transport services**
- **Impact Assessment**
- **Support Study and Annexes:**
  - https://data.europa.eu/doi/10.2832/553011
  - https://data.europa.eu/doi/10.2832/255376
  - https://data.europa.eu/doi/10.2832/764311

Question time

- Use the Q&A panel to submit your questions



Your feedback

Thank you for your participation!

Upcoming webinars

2024-05-22&23 - European Harmonized Standards: A Journey from Legal Framework to Citation in the Official Journal of the European Union

2024-06-18 - Webinar 'The revised Guide 29: boosting innovation through the CEN and CENELEC Workshop Agreements'