



© H.Fallmann, 2009

CBAM – CARBON BORDER ADJUSTMENT MECHANISM

13TH EU ETS COMPLIANCE CONFERENCE, 22 NOVEMBER 2022

OVERVIEW

- Starting point = Carbon leakage
- Description of the Commission proposal for the CBAM
 - Scope
 - How will it work? (Compliance system)
- MRV requirements
- The concept of “embedded emissions”

PREAMBLE

- This presentation is based on the Commission proposal of 14 July 2021
- Trilogues are ongoing and are likely to change some important details, such as
 - Distribution of roles between Commission and Member States
 - Scope of included products; Treatment of indirect emissions
 - Timing of the start of the CBAM, including phase out of free allocation in the EU ETS
- Some elements in this presentation are based on the first discussion note on MRV for embedded emissions in the CBAM, as shared with the Expert Group on CBAM
- Aim of our project:
 - Support in developing the implementing act relevant for MRV
 - Development of templates and guidance documents for importers and for operators of installations in third countries
- NOT aim of this project (but done in parallel by other institutions):
 - Development of default factors
 - Treatment of electricity in CBAM

CARBON LEAKAGE

Definition:

- Relocation of production and/or investments (and thereby of emissions)
- as consequence of a material competitive disadvantage against competitors located in other countries
- caused by unilateral cost increases induced by a carbon price (the EU ETS!)
- where the costs cannot be passed through to customers in the product price

Options of CL mitigation:

- Current approach in EU ETS
 - Free allocation for direct emissions
Based on benchmarks
 - Optional: Compensation for indirect carbon costs from electricity consumption (benchmark based)
- A **Carbon Border Adjustment Mechanism (CBAM)** will be introduced for some sectors, gradually replacing the free allocation

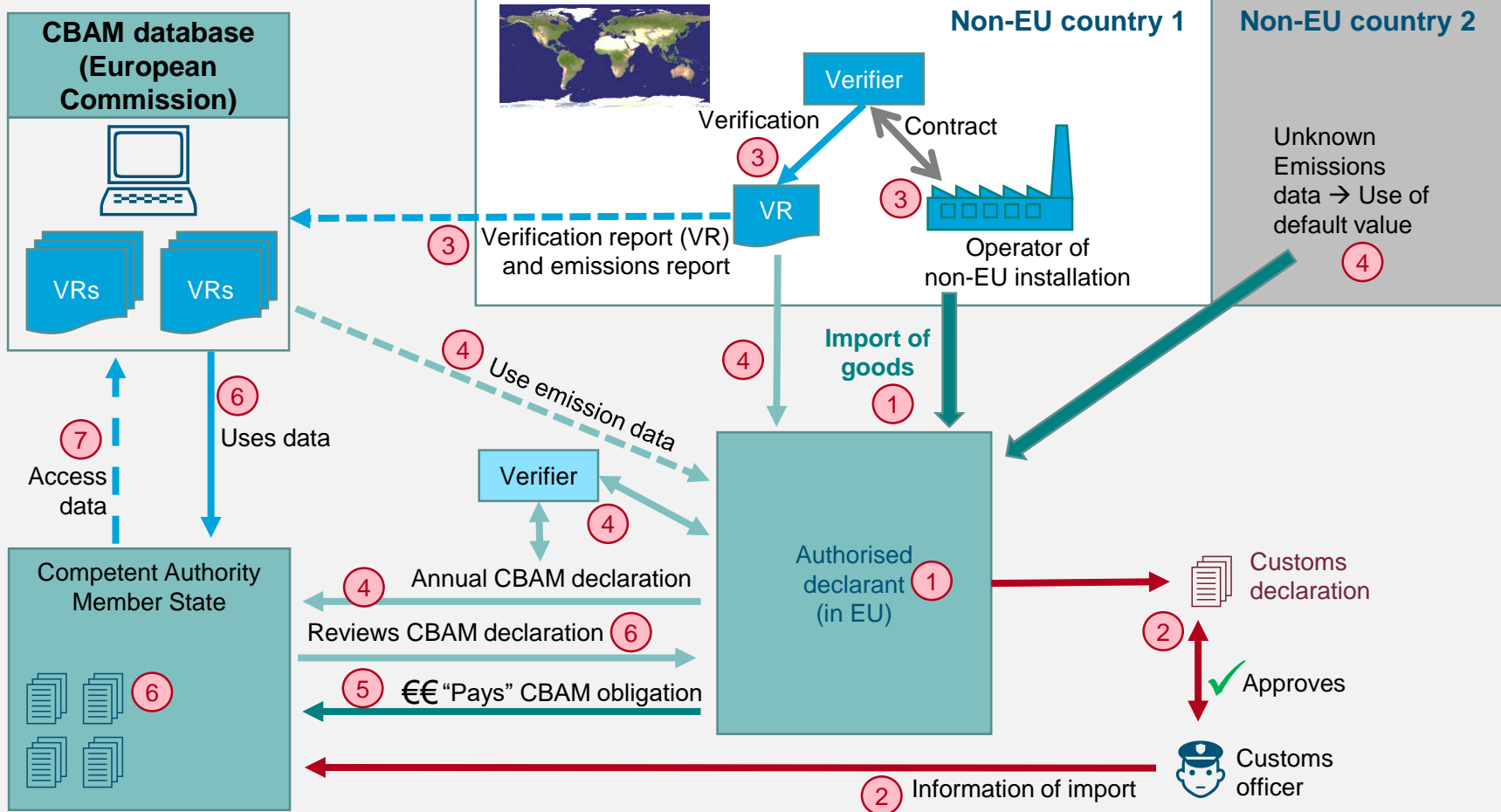
SCOPE OF THE CBAM – GOODS

- Theoretical considerations
 - Sector at risk of carbon leakage
 - Significant emissions covered
 - Identify main products and important value chains
 - Feasibility to identify products and avoid circumvention
 - Feasibility to define embedded emissions and to determine default values
- These criteria led to a first list of goods to be covered, identifiable by the 8-digit CN code (Annex I of the CBAM Regulation)
- Goods proposed to be covered by CBAM:
 - Cement and clinker
 - Fertilizers
 - Iron and steel products, except Ferro-alloys and scrap
 - Aluminium
 - Electricity
- The Annex can be amended by implementing acts for avoiding circumvention

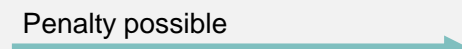
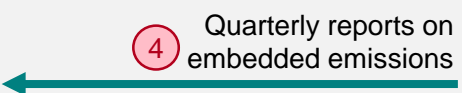
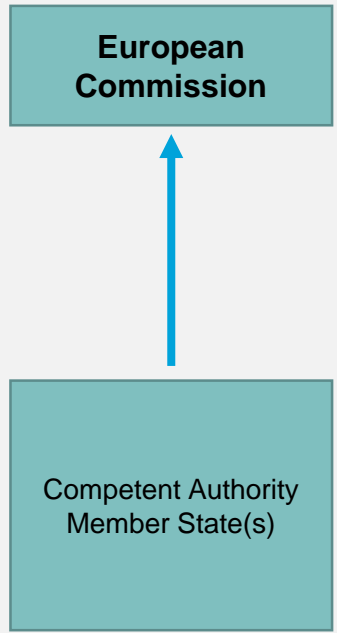
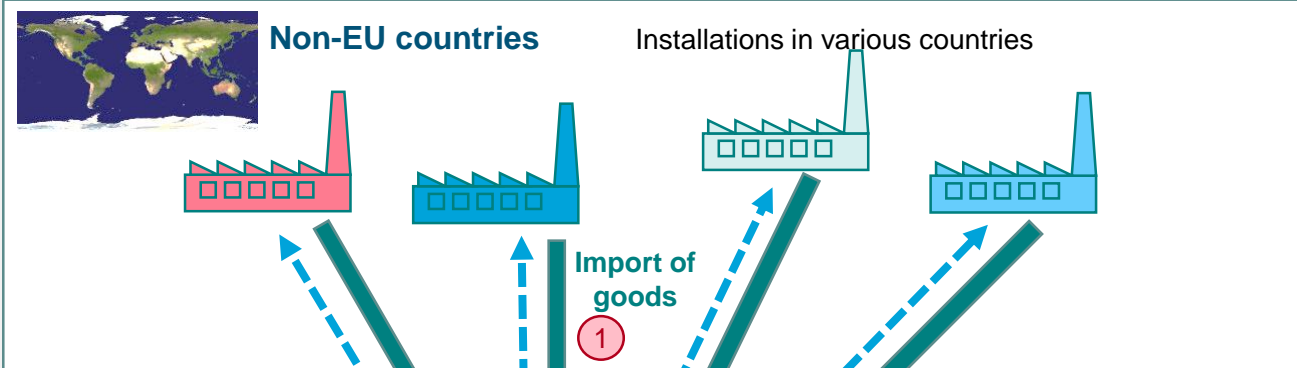
SCOPE OF THE CBAM – COUNTRIES

- Countries of origin can be exempted from CBAM if:
 - The EU ETS applies in that country, or a full linking agreement between the EU ETS and the other countries ETS has been concluded;
- Or in case of electricity:
 - Country has electricity market integrated with Union internal market
 - Agreement to apply Union law in field of electricity market, incl. renewables
 - Main legislation is implemented
 - Country has submitted a roadmap for these measures
 - Has committed to carbon neutrality by 2050 under UNFCCC
 - Etc.
- Other ETS or carbon pricing is not exempt, but: The effective carbon price paid in the country where goods are originating in is deducted from the CBAM obligation
- No specific exemption for least developed countries

THE PROPOSED FUNCTIONING OF THE (FINAL) CBAM



THE FUNCTIONING OF THE (TRANSITIONAL) CBAM



THE COMPLIANCE SYSTEM

- Responsible for “paying” the CBAM obligation: An importer with seat in the EU (‘the **authorised declarant**’ – AD), who must seek authorisation in its Member State (MS) before carrying out imports
- Every 31 May of the following year, the AD must submit a ‘**CBAM declaration**’ to the Competent Authority (CA) in the MS, containing:
 - Total quantity of goods (or electricity) imported
 - Total ‘embedded emissions’ of those goods
 - Total number of CBAM certificates to be surrendered (if applicable, taking into account the carbon price already paid in country of origin minus any free allocation)
- During the transitional phase, the reports shall be due every quarter of a year, with different content (incl. indirect emissions), not verified

After the testing period (from 2026 onwards)

- The AD must ensure that it has sufficient **CBAM certificates** available (purchased from the CA)
- Every 31 May, the AD surrenders CBAM certificates in line with the embedded emissions of imported goods
- The CA may review the CBAM declaration (during up to 4 years following the submission) and correct the emissions for which certificates have to be surrendered
- The same penalty as under the EU ETS is due (100€ per t CO₂ not surrendered), plus surrender of the missing certificates
- Certificate price = weekly average of EU ETS allowances (EUAs)
- Certificates not tradeable!

MONITORING, REPORTING, VERIFICATION

- The customs authorities ensure that
 - Only imports by authorised declarants are allowed;
 - For each imported quantity of a good, the following data are forwarded to the CA:
 - ID of the declarant
 - 8-digit CN code* of the good imported
 - The quantity of the good
 - The country of origin
 - At that stage, the proposed legislation does not require the reporting of the amount of embedded emissions
- The embedded emissions shall be based on actual emissions data. If they *cannot be adequately determined*, use default values (For Electricity: Default values mandatory, except if justified to use actual data)
- Default values will be determined by the European Commission based on public international and/or EU ETS data
- Actual emissions data must be verified by a verifier accredited in the EU

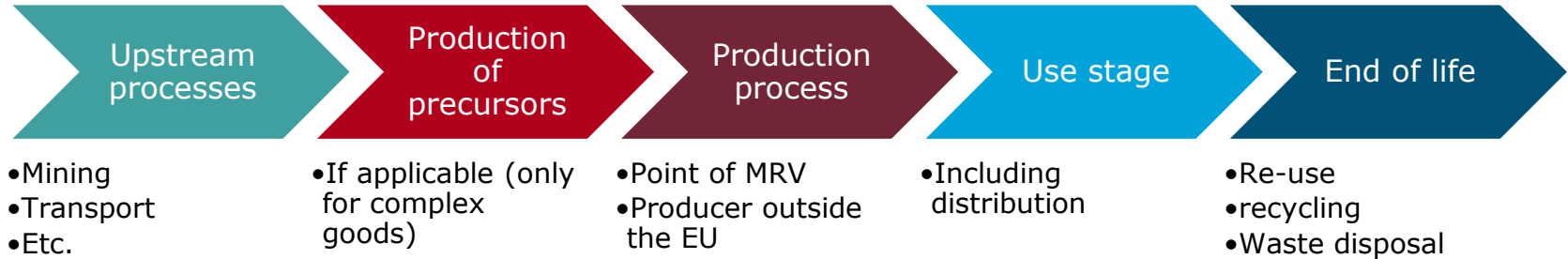
* CN = common nomenclature, the EU extension to the UN-based customs product codes (HS / Harmonised system codes)

STARTING POINT FOR THE METHODOLOGY

- CBAM is intended to put the same carbon costs on imported products as would be incurred by installations in the EU under the EU ETS
- Consequently, coverage of emissions should be as similar as possible
- Monitoring, Reporting and Verification (MRV) rules should build on EU ETS experience

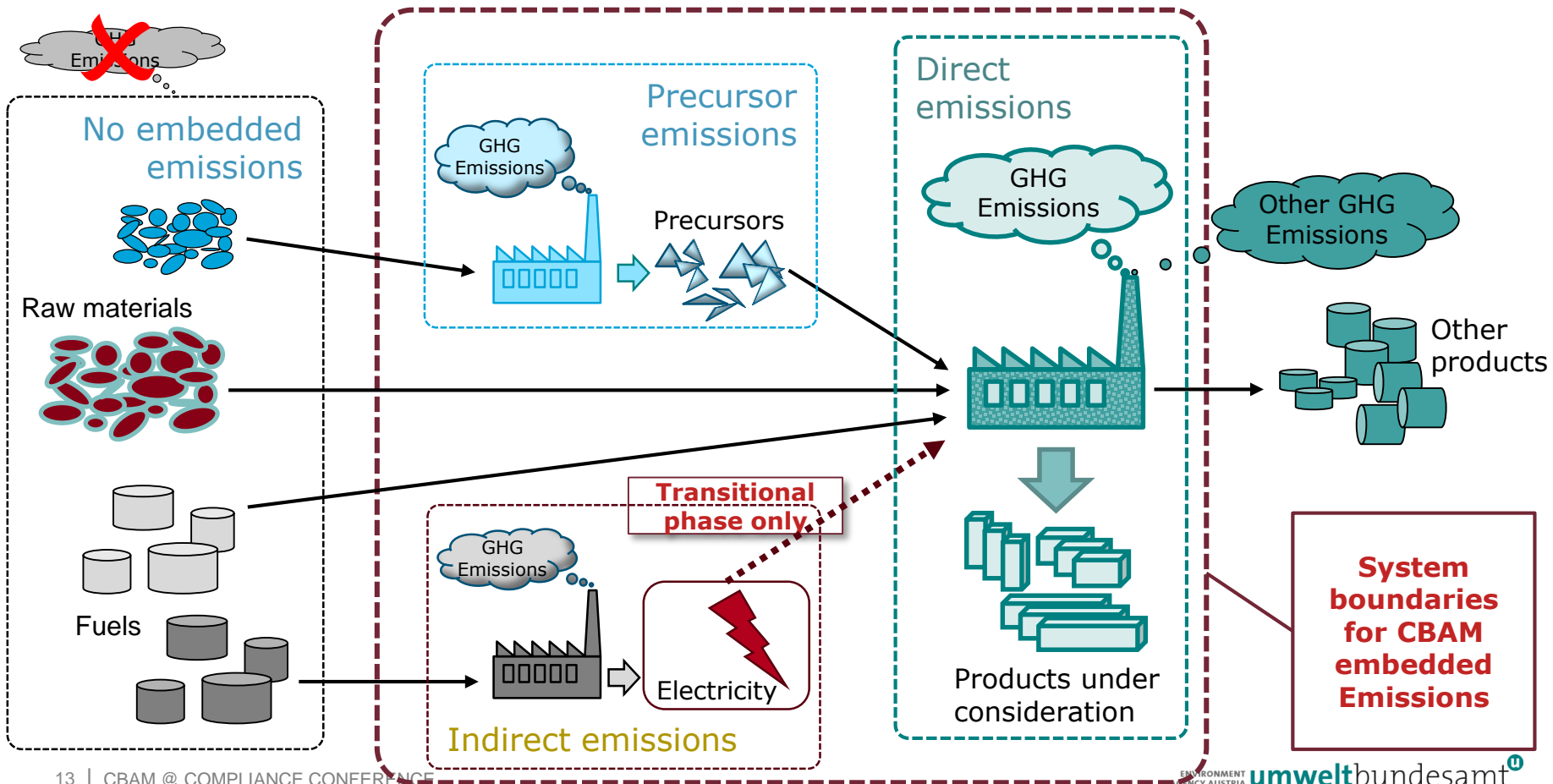
EMBEDDED EMISSIONS – A CONCEPT BETWEEN EU ETS AND PRODUCT CARBON FOOTPRINT

- Product environmental footprint (PEF) / Product Carbon Footprint (PCF)



- EU ETS: Direct emissions only
- Heat – included
- Electricity – indirectly included
- Upstream products: Indirectly included
- Mining of raw materials, transport, downstream use: excluded

EMBEDDED EMISSIONS (CONCEPT)



SPECIFIC EMBEDDED EMISSIONS (SEE) – CALCULATION

- For simple goods g , as in Commission Proposal: $SEE_g = \frac{AttrEm_g}{AL_g}$

i.e. this is attributed emissions / tonne of product

- AL_g = the activity level of the installation (i.e. tonnes of good g produced in the reporting period)
 - $AttrEm_g$ = attributed emissions of g in the reporting period
- For complex goods g , add (recursively) the embedded emissions of the *relevant* precursors:

$$SEE_g = \frac{AttrEm_g + EE_{InpMat}}{AL_g} \quad \text{and} \quad EE_{InpMat} = \sum_{i=1}^n M_i \cdot SEE_i$$

- M_i = Mass of precursor (input material) i consumed in the production of 1t of good g
- SEE_i = Specific embedded emissions of (1t of) precursor i

RELEVANCE OF PRECURSORS AND OTHER INPUTS

- Implementing act should specify for each good and production process, which precursors are relevant
- All other materials and fuels used in the production process are assigned $SEE = 0$
- However, these embedded emissions SEE are only the “rucksack” of emissions carried by the precursor.
- The *actual carbon content* is the physical amount of carbon going into the process and contributing to the direct emissions. For the direct emissions *all materials and fuels* used in the process have to be taken into account (i.e. monitored and reported), irrespective of whether they are relevant precursors or not.
- **Example: Coke**
 - Production of 1 tonne coke produces ca. **0,3 t CO₂** – these are the **embedded emissions** of coke.
 - Carbon content of coke is ca. 90%, i.e. 1t of coke burnt = ca. **3,3 t CO₂ direct emissions**
 - **Total contribution** of 1t coke to a production process where coke is a relevant precursor: **3,6 t CO₂**

THANKS FOR YOUR ATTENTION!

Contact & Information

Hubert FALLMANN

+43-1-31304-5524

hubert.fallmann@umweltbundesamt.at

Umweltbundesamt
www.umweltbundesamt.at

13th EU ETS Compliance Conference
Brussels & online ● 22 November 2022