The Carbon Border Adjustment Mechanism
Cement sector

Dear participants,
Welcome to the webinar session on the

CEMENT SECTOR

Please be patient, the webinar will start at
10:00 AM (CET).

The Carbon Border Adjustment Mechanism (CBAM)

Webinar session on the cement sector

Please make sure that you appear in Zoom with your name and affiliation.

If needed, rename yourself:

- Click on the "Participants" icon in the Zoom toolbar.

- In the "Participants" window, next to your name click on "More" and choose "Rename".

- Enter a new name and click "Rename" to save it. You will see the new name showing in the "Participants" window.

Starting time: 10:00 AM (CET)

15 September 2023

Housekeeping rules

✓ All participants are muted

✓ Webinar is being recorded and will be made public

✓ Video recording is not allowed

✓ Please write your questions in the chat – they will be answered at the end of the webinar

✓ A feedback survey will appear on your screen at the end of webinar

✓ The presentation will be uploaded on the DG TAXUD CBAM webpage, where you can also find additional materials.

Zoom poll

Question:
Which entity defines you best?

- EU Member State
- EU Importers
- Non-EU country
- Non-EU producer
- Non-EU exporter
- International organisation
- NGO & think tank
- Law firm, consultancy
- Academia
- Other

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Webinar Agenda

① **CBAM general overview**

② **Determination of embedded emissions**

③ **Cement sector:**

- **Overview of the actors in CBAM**

- **Reporting declarants**

④ **Submitting CBAM reports**

Carbon Border Adjustment Mechanism
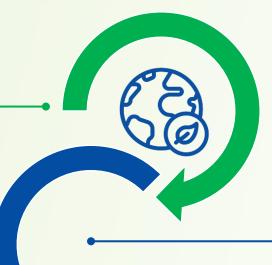
① **CBAM general overview**

The aim of CBAM

Prevents carbon leakage
to ensure effectiveness of
EU climate policy

Complements and
reinforces the EU ETS

Contributes to decarbonisation
globally and to reaching climate
neutrality by 2050

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Reporting obligations in the transitional phase

October 2023 - December 2025
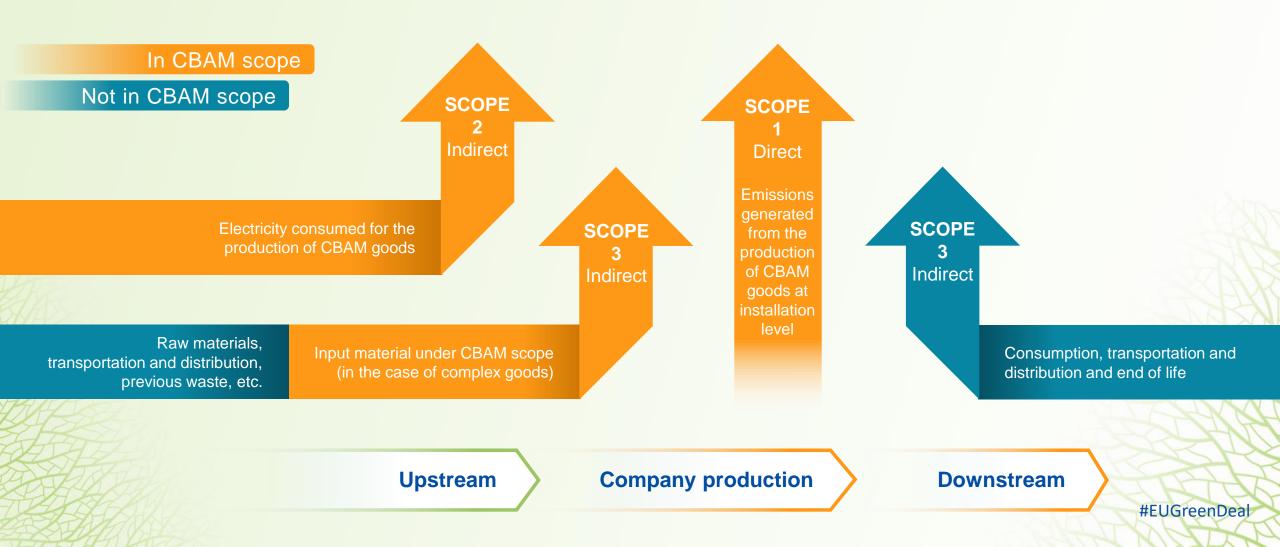
CBAM Report containing the following:

- Total quantity of goods imported during the preceding quarter

- Total embedded direct and indirect emissions

- The carbon price due in the country of origin for the embedded emissions

Report to be submitted quarterly

No verification of emissions by EU-accredited verifier

No CBAM certificates

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CBAM emissions during the transitional phase

In CBAM scope

Not in CBAM scope

SCOPE 2 Indirect

SCOPE 1 Direct

Emissions generated from the production of CBAM goods at installation level

SCOPE 3 Indirect

SCOPE 3 Indirect

Electricity consumed for the production of CBAM goods

Raw materials, transportation and distribution, previous waste, etc.

Input material under CBAM scope (in the case of complex goods)

Consumption, transportation and distribution and end of life

Upstream

Company production

Downstream

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European Commission

Carbon Border Adjustment Mechanism

2 **Determination of embedded emissions**

Key Terms

Simple goods

- goods produced from fuels and raw materials considered to have zero embedded emissions under CBAM

Complex goods

- goods produced from other CBAM goods (either simple or other complex goods)

Aggregated goods category

- group of CBAM goods with different CN codes but similar characteristics
- for each aggregated goods category and production route: provisions on system boundaries (inputs, outputs and corresponding emissions), emission monitoring and relevant precursors

Production process

- chemical or physical processes carried out in parts of an installation to produce goods under an aggregated goods category and its specified system boundaries

Production route

- specific technology used in a production process to produce goods

Goods in scope of CBAM

CN code	Aggregated goods category	Greenhouse gas
Cement		
2507 00 80 – Other kaolinic clays	**Calcined clay**	Carbon dioxide
2523 10 00 – Cement clinkers	**Cement clinker**	
2523 21 00 – White portland cement, whether or not artificially coloured	**Cement**	
2523 29 00 – Other Portland cement		
2523 90 00 – Other hydraulic cements		
2523 30 00 – Aluminous cement	**Aluminous cement**	

Steps to determine embedded emissions

Step 1. Split the installation into production processes and its specified system boundaries

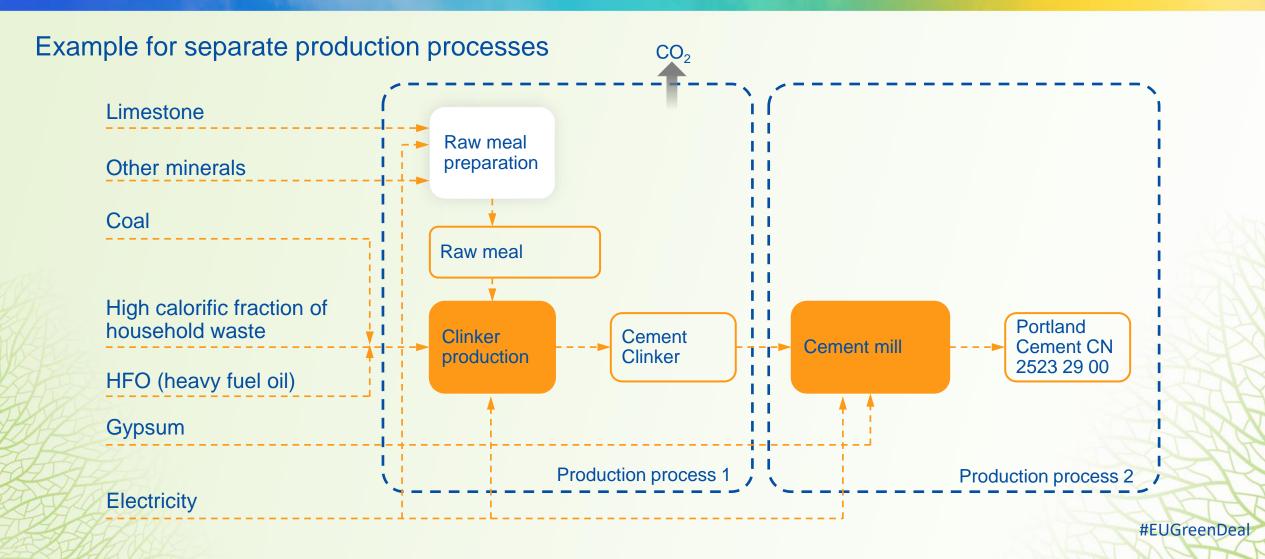**Step 2.** Identify relevant parameters and methods, then carry out monitoring

Step 3. Attribute emissions to production processes

Step 4. Add the specific embedded emissions of relevant precursors

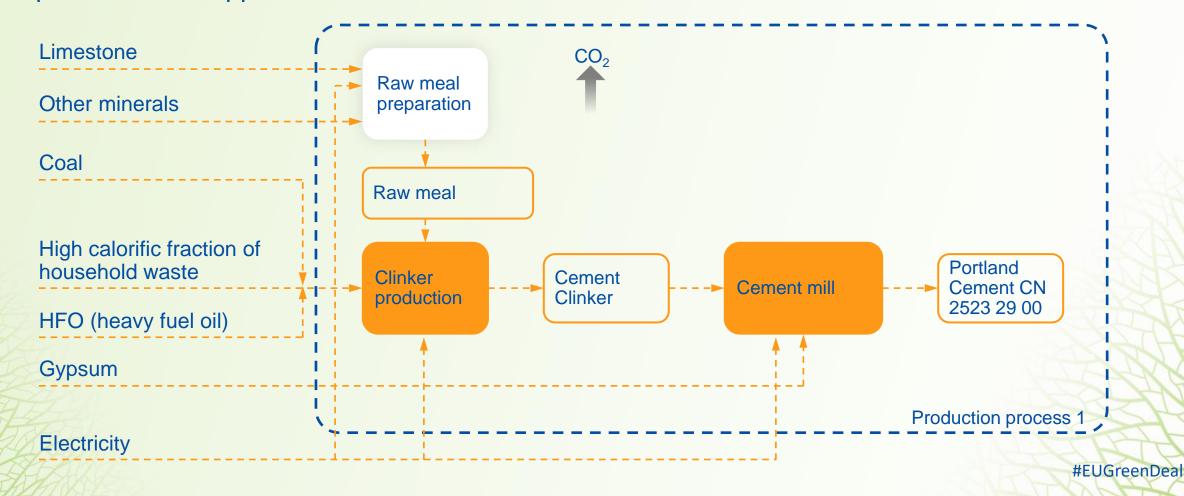**Step 5.** Determine the specific embedded emissions of CBAM goods

Step 1: Split installation into production processes (1/2)

Example for separate production processes

Step 1: Split installation into production processes (2/2)

Example for ‚bubble approach'

Step 2: Monitoring – General

- **Direct emissions from fuels and materials**
  - Standard method, mass balance, continuous emissions monitoring

- **Direct emissions related to heat flows, if relevant**
  - Determine heat flows
  - Emissions = heat flow × corresponding emission factor

- **Waste gases, if relevant**
  - Determine flows and calorific values

- **Electricity produced, if relevant**

- **Indirect emissions related to electricity consumption**
  - Determine electricity consumption for the production of CBAM goods

- **Precursors, if relevant**
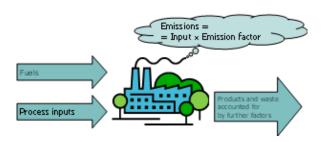 - Determine precursor consumption

Step 2: Monitoring – Direct emissions

❶
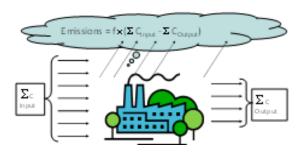## Calculation-based methodology

❷
Measurement-based methodology

Standard method

- determine quantities of fuels and input materials consumed
- determine calculation factors such as net calorific value and emission factor
- determine emissions by multiplying consumption with calculation factors
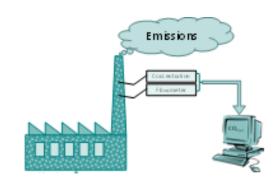

Mass balance

- determine carbon content in all fuels and input materials
- determine carbon content in all output materials
- determine emissions as difference between inputs and outputs
- typically relevant where carbon remains in the goods produced (e.g. steel).

Continuous emissions monitoring system

- measure GHG concentration directly in the stack or using extractive procedures
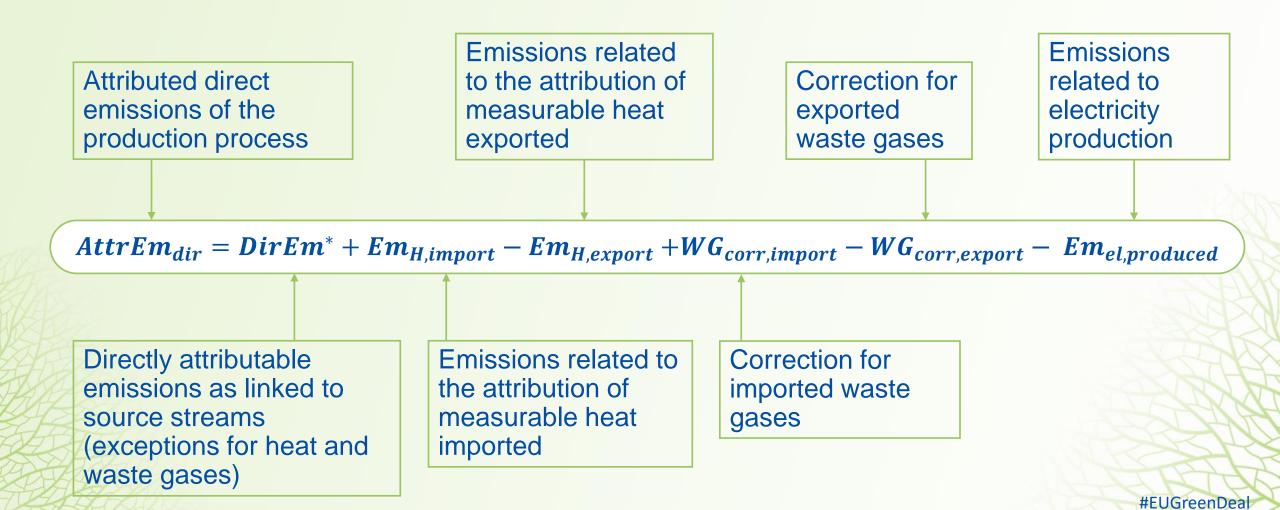- measure flue gas flow
- determine emissions

Step 2: Monitoring – Other methods

1. **Other monitoring and reporting methods** until 31 December 2024, if similar coverage and accuracy of emissions data:

   ▪ a carbon pricing scheme where the installation is located, or

   ▪ a compulsory emission monitoring scheme where the installation is located, or

   ▪ an emission monitoring scheme at the installation which can include verification by an accredited verifier.

2. **Other referenced methods** including default values until 31 July 2024

3. **Estimation of up to 20%** of the total embedded emissions in the case of complex goods (includes the use of default values)
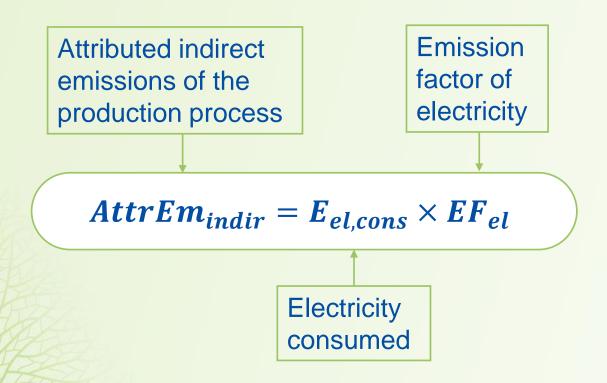
Step 3: Attribution of direct emissions

Attributed direct emissions of the production process

Emissions related to the attribution of measurable heat exported

Correction for exported waste gases

Emissions related to electricity production

$$AttrEm_{dir} = DirEm^* + Em_{H,import} - Em_{H,export} + WG_{corr,import} - WG_{corr,export} - Em_{el,produced}$$

Directly attributable emissions as linked to source streams (exceptions for heat and waste gases)

Emissions related to the attribution of measurable heat imported

Correction for imported waste gases

Step 3: Attribution of indirect emissions

Attributed indirect emissions of the production process

Emission factor of electricity

$$AttrEm_{indir} = E_{el,cons} \times EF_{el}$$

Electricity consumed

Emission factor of electricity

1) General case: use of default values
- average emission factor of the country of origin, based on IEA data
- other emission factors based on publicly available data (average emission factor or CO_2 emission factor)

2) Use of actual emission factors, if:
- direct technical connection or
- power purchase agreement

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Steps 4 and 5: Precursors and calculation of specific embedded emissions

For simple goods (Step 5): ▶

$$SEE_g = \frac{AttrEm_g}{AL_g}$$

Attributed emissions (direct or indirect)

Specific embedded emissions (direct or indirect)

Amount of goods produced

For complex goods using precursors as input (Steps 4 and 5): ▶

$$SEE_g = \frac{AttrEm_g}{AL_g} + \sum_{i=1}^{n} m_i \cdot SEE_i$$

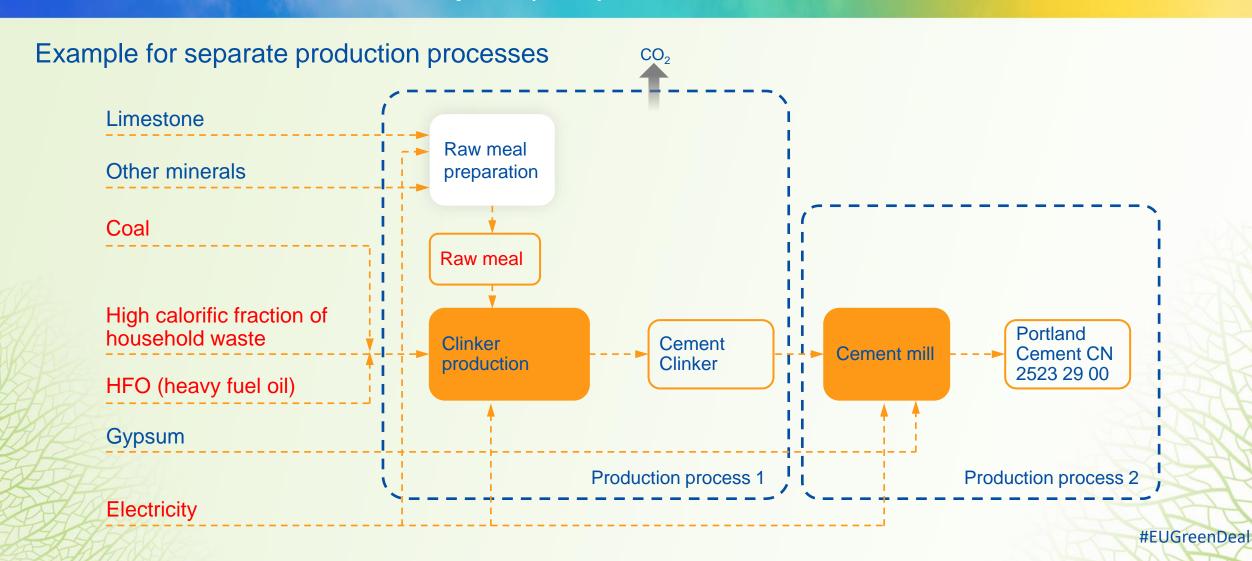Specific embedded emissions (direct or indirect) of the precursors

Specific embedded emissions (direct or indirect)

Amount of precursors used per goods produced

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Worked cement example (1/4)

Example for separate production processes

Worked cement example (2/4)

Production process 1: clinker

Parameter	AD (t)	NCV (GJ/t)	EF (t CO_2/t or t CO_2/TJ)	Biomass %	Emissions fossil (t CO_2)	Emissions biomass (t CO_2)
Process emissions						
Raw meal	1 255 000		0,525		658 875	
Combustion emissions						
Coal	88 000	25	95		209 000	0
High NCV household Waste	25 000	20	83	15%	35 275	6 225
HFO	43 000	40	78		134 160	0
Total direct emissions					**1 037 310**	

Worked cement example (3/4)

Production process 1: clinker

Parameter	AD (MWh)	EF (t CO_2/MWh)	t CO_2
Total direct emissions			1 037 310
Indirect emissions			
Electricity	81 575	0,833	67 953

Parameter	AD (t)
Clinker production	1 255 000

Parameter	SEE, direct (t CO_2/t)	SEE, indirect (t CO_2/t)
Specific embedded emissions (clinker)	0,8265	0,0541

Worked cement example (4/4)

Production process 2: cement

Parameter	SEE, direct (t CO_2/t)	SEE, indirect (t CO_2/t)
Specific embedded emissions (clinker)	0,8265	0,0541

Parameter	(t/t)	
Clinker / cement ratio	0,95	

Parameter	AD (MWh/t)	Emissions (t CO_2/t)
Additional electricity consumption	0,85	0,0708

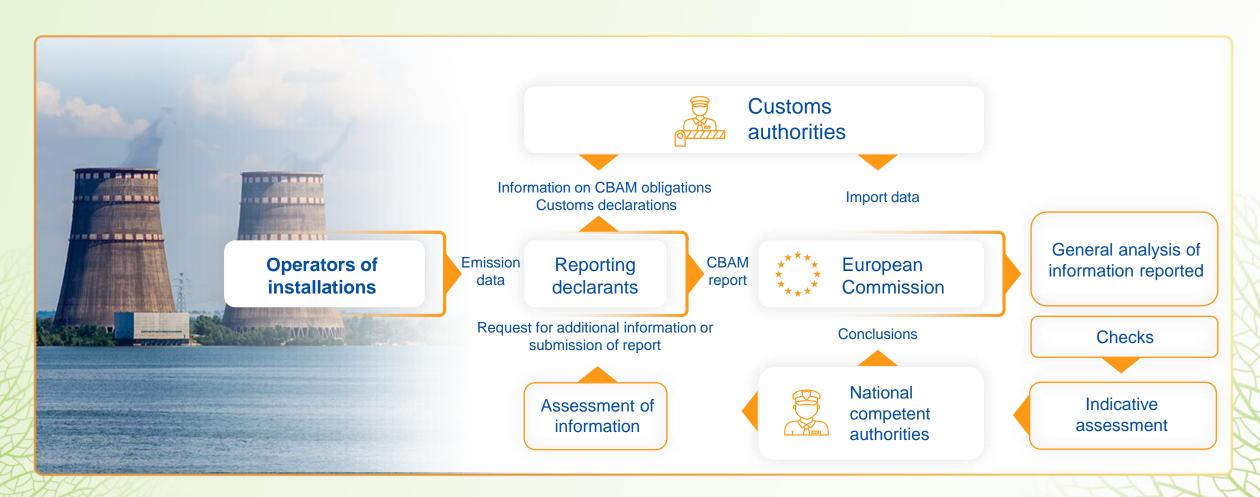| Parameter	SEE, direct (t CO_2/t)	SEE, indirect (t CO_2/t)
Contribution of precursor (clinker)	0,7852	0,0514
Production process		0,0708
Total specific embedded emissions (cement)	**0,7852**	**0,1222**

Carbon Border Adjustment Mechanism

③ Cement sector:

- Overview of the actors in CBAM
- Reporting declarants

Overview of the actors in CBAM

Who are the reporting declarants?

Rules for Representatives

Importer

No representation by others - Own import

Direct customs representative (Status: Customs Declarant)

Importer is the CBAM reporting declarant

Indirect customs representative (Status: Importer)

Importer or indirect customs representative may be the reporting declarant

Subject to reporting obligations

Steps to comply with the CBAM reporting obligations

Step 1: Define the scope of goods concerned

Step 2: Determine the reporting period to use

Step 3: Identify all the parameters you need to report

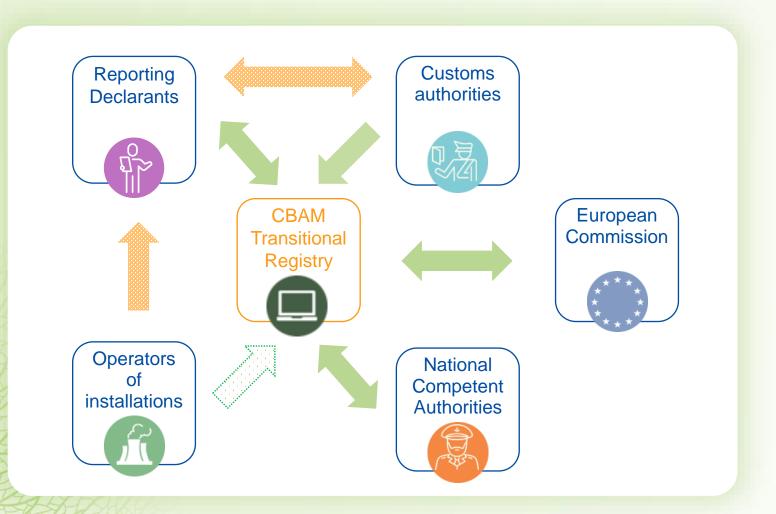**Step 4:** Collect data on carbon price due in jurisdiction if any

Carbon Border Adjustment Mechanism

④ Submitting CBAM reports

Reporting in the CBAM Transitional Registry

Key highlights

- Single platform to create synergies

- Tool to perform CBAM-related tasks

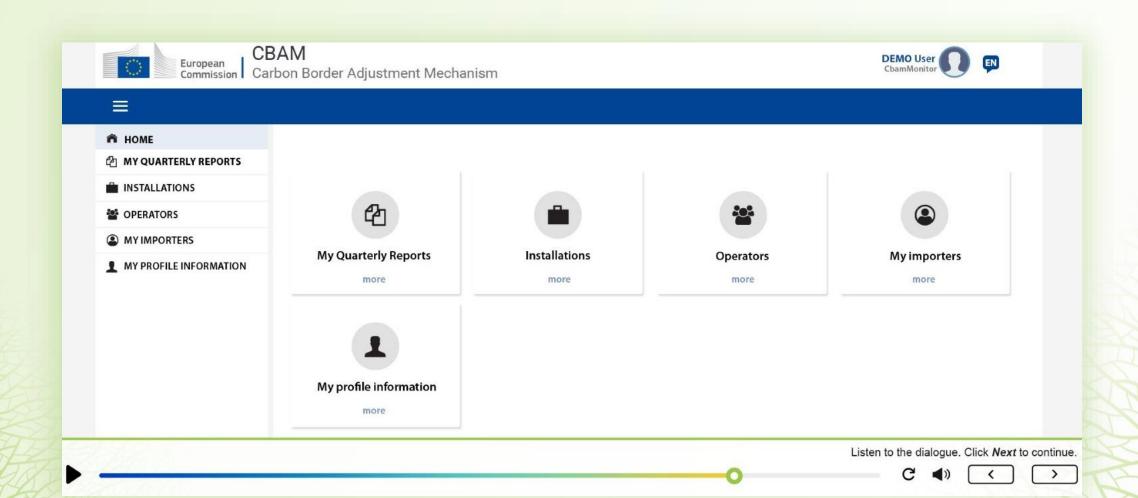- Secured platform to ensure confidentiality of information

OUTSIDE THE REGISTRY

VIA THE REGISTRY

The CBAM Transitional Registry

Timeline for reporting declarants

REPORTING PERIOD	SUBMISSION DUE BY	MODIFICATION POSSIBLE UNTIL*
2023: October – December	**2024:** January 31	**2024:** July 31
2024: January – March	**2024:** April 30	**2024:** July 31
2024: April – June	**2024:** July 31	**2024:** August 30
2024: July – September	**2024:** October 31	**2024:** November 30
2024: October – December	**2025:** January 31	**2025:** February 28
2025: January – March	**2025:** April 30	**2025:** May 31
2025: April – June	**2025:** July 31	**2025:** August 31
2025: July – September	**2025:** October 31	**2025:** November 30
2025: October – December	**2026:** January 31	**2026:** February 28

*After the modification deadline, reporting declarants may request reopening of the file
before the national competent authority for eventual corrections.*

Where to find further information on CBAM?

Visit the CBAM webpage regularly – our one-stop shop

https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en

- 2 guidance documents
- Communication template between importers and operators
- Registration to dedicated webinars
- Link to our E-learning materials through the Customs and Tax EU Learning portal
- Q&A and factsheet
- Soon: link to the recording of these webinars

The Carbon Border Adjustment Mechanism-Cement Sector

Thank you!