

SUMMARY

In 2023 CBAM started from transitional phase when importers have to submit reports about embedded emissions of imports. In 2026 CBAM will begin operating fully – with appropriate payments. Although initial CBAM coverage is limited to several products, in the future the scope can be extended.

From the official point of view, the EU introduced CBAM to level the playing field for European producers and importers. But in fact, CBAM is transformed into new trade barrier which decreases access to European market for countries with low income and without developed financial markets allowing to attract funding for decarbonization.

More than half of Ukrainian exports of goods goes to the EU, while CBAM can be applied to 15-17% of it. European market is vital for Ukrainian producers that suffered from the war. Export allows Ukrainian companies to continue production while capacity of domestic market decreased.

Ukrainian iron & steel industry will be the most damaged sector from CBAM as 93% of Ukrainian exports which falls under CBAM regulation are iron & steel products. At the same time iron & steel industry is major exporter and contributor to economy of Ukraine. For example, in 2023 it contributed 5.7% to the GDP of Ukraine, including supply chains.

CBAM in the EU will lead to increasing losses for Ukrainian economy. If in the first year of full CBAM introduction Ukraine will lose \$202 mln of exports, in 2030 this indicator will rise to \$1,440 mln. Due to CBAM Ukraine may stop export of cement, fertilizers, pig iron, billets, long steel products after 2030.

CBAM is spreading globally. It is obvious that CBAM will be introduced by major developed countries and some developing ones. Access to export markets is under threat. Countries like India, China, South Africa are trying to oppose CBAM to find solutions allowing to support their exporters. Ukraine took wait-and-see approach, which

does not seem to be practical in current circumstances.

Ukraine announced ambitious climate goals and plans to be part of European Green Deal, but the war destroyed all these intentions. Ukraine is continuing preparation to joining the EU, but adaptation needs time. Ukraine has already launched monitoring. reporting and verification system for greenhouse gases. Development of local ETS is ongoing. In the future local ETS should be linked with the EU ETS, which prevents threat of carbon leakage.

Ukraine joins long-term European trend of "green" transition, while currently Ukrainian economy suffered from the war needs exemption from CBAM. Such solution could be provided under article 30.7 of CBAM regulation, which envisages that European Commission can change CBAM application approach for countries which faced unforeseeable, exceptional and unprovoked event, that has destructive consequences on the economic and industrial infrastructure.

CBAM BECAME NEW REALITY FOR INTERNATIONAL TRADE

CBAM in the EU: timing and main components

Transitional phase

2026

Phased-in CBAM implementation

2023

Importers should make reports about embedded carbon emissions of certain imports

- Importers should pay for embedded carbon emissions of imports
- ▶ Price of CBAM certificates is calculated as average weekly CO₂ price in the EU ETS
- Carbon costs paid in the country of origin is deducted from CBAM payment
- ► CBAM payment should reflect free carbon allowances provided to European producers in the EU ETS

CBAM was announced as climate instrument which makes importers to pay for each ton of embedded carbon emissions in imported products.

CBAM is directly connected to the EU ETS as price of CBAM certificates is based on carbon price in the EU ETS.

CBAM is focused on preventing carbon leakage, so it is considered that

CBAM will replace free allowances in the EU ETS.

From 2034 there will be no free allowances for sectors which products are subject to CBAM.

Initially CBAM covers limited number of products, but in the future the scope can be extended.

CBAM is expected to be applied to products of all sectors included in the EU ETS.

Initial CBAM scope:

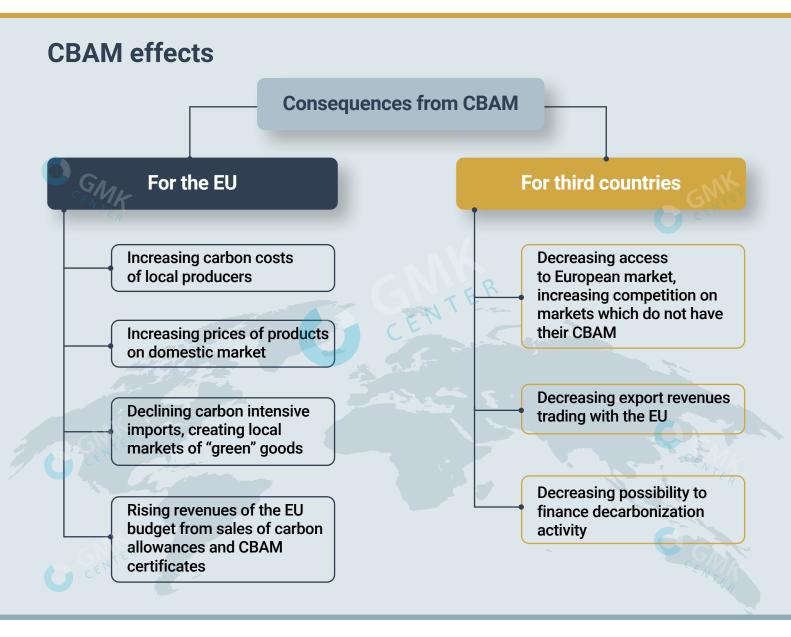
DIRECT EMISSIONS (SCOPE 1):

iron & steel, aluminum, hydrogen

DIRECT + INDIRECT EMISSIONS (SCOPE 1 + SCOPE 2):

cement, fertilizers, electricity

CBAM CREATES ADDITIONAL TRADE BARRIERS



The EU introduced CBAM to:

- protect domestic producers from carbon intensive imports;
- level the playing field for European producers and importers;
- influence climate ambitions of other countries.

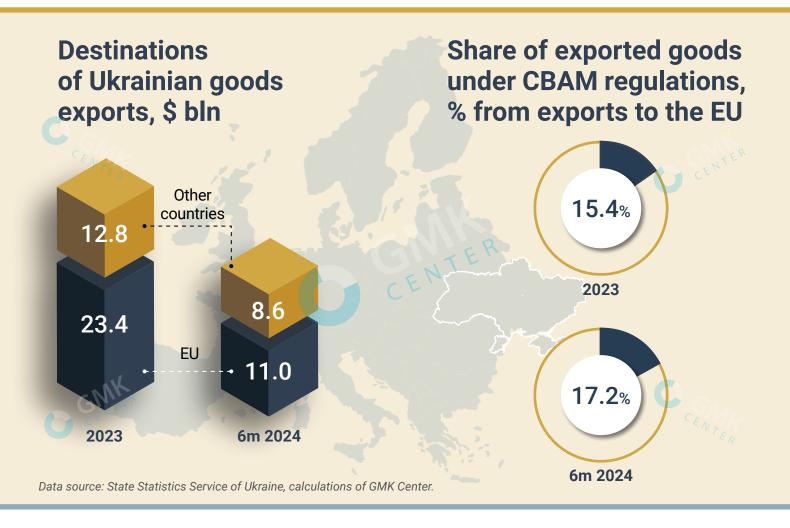
CBAM will create new trade barrier decreasing access to European market for those producers who can not comply with European environmental regulations.

In fact, CBAM can become instrument which discriminates countries with low-income level and without developed financial markets allowing to attract funding for modernization of production facilities.

CBAM will lead to rebuilding supply chains if European trade partners will not be ready to fulfill stronger climate ambitions.

CBAM is an experimental instrument, and now nobody can predict all its consequences.

MORE THAN HALF OF UKRAINIAN GOODS EXPORTS GOES TO THE EU



Ukrainian economy is traditionally export oriented. During the war the EU has become the main trade partner considering blocked Ukrainian seaports.

Export allows Ukrainian companies to continue production activity, maintain employment and support local economy.

CBAM will create additional obstacles for Ukrainian companies further increasing the burden of war. Capacity of the Ukrainian domestic market has reduced, while CBAM will decrease export possibilities.

According to our calculations, CBAM may be applied to 15-17% of Ukrainian exports to the EU.

CBAM may deteriorate state of Ukrainian economy. Such situation contradicts the strategic interests of the EU, which supports Ukraine.

Maintaining trade relations with the EU will allow Ukraine to integrate further into the European economy and will support financial abilities of the state budget now.

IRON & STEEL INDUSTRY OF UKRAINE WILL BE THE MOST HIT BY CBAM



Data source: State Statistics Service of Ukraine, companies' data, calculations of GMK Center.

Economic impact of iron & steel industry of Ukraine (2023)

5.7% contribution to GDP of Ukraine, including supply chains

14.6% contribution to Ukrainian exports of goods, including supply chains

\$600 min capital expenditures of the largest Ukrainian iron & steel companies

93% of Ukrainian exports which falls under CBAM regulation is represented by iron & steel sector.

Iron & steel industry is major contributor to Ukrainian economy. In 2023 it contributed 5.7% to the GDP of Ukraine, including supply chains.

Despite the war, Ukrainian steel companies continue to invest and develop production.

Ukrainian iron & steel sector remains major employer. Before the war it provided more than 560 ths jobs, including supply chains.

During the war, iron & steel industry remains one of the largest exporters. In 2023 the sector's share in total exports was 14.6%.

Ukrainian and European steel industries have been partners for a long time.

Ukrainian iron & steel industry may enable green transition in European steel industry as Ukraine has one of the largest magnetite iron ore reserves globally, that enables supplies of 20-25 mln tons of DR-feed to global market. Supporting iron- and steelmaking supply chains Ukrainian iron & steel sector may help European steelmakers to be more competitive on the global market.

THE LOSSES FROM CBAM FOR UKRAINIAN ECONOMY WILL INCREASE OVER TIME

Impact of CBAM on Ukrainian economy*

CENTER	2026	2030 GM
GDP losses, \$ mln	790	4,890
Export losses, \$ mln	202 ER	1,440
Losses of taxes, \$ mln	150	910
Investment losses, \$ mln	110	690
Losses of wages, \$ mln	320	2,000

^{*} Considering current structure of Ukrainian exports and economy

Data source: State Statistics Service of Ukraine, calculations of GMK Center.

CBAM will lead to gradual decrease in free allowances in the EU ETS. For example, in 2026 2.5% of free allowances will be phased out, in 2030 – 48.5%, in 2034 – 100%.

Decreasing free allocation will lead to rising carbon prices in the EU ETS and growing CBAM payments. The higher CBAM payments mean the higher losses for the Ukrainian economy.

Due to CBAM in the EU Ukraine may stop export of cement, fertilizers, pig iron, billets, long steel products after 2030. In such case export losses will exceed \$1.4 bln. Export losses for iron & steel products will be \$1.3 bln.

GDP losses will be greater considering intersectoral links in Ukrainian economy.

For example, iron & steel sector impacts on operation of coal and coke industry, machinery, service sector.

Iron & steel industry is major driver of regional development, where production facilities are located.

Steel companies are the biggest taxpayers in Ukraine. In general tax losses due to CBAM may reach \$910 mln in 2030.

PRODUCTION OF PIG IRON AND **LONG STEEL PRODUCTS WILL HAVE** THE BIGGEST LOSSES FROM CBAM

In Ukraine, 89% of steel has been produced using BF-BOF or BF-OHF route, that means average carbon intensity at 2.3 tons of CO2 per ton of steel. It also relates to long products (rebar, wire rod and other bars). So, Ukrainian billet and longs would be uncompetitive to products, produced via EAF route in the EU. We tend to think that Ukraine could lose all its billet and longs exports as the result of CBAM.

Pig iron sales also could halt as CBAM payments for pig iron deliveries could reach \$160 per ton in 2030. It would mean that pig iron segment mainly could be substituted by imported HBI, which production is developing in MENA.

We don't think that slabs and flats (coils & sheets) sales could be affected because of high free allocations in the EU in this segment and absence of low carbon alternatives.

But introduction of many low-carbon projects in flats segment in the EU poses the risk of lowering margins for products, produced via traditional technologies.

Seamless pipes and iron ore pellets produced in Ukraine have good position in carbon intensity that enables successful sales after CBAM introduction.

Potential export losses for the iron & steel sector of Ukraine from CBAM introduction in 2030

TOTAL LOSSES \$1.3 bln

PIG IRON

\$300 mln

Pig iron segment in the EU could be substituted by HBI supplies in 2028-2030 as a result of CBAM

SLABS & FLATS

Carbon and CBAM costs could be transferred onto prices, as major part of flats capacities in the EU and globally represented by BF-BOF technology

BILLET & LONGS

There are abilities for substitution of BF-BOF products by EAF in longs segment

IRON ORE PELLETS

Carbon intensity of pellets production in Ukraine allows to avoid CBAM payments, at least until new regulations are adopted

PIPES & TUBES

Seamless pipes in Ukraine are already produced via scrap-EAF route with one of the best carbon intensities globally. Impact on welded pipes export will be similar to flats segment

CBAM WILL INCREASE ADMINISTRATIVE EXPENSES FOR SMALL AND MIDDLE EXPORTERS

CBAM reporting scheme

Operators in third countries

Primary report

Reporting declarants

CBAM report

European Commission

- info about production process;
- specific embedded emissions;
- · other relevant factors.

- based on processed data from primary report;
- compiled according to CBAM regulation.

Data source: based on Commission Implementing Regulation (EU) 2023/1773 of 17 August 2023 and the Carbon border adjustment mechanism eLearning module

Annually Ukrainian companies export to the EU 55-60 ths tons of steel products like steel structures, reservoirs, containers, bolts, screws etc.

Such companies do not have primary production of iron or steel. But as iron and steel products are under CBAM regulation, they also need to provide data to EU importers for CBAM reports.

CBAM regulation requires to collect a lot of data. It will increase administrative expenses of small & middle exporters and importers. CBAM could become new technical barrier for trade. Difficulties connected with providing data will have negative impact on prices of exported products.

CBAM regulation envisages that reporting declarants should receive from operators of installations following information:

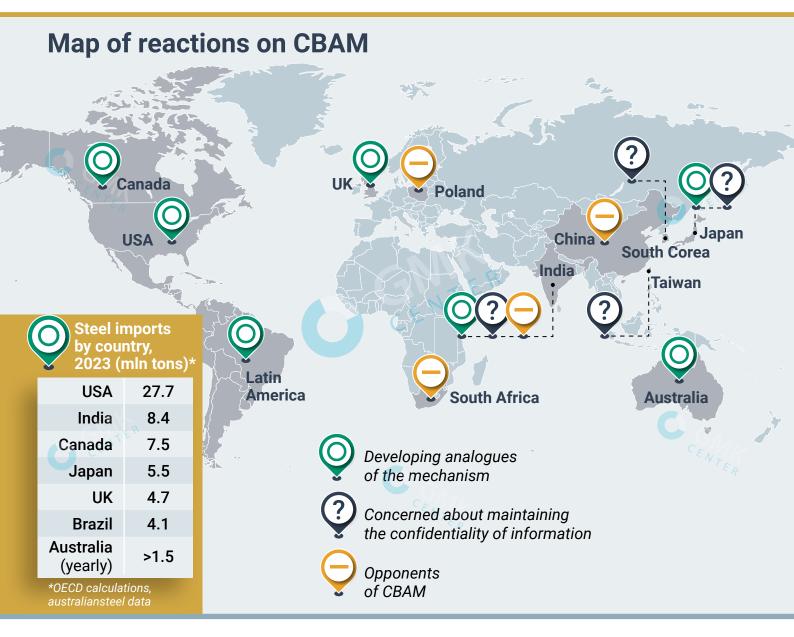
- the name and contact details of the operator and installation;
- description of the production processes and routes used;
- the specific direct and indirect emissions, information on the data quality and methods used for their calculation;
- ▶ if applicable, the information on carbon price due;
- ▶ total emissions of the installation, incl. activity data and calculation factors for each source stream used and other.

Producers of iron and steel products also should submit such sector specific data:

- the main reducing agent used in precursor production;
- mass % of Mn, Cr, Ni, total of other alloy elements;
- mass % of materials contained which are not iron or steel if their mass is more than 1 % to 5 % of the total goods' mass;
- tons scrap used for producing 1 t of the product;
- % of scrap that is preconsumer scrap.

It is difficult to collect such big set of data, especially when company does not produce pig iron or crude steel directly.

CBAM IS SPREADING GLOBALLY



More and more countries are considering introduction their own CBAM. UK plans to introduce a tax on imports of carbon-intensive products by 2027. Australia and Canada are developing their CBAM regulation.

American Iron and Steel Institute supports introduction of local CBAM saying that this instrument will be important for decarbonization of the industry. Latin American Steel
Association assumes
that Latin America may
in the future introduce its
own regional CBAM. The
development of a regional
CBAM should go hand in hand
with the creation of a carbon
market.

In 2028 Japan is going to introduce carbon levy on imports of fossil fuels. Such mechanism can become a kind of local CBAM.

CBAM will be introduced by developed countries and some developing ones. So, access to traditional Ukrainian export markets is under threat. Local CBAMs are the first step to introducing global carbon price.

Ukraine has adopted a wait-and-see attitude, while it should be more active in protection of interests in foreign markets to continue exports and support national economy.

INDIA, CHINA, SOUTH AFRICA ARE OPPOSING CBAM

Activities aimed on mitigation of CBAM impact



India

Exploring possibility to challenge CBAM at the World Trade Organization

Considering implementation of domestic carbon tax or ETS

Considering introduction of retaliation tariffs on the EU exports



China

Initiating multilateral discussions concerning CBAM



Considering complaint to the World Trade Organization against CBAM





Developing countries are considering CBAM as punitive instrument which excludes industrial development opportunities.

CBAM shifts the burden of the "green" transition to the developing world, while Paris Agreement envisages "the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances".

India may be damaged up until 0.05% of its GDP by CBAM according to estimations of Centre for Science and Environment.

India has declined proposal of European Union to levy higher taxes on its carbonproducing industries, considering that this suggestion is not practical.

Negotiation between India and the EU is continuing to align EU and Indian industries on decarbonization efforts. South Africa also continues negotiations with the EU to find a mutually acceptable solution regarding CBAM, although country remains option to file a WTO complaint.

China insists that the CBAM does not comply with WTO rules and it is necessary to conduct multilateral negotiations on CBAM-related issues.

UKRAINE IS PREPARING TO BECOME EU MEMBER

Activities to align Ukrainian legislation with European climate policy

Setting principles of climate policy

Ukrainian parliament is reviewing the law about the main principles of state climate policy.

Launching monitoring, reporting and verification (MRV) system for greenhouse gases

On 01.01.2021 the law on the principles of monitoring, reporting and verification of greenhouse gas emissions entered into force.

Reforming carbon pricing

Ukrainian government is discussing introduction of emission trading system.

Updating National determined commitment (NDC) to Paris agreement

Ukrainian Ministry of environment plans to develop and approve new NDC in 2025.

Reforming industrial pollution control

In 2024 Ukrainian parliament passed the law on integrated prevention and control of industrial pollution.

In 2014 Ukraine and the EU signed Association agreement. In February 2022 Ukraine applied for EU membership and in June 2024 official negotiation about Ukraine's accession to the EU began.

For example, Ukraine has already launched MRV system and adopted the law on integrated prevention and control of industrial pollution. Development of local ETS is ongoing.

Ukraine adapts its legislation to European standards to fulfill the conditions for joining the EU.

Ukraine strives to be part of European green deal and in fact Ukraine is a part of European economic space. Future of Ukraine is connected with the EU. The EU should not be interested in worsening state of Ukrainian economy. Only strong Ukraine can make the EU stronger and can maintain lasting peace in the future.

Implementing all requirements of European legislation, Ukraine will have the same regulation field as the EU and will not create any carbon leakage risk.

UKRAINE TO CONTINUE ITS COURSE TO GREEN TRANSITION, DESPITE THE WAR

Both the authorities and business in Ukraine share the commitment to achieving climate goals and a green transition.

For example, Ukraine's plan according to NDC-2 was ambitious and assumed a 65% reduction in carbon emissions till 2030 compared to 1990. Now the NDC plan is a subject for update.

Ukraine has also committed to implementing an emissions trading system for CO₂.

According to strategy draft presented by Ministry of Environmental Protection and Natural Resources of Ukraine, pilot stage of Ukrainian ETS can start in 2026. It is expected that in 2029 ETS will begin operating fully.

Ukrainian government plans to interact with European authorities on the stage of developing legislation regulating ETS. It will ensure using the best European practices in advancing decarbonization in Ukraine.

Further effective green transition should allow Ukraine to maintain trade relations with the EU.

Ukraine's integration into the EU is beneficial for the European community in the context of achieving climate goals.

Ukraine has shown one of the greatest progresses globally, having reduced CO₂ emissions by 62% since 1990. Therefore, including Ukraine's emissions in the European emissions data will increase the EU's progress in achieving its carbon reduction targets.

Preliminary roadmap for ETS launch in Ukraine

2024-2025

Preparatory stage

Adoption of the legislation regulating ETS, defining competent authorities for ETS, their functions and administrative procedures, improvement of technical infrastructure for MRV system.

2026-2028

Pilot stage of ETS operation

Check of ETS functioning in real conditions, improvement of ETS regulations and the qualifications of market participants.

2029-2033

The first stage of full ETS functioning

Inclusion of new economic sectors in ETS, improvement of control mechanisms, ensuring future accession or connection to the EU ETS.

Data source: Ministry of Environmental Protection and Natural Resources of Ukraine

UKRAINE SHOULD BE EXCLUDED FROM CBAM

Direct economic losses of Ukraine from Russian invasion as of 01.01.2024, \$ bln

RESIDENTIAL PROPERTY	59
INFRASTRUCTURE	37
INDUSTRY	13
ENERGY	9
AGRISECTOR	9 CEN
OTHER	28
TOTAL	155

\$50 billion

Requirements for energy sector afterwar rebuilding in Ukraine as of 10.06.2024, by Kyiv School of Economics CBAM regulation sets out the clauses for excluding third countries from obligations under the CBAM:

"Where an unforeseeable, exceptional and unprovoked event has occurred that is outside the control of one or more third countries subject to the CBAM, and that event has destructive consequences on the economic and industrial infrastructure of such country or countries concerned, the Commission shall assess the situation and submit to the European Parliament and to the Council a report, accompanied, where appropriate, by a legislative proposal, to amend this Regulation by setting out the necessary provisional measures to address those exceptional circumstances."

Article 30.7 of the Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism.

No doubt that the Russian invasion and the resulting damage to Ukraine satisfy the conditions of Article 30.7 of the regulation.

Russian invasion, being out of the control of Ukraine, caused significant destructive consequences for economic and industrial infrastructure.

Direct losses alone amounted to \$155 bln as of start of 2024. The losses are increasing with each day of the ongoing war.

The war has been going on for two years and seven months, as of the date of this report. This time has been lost for adaptation of Ukraine's economy to green transition goals.

In addition, in the post-war period, Ukraine will have reduced opportunities to stimulate decarbonization. The exclusion of Ukraine from the CBAM under Article 30.7 is logical and will be a test for the mechanisms established by European legislators in the CBAM regulation.



Ukrainian based consulting company focused on European steel market



PROSPECTS of green steel market in the EU till 2030



TRENDS on global DRI/HBI market



COMPARATIVE ANALYSIS of decarbonization strategies of global iron & steel companies

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