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EU CARBON BORDER ADJUSTMENT MECHANISM: OPPORTUNITIES AND CHALLENGES

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Abstract

The European Union plans to introduce a levy on greenhouse gases emitted during the production of goods and services that will be imported into the Single Market. The European Commission presented the Carbon Border Adjustment Mechanism (CBAM) in July 2021. Respect of the principle of the most-favorite nation and the principle of national treatment are crucial for its WTO compliance. The introduced measures must not represent arbitrary or unjustifiable discrimination. The CBAM should ensure a level playing field in the EU Single Market and protect the products and services of European companies from unfair competition from imported products and services for which no or lower level of levy has been paid on greenhouse gas emissions. Proper implementation of this mechanism will contribute to reducing greenhouse gas emissions and will also stimulate the development and introduction of new cleaner technologies globally. The European Union, through the CBAM intends to encourage other countries to introduce mechanisms similar to those contained in the European Green Deal.

Keywords: Carbon Border Adjustment Mechanism, climate change, greenhouse gases, EU, WTO, border measures

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Introduction

The European Commission (2021a) presented the European Green Deal on July 14, 2021. This comprehensive plan contains a number of measures and instruments aimed at reducing greenhouse gas emissions by 55% by 2030 compared to 1990 levels, and to make Europe climate neutral by 2050. The European Green Deal is the most comprehensive climate plan adopted by any country or group of countries. The European Green Deal contains 14 areas that aim to "create the right balance of policy measures and revenues generated to design and drive a just and transformational change across the EU economy." (European Commission 2021a p.1).

This package contains two instruments that are introducing direct financial obligations for the private sector. These are the Emission Trading System (ETS) and the Carbon Border Adjustment Mechanism (CBAM), aiming to reduce greenhouse gas emissions, to stimulate the private sector to introduce new technological solutions that will reduce those emissions, but also to generate revenues in the EU budget, that would be further invested in projects related to achieving the goals of the European Green Deal. The EU ETS was introduced in 2005 and covers sectors that emit about 45% of total greenhouse gases and aims to reduce their emissions. The European Commission is determining the total amount allowances for the greenhouse gases that can be emitted by European companies in the sectors covered by the ETS. Gradual decrease of greenhouse allowances is implemented by ETS too. The allowances are then allocated to Member States, that are responsible for their distribution to the producers. The allowances have so far been distributed free of charge, but the companies that need additional allowances buy them on the secondary market from the companies that had lower emissions and haven't used all of their certificates. The European Commission plans to start gradually charging for the allowances after 2025. European companies will be

paying 10% of the price in the first year, 20% in the second and so on until the 10th year, ie 2035 when the full price should be paid.

Figure 1. Elements of the European Green Deal



Source: European Commission: Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality. Brussels: EC, COM(2021) 550 final, 14.7.2021 p.13

Electricity, the cost of which is included in the total expenses of each product, can be used as an illustration of the impact of greenhouse gas emission charges. The electricity price is especially important for goods that are produced by technological processes that have intensive electricity use. If in a country electricity is generated from fossil fuels and doesn't have requirement for purchasing of the greenhouse allowances, the price of electricity is lower than in countries where such allowances have to be purchased. The price will increase further if the electricity is from renewable energy sources, which are more expensive than electricity generated from coal. Producers in countries where such levies are paid will have much higher electricity costs and will be less competitive. This will create unfair competition between companies that do not pay for allowances and companies operating in countries where such levies are paid. Therefore, the European Union needs to protect European companies from unfair competition coming from the imported goods originating from the countries where there is no such levy.

To reduce such negative effects, the European Commission (2021a) plans to introduce a Carbon Border Adjustment Mechanism (CBAM), which should provide protection from unfair competition, but also prevent relocation of installations to countries with less ambitious climate policies. The European Commission through this mechanism plans to introduce an obligation for importers to purchase allowances for greenhouse gas emission occurred in the production process of goods imported into the Single Market. The purpose of the CBAM is to ensure an equal level playing field on the European If the EU does not introduce such a mechanism, its

domestic producers, who will be paying for the allowances for greenhouse gas emissions will be discriminated. The EU position is that the CBAM promotes fair competition.

Furthermore, the absence of such a mechanism will not only impact the competitiveness of European companies, but will also negatively affect the accomplishment of global climate goals. Instead investing in R&D in technologies that will reduce emissions, companies might opt to relocate their facilities to countries where there is no such regulation. Relocation could even increase level of global greenhouse gas emissions if production capacity moves from a country where electricity is generated from cleaner energy sources (such as renewable or nuclear energy) to countries where it is generated from coal. The goal of the European Green Deal is not only to reduce greenhouse gas emissions in the EU, but also globally.

In the EU ETS and CBAM regulation the term carbon tax or customs duty is not used. Instead, the term allowance for greenhouse gas emission is used. Although the two mechanisms have financial implications, the European Commission does not consider them as a tax or customs duty, but as a measure of the economic policy. This terminology is a because of the internal procedures in the EU. The introduction of a measure as a carbon tax requires a unanimous vote in the Council, which at the time of the adoption of the ETS was difficult to be achieved, because there was no unity among EU members on this issue. To avoid possible blockage, this policy measure was named as an allowance. If the measure contained in the CBAM is named as customs duty, the EU internal procedure for its adoption requires a qualified majority, which will be easily achieved, but measure with such title will be non-compliant with the EU obligations regarding the maximum level of customs and other duties contained in the Schedule of Concessions of the European Union in WTO.

Therefore, the European Commission does not define the obligation to purchase allowances as a fiscal measure (tax or custom duty) but as a measure of the economic policy aimed at reducing greenhouse gas emissions.

Sectors covered in the initial phase of CBAM

CBAM will initially apply to imports of goods whose production has a significant greenhouse gas emission. When selecting the sectors for which such a measure will be introduced, the administrative feasibility was considered too.

According to the European Commission (2021b) the carbon border adjustment mechanism will start to be implemented on 1.1.2026 and will apply to the following products:

- cement
- iron and steel
- aluminum
- fertilizers
- electric energy

It could be noted that crude oil and natural gas are not included although they significantly contribute to greenhouse gas emissions. The EU didn't want to increase the price of these energy sources, in order not to provoke protests, such as the "Yellow Vests" riots in France, which were the result of rising energy prices.

However in the future it should be expected an expansion of the range of products that will be covered by BCAM, including crude oil and natural gas. The European Commission has announced that it will assess after the end of the transition period whether it will expand the range of more products and services and whether it will include so-called "indirect" used greenhouse emission for the production of imported goods (a downstream approach). Also,

the free allowances will be gradually abolished, which will increase the burden on the exporters on the European market.

CBAM compliance with WTO regulations

The idea of introducing a customs duty on greenhouse gas emissions is not new and has long been discussed as a possible mechanism for achieving global sustainability (Moghaddam, F. R. et al. 2013 p.375).

In addition to the technical/methodological parameters related to the determination of the amount of greenhouse gases emitted and the price per metric ton, one of the issues discussed is the compliance of the CBAM with the regulations administered by the World Trade Organization (WTO). Arguments for justification for the introduction of such measures are contained in **Article XX:b of GATT'47 which allows the introduction of measures "necessary to protect human, animal or plant life or health"**. In addition, the measures of CBAM need to ensure respect for the principle of the **Most-favored-nation treatment** (Article I:1 of GATT'47), the principle of **National treatment** (Article III of GATT'47) and the imposed levy **not to be arbitrary or unjustifiable high** (Article X of GATT'47).

The European Commission needs to prepare the legislation for implementation of the proposed CBAM, that will enter into force on 1.1.2026. Once the detailed regulation is adopted it will be possible to give a more accurate assessment of their compliance with the WTO rules. One of the key requirements that need be met is respect of the principle of the **Most-favored-nation treatment** is that "any advantage, favor, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties" (Article I:1 of GATT'47). This in practice means that it is not allowed to discriminate between the same or like products originating from different countries. According to Bacchus (2021) the different treatment of the same or like products based on their carbon content originating from different WTO member countries is a violation of the Most-favored-nation treatment. Namely with the introduction of the CBAM there will be discrimination between products from different WTO member states, as a result of differences in climate policies between those countries, the amount of greenhouse gases emissions and the prices of allowances. Those differences will create different treatment of the imports from WTO members. EU importers might have to pay different amount for the allowances for imported goods based on the how the emission of greenhouse gases is treated in the country of origin of the imported goods. It is also possible that the levy for the same or like product is different between two manufacturers in the same country, depending on the actual amount of greenhouse emissions. Namely, if it is determined that for the same or like product, for example, a ton of steel, different amounts of greenhouse gases are emitted, then the levies to be paid will be different. European WTO regulators believe that there is no discrimination between different WTO members, although at first glance, one gets the impression that the same or like products from different countries and different manufacturers are treated differently. Namely, the European Commission position is that the products, regardless of the country of origin, will be treated equally, ie the total levy paid for the allowance will be equivalent to the amount of greenhouse gases emitted. This ensures equal treatment, regardless of the origin of the product.

The CBAM must also comply with the **National treatment principle** (Article III: 2 of GATT'47), which requires contracting parties to treat "the products of the territory of any contracting party imported into the territory of any other contracting party shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied,

directly or indirectly, to like domestic products". In order to ensure equal treatment of foreign and domestic products, it is necessary for the allowances in the ETS to be equal to those in the CBAM, ie the levies for imported and domestic products should be equal. The fact that such a levy will apply to both domestic and foreign goods can be used as an argument that this mechanism is in line with the WTO National treatment principle. However, in order this measure to be fully in compliance with WTO, it will be necessary the fiscal burden on domestic and foreign goods to be equal. It is also required to determine the actual greenhouse gases emissions for the imported products as well as the equal charge for the allowance per metric ton of CO₂ equivalent. European legal experts consider that ETS and CBAM are harmonized and thus ensure equal treatment of domestic and imported goods.

In order CBAM to be fully in conformity with WTO, it is necessary to **comply with Article XX of GATT'47**, according to which "measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination". This means that the levies related to this mechanism must not present an unjustified financial burden and should not have a negative impact on the volume of imports.

Some legal experts (Bacchus, 2021 p.3) disagree with the European Commission's position that the CBAM levies are not a fiscal instrument, but an economic policy measure. The purchase of allowances for imported goods, according to these legal experts, fall into the category of customs duties and other charges and their introduction will exceed the level of ceilings contained in the WTO Schedules of Concessions of the European Union. This will be breach of the obligations stipulated in the Article II:1 of GATT'47. On the other hand, European legal experts have a position that such a measure is not a customs duty and therefore the introduction of CBAM will not breach the commitments of the EU. But it would not be a surprise if some WTO members did not accept such an interpretation and use the WTO dispute settlement mechanism to prove that CBAM is not in compliance with WTO.

The United States, Canada, Japan, China, India, Brazil, South Africa, including the least developed countries, have already expressed concern about the EU's introduction of CBAM. There is fear that CBAM could be used as a protectionist tool against foreign competition.

According to initial estimates, Russia, China, Turkey, Great Britain, Ukraine, South Korea, India, Serbia the United States and UAE will be most affected by the introduction of such measures.

Table 1: Top 10 sources of EU imports of CBAM goods, by source country, 2020

	Total EU goods imports (millions of dollars)	CBAM goods	
		Total EU imports of CBAM goods (millions of dollars)	Percent of total EU goods imports
Russia	116.558	8.576	7,4%
China	471.218	5.635	1,2%
Turkey	76.619	5.401	7,0%
United Kingdom	205.541	5.401	2,6%
Ukraine	20.178	3.183	15,8%
South Korea	54.115	2.931	5,4%
India	40.521	2.780	6,9%
Serbia	13.160	1.434	10,9%
United States	248.976	1.394	0,6%

United Arab Emirates	10.610	1.082	10,2%
Total	1.257.496	37.817	3,0%

Note: Exchange rate applied is as of December 31, 2020 (€1=\$1.2271)

Source: Gary Clyde Hufbauer, Jisun Kim, and Jeffrey J. Schott: Can EU Carbon Border Adjustment Measures Propel WTO Climate Talks? Washington: Peterson Institute for International Economics, 2021 p.6

The European Union prefers adoption of the international instrument that will define the rules in international trade dealing with the reduction of greenhouse gas emissions. If no consensus is reached by 2026 on amending WTO-administered regulation to provide a clear legal basis for introducing such a mechanism, it should be expected that some WTO member states will initiate proceedings before the WTO Appellate Body. Certain bilateral measures could be triggered too, as a response to the implementation of the CBAM. Those bilateral measures will target the EU export.

Determination of the levies on the greenhouse gas emission contained in the imported products

The amount of the levies will depend on the amount of greenhouse gases emitted in tons of CO₂ equivalent (CO_{2e}) and the price per metric ton of CO_{2e}.

$$BL = Q_{CO_{2e}} \times P_{mtCO_{2e}}$$

BL - border levy

Q_{CO_{2e}} – quantity of emitted greenhouse gases expressed in CO_{2e}

P_{mtCO_{2e}} - price of metric ton of CO_{2e}

The first element for calculating of this levy is the quantity **of emitted greenhouse gases expressed in CO_{2e}**. It is complex task. The production of the same product (for example 1 ton of cement) can emit different quantity of greenhouse gases depending on the technology, production process, raw materials and energy used. In order to determine the quantity correctly, it is necessary to use a methodology that will calculate the **actual greenhouse gas emissions**. At the moment the EU ETS does not implement such a methodology. The emissions per unit of product are equal for all producers, regardless of the actual greenhouse gas emissions. In practice this means that all manufacturers for one ton of cement steel should have the same number of allowances, regardless the actual greenhouse gas emissions. The verification of the quantity of emissions of the greenhouse gases is a complicated process and opens up possibilities for different interpretations.

The proposed CBAM outlines three methodologies for determining the quantity of greenhouse gases emission (European Commission 2021b Annex III). The first methodology that is preferred is based on **actual greenhouse gases emissions** generated during the production of imported products. However, in order to be able to use this method it is necessary the installation to be included in the CBAM database. The exporting country should establish a body that will be in charge of verifying the data and monitoring the greenhouse gas emissions. Determining the actual greenhouse gas emissions will have a large positive environmental impact and will contribute to fair competition. In the first phase of CBEM, which includes raw materials, their semi-finished products and electricity, this methodology could be more easily implemented, but in later stages when the products that contain indirect emissions (so called downstream emissions), the implementation will be more complex, will require highly complex data and will be more difficult to be administered.

The second methodology for determining the quantity of emitted greenhouse gases is based on the **default value** calculated **based on data from third sources or the literature**. The

importers will face the situations when they pay for smaller or higher quantities of greenhouse gases than the actual. However the implementation of this methodology is simpler and the administrative costs are lower. The downside is that this methodology might allow the leakage and could create uneven playing field.

The third option for determining the quantity of emitted greenhouse gases will be used when there is no data on the current emission, nor data from secondary sources. The **default value** of greenhouse gas emissions will be determined **based on the 10% worst performing EU installations**. This methodology is not providing incentives for the producers to reduce the greenhouse gas emissions and could be arbitrary and be seen as discrimination practice.

The second element for just calculation of CBAM levy on the greenhouse gas emission for the imported products is the **price of allowance for emission of one metric ton of CO_{2e}**. In order CBAM to comply with WTO regulations this price should be equal to that paid by European companies. The CBAM should replicate the ETS, and the only difference between the two mechanisms should be that the ETS allowances will be purchased by European producers, while the CBAM allowances will be bought by importers. The European Union plans to set the price of allowances in the CBAM on the basis of the weekly average auction price through the ETS for European manufacturers.

But here are some challenges that need to be overcome by 1.1.2026 when the CBAM will be implemented. Namely, on April 1, 2021, only 19 countries on the European continent had introduced greenhouse gas emission allowances, but the price varies greatly from country to country, ranging from 0.07 euros per ton of CO_{2e} in Poland to 116.33 euros in Sweden.

Table 2: Carbon Tax Rates, Share of Covered Greenhouse Emissions, and Year of Implementation (as of 2019)

	Carbon Tax Rate (per ton of CO _{2e})	Share of Jurisdiction's Greenhouse Gas Emissions Covered	Year of Implementation
Denmark (DK)	€23.78	35%	1992
Estonia (EE)	€ 2.00	6%	2000
Finland (FI)	€62.00	36%	1990
France (FR)	€45.00	35%	2014
Iceland (IS)	€29.72	55%	2010
Ireland (IE)	€33.50	49%	2010
Latvia (LV)	€12.00	3%	2004
Liechtenstein (LI)	€85.76	26%	2008
Luxembourg (LU)	€20.00	65%	2021
Netherlands (NL)	€30.00	12%	2021
Norway (NO)	€58.59	66%	1991
Poland (PL)	€0.07	4%	1990
Portugal (PT)	€24.00	29%	2015
Slovenia (SI)	€17.30	50%	1996
Spain (ES)	€15.00	3%	2014
Sweden (SE)	€116.33	40%	1991
Switzerland (CH)	€85.76	33%	2008
Ukraine (UA)	€0.25	71%	2011
United Kingdom (GB)	€21.23	23%	2013

	€35.91	34%	
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Source: Tax Foundation <https://taxfoundation.org/carbon-taxes-in-europe-2021/> (accessed on 3.3.2022)

The European Union needs to reform this system by 2026. Firstly, it is necessary all EU member states to be included in ETS, the price should be harmonized (to be equal for all countries) and thirdly, all greenhouse gases should be included and their conversion into metric tone of CO₂ equivalent should be defined. The large differences that exist, not only represent an obstacle to the correct determination of this levy on goods impored into the Union, but could also make distortions within the Single Market. European companies could relocate production to EU member states that have much lower price for allowances. At the moment, the possibilities for such distortions are minimal because the allowances are free of charge, and only small quantities are traded on the secondary market.

The European Commission also needs to decide how will treat the difference between the official price per tone CO_{2e} and the price on the secondary market. Companies that have surplus the allowances can sell them to companies that need them. The price per ton of emitted CO_{2e} on the secondary market on April 5, 2022 was 80.69 euros (<https://carboncredits.com>, accessed on 5.4.2022). If this price is compared to the average price of allowances of EU member states which is 35.91 euros (Tax Foundation accessed on 3.3.2022) it can be noted that the difference is quite large. The difference between the official prices and those on the secondary market may provoke reactions from European companies that lack allowances and are buying them on the secondary market at a much higher price. Namely, they can complain about the fact that the importers of foreign products are paying lower prices for their allowances and that domestic producers are discriminated.

Figure 2. EU Carbon Permits



Source: Trading Economics, <https://tradingeconomics.com/commodity/carbon> (accessed 12.04.2022)

An additional challenge are the different international prices per ton of carbon dioxide equivalent (CO_{2e}). Namely, the differences of the market prices for the allowances in the

different countries are huge. As can be seen from Table 3, these differences range from 1: 4. This means that the producers of certain goods will pay different prices depending on where the goods were produced. This is discrimination, according to the principle of the most favored nation, which requires all countries to be treated equally. The European Commission should answer how it will treat products that have paid for greenhouse gas emissions, but at much lower prices than European ones.

Table 3. Price of 1 ton of CO₂ equivalent emission

Carbon Prices	5.4.2022
European Union	€80.16
California	\$30.83
Australia	\$30.50
New Zealand	\$76.05
South Korea	\$17.23

Source: https://carboncredits.com/?sl=carbon-credits-home-ad&gclid=EAlaIqobChMlluPp_enu9QIVZftjBx022AYAEAMYAyAAEgl9UvD_BwE, accessed on 5.4.2022

The European Commission, in order to create a level playing field and to avoid discrimination between countries, has taken approach that if the producers prove that they have already paid for the allowance for carbon emission in their country, the levy to be paid in the EU will be reduced in equal amount that they have already paid in their own country.

There is also a second option that is best for the EU, and that is to achieve harmonization of official prices for greenhouse gas emissions globally. But at this point no consensus can be reached on the obligation to implement a greenhouse gas emission levy. Price harmonization can be on the agenda of international negotiations only after the basic regulation for the establishment of such border mechanisms is adopted.

The transition period for the implementation of CBAM and administrative procedures

The European Green Deal envisages a transition period until 1.1.2026, when it will start charging for allowances for imported products. The first phase will start on 1.1.2023 and will last until 31.12.2025. During this period, importers will have to report the greenhouse gas emissions for the imported goods that are part of CBAM and will not be obliged to buy allowances. Some countries might decide to introduce similar instruments or mechanisms within their economic policy in order to reduce the impact or eliminate the introduction of such levies for their companies. The European Commission will provide technical assistance to the least developed and developing countries that will support their transition.

The mechanism of distribution of allowances for emitted greenhouse gases for imported goods, from an administrative point of view, will be big challenge. First European Commission needs to determine the amount of allowances for greenhouse gases for the imported goods at the global level. Next step is the geographical allocation of the allowances based on the origin of the imported goods. This phase is extremely important. The process should not have the characteristics of a quantitative restriction on imports, and should not create unjustified discrimination among countries that will result in restriction of their exports to the EU due to the lack of allowances. Inadequate implementation of this process can contribute to the restriction of imports, discrimination, and different treatment of exporting countries.

CBAM stipulates obligation importers to declare the amount of allowances that are used in the previous calendar year by May 31 of the current year and if there are not used allowances

they should be returned. The legitimate question is what will happen if an importer who bought such allowances didn't use them with aim restrict imports and gain benefits from limited quantities of goods on the market. The damage caused to the exporters due to the lack of allowances can not be compensated, and therefore is big concern that the CBAM can be used as mechanism for unjustifiable "green protectionism".

An additional challenge is the complexity and cost associated with administering the CBAM. Additional burden on imports will be the result of technical and administrative procedures related to monitoring, reporting and verification of emissions embedded in imported products.

Other international implications of the introduction of CBAM

One of the challenges that the European Union will face internationally will be the reaction related to the allocation of revenues from the allowances for the imported goods. Namely, if the exporting country has a price that is equivalent to the EU price, then the revenues from such measure go to the budget of the exporting country. The other extreme is if the exporting country has not introduced such a measure, then the entire revenue from the allowances will go to the EU budget. If the exporting country has a price for greenhouse gas emissions that is lower than the European one, then part of the revenues will go to the budget of the exporting country, and the difference to the EU budget. This will be politically very unpopular with the least developed and developing countries, which actually have much lower greenhouse gas emissions than the developed countries, and are therefore less responsible for the climate change. It is practice that developed countries to provide support and assistance to the less developed countries to become more integrated in international trade. In order to support this process, the EU has given the least developed and most of the developing countries a differential and preferential status, ie the import into the EU of goods originating from these countries is duty free. Europe needs to find a mechanism to use the revenues collected for goods imported from these countries through CBAM to be invested in projects that will support the transition and implementation of more clean in these countries. That will be in line with goal of EU to reduce emissions on global level.

The ambitious plan to reduce greenhouse gases poses another challenge for European companies. For example, if an aluminum producer from country "A" does not pay a levy for emissions, and a manufacturer from country "B" that is an EU member, pays such a levy, an has increased costs, and therefore may not be competitive with the manufacturer from country "A". One of the solutions could be to reimburse such levies on exported products, but it will be in contradiction with the spirit of the European Green Deal, which aims to stimulate companies to reduce greenhouse gas emissions globally.

The best solution that a similar mechanism is introduced globally. Therefore should be expected the EU to initiate and pursue intensive diplomatic activities for adoption of an international regulation in this area.

Conclusion

The Carbon Border Adjustment Mechanism (CBAM) is a significant step forward, and is the first mechanism implemented to create fair competition between goods originating in countries where greenhouse gas emission levies have been implemented and goods originating from the countries where such levy doesn't not exist. This mechanism, if properly implemented, will contribute to achieving targets for reduction of the greenhouse emissions on the global level. The most ideal solution would adopting international regulation, under the auspices of the WTO, which would define the rules for the introduction of such measures. But due to the differences that exist, both within the developed countries and between the least developed

and developing countries and developed countries, it is very difficult to expect such an agreement to be reached in the next few years. Of course, by adopting the CBAM the European Union is initiating a wider international dialogue and is encouraging other countries to consider introducing similar mechanisms. The CBAM is one of the EU's key instruments for achieving Europe's ultimate goal of carbon neutrality by 2050 and for influencing other countries to introduce similar policies and instruments.

The number of sectors covered by this mechanism is limited, but it should be expected that the European Union will gradually expand the list of goods and services for which the allowance will be required. In parallel, an increase in the price of one tone of carbon dioxide equivalent should be expected.

Exporting countries and companies to the European Single Market should closely monitor this process and take appropriate measures and policies. The transformation to a carbon neutral economy should also be used to increase the competitiveness of national economies. Proper implementation of such mechanisms is of particular importance for the preservation of planet earth for future generations.

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