

## ROMANIA TOWARDS A GREEN TRANSITION: CARBON BORDER ADJUSTMENT MECHANISM (CBAM) REGULATIONS

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### Abstract

*The paper aims to highlight the steps our country needs to take to achieve green economy and industry, defining the new adopted regulations regarding the greenhouse gas emissions embedded in goods imported. The Carbon Border Adjustment Mechanism (CBAM) is a price adjustment dedicated to goods carrying CO<sub>2</sub> emissions that enter the European Union. The main purpose of CBAM is to prevent the risk of carbon leakage and by encouraging the reduction of emissions by operators in third countries (countries outside the EU), global carbon emissions should be reduced. Carbon Border Adjustment Mechanism is an instrument used to achieve a greener industry, economy and life, a tool to a green transition. The paper presents the basis and decisions made in time and seeks to identify the measures that need to be taken so that we can all contribute to what it means to decarbonize the European Union.*

**Key words:** carbon, European Union, emissions, green transition, regulations.

### INTRODUCTION

Extreme climate events in increasing numbers perfectly define global warming although there are thesis and theories that do not accept "global warming" and place numerous phenomena like floods, droughts, extreme precipitation, heat waves, forest fires, shifting and melting glaciers, rising sea levels, etc., on the cycle of periods from glaciations to overheating, over 4.6 billion years. Clearly the scientific evidence shows that the risks of irreversible and catastrophic changes would increase significantly if global warming were to exceed pre-industrial levels by 2°C or at least 1.5°C (The Ministry of Research, Innovation and Digitalization, 2023).

### MATERIALS AND METHODS

The year 2024 puts the European Union as a global economic power to actively engage in tackling greenhouse gas (GHG) emissions, maintaining a 31% decrease from previous years' levels.

Human activities such as fuel burning, haphazard agriculture forcing deforestation have become unhindered producers of carbon, methane, nitrous oxide and fluorocarbon emissions (Borzykh et al., 2023; Cadar et al., 2023).

These greenhouse gases store heat from the earth's surface and prevented it from being released, causing global warming. The global warming is a continuous temperature rise in Earth's temperature. Studies have shown that each year, we register a higher average temperature.

The Sixth IPCC Climate Change Synthesis Report (IPCC) published in March 2023 shows that projections of an increased global temperature average from 1.4°C to 4.4°C.

The rise in global average temperature is putting freshwater resources at major risk through accelerated melting of glaciers. The prolonged drought of the last 10 years has caused large financial losses to all countries with developed agriculture and reduced possibilities to recover water reserves in the soil to ensure good or average yields for the global food supply over time.

Reducing pollution, conserving carbon dioxide in the soil by 2030 are just some of the projects on the UN Agenda 2020-2030.

### RESULTS AND DISCUSSIONS

In order to create a greener and more prosperous future, legislative initiatives by individual countries are needed, which in theory should create a robust and well-defined resilience plan.

Climate change is of interest to all. It affects almost every socio-economic sector, from agriculture to tourism, from infrastructure to health. It impacts on strategic resources such as water, food and energy. They slow down and even threaten sustainable development, and certainly not only in developing countries.

The cost of inaction is high and will become even higher if we do not act immediately and decisively.

Climate change is an imminent threat to the world we live in, but we can all do something about it: combat it and build a better future.

Under the Kyoto Protocol, the European Commission has presented the Green Deal as the most ambitious White Paper proposal of the entire globe with clear measures to reduce greenhouse gas emissions by 55%, decarbonising the EU economy by 2030, according with the Paris Agreement (EC, 2019). Ensuring a balance between the economic and social situation must consider the essential aspects of governance and civil society, inclusiveness and recognition of the necessary interconnections between its goals and targets, make the Green Deal a precise guide to reducing the pressures posed by global warming worldwide.



Figure 1. The EU Green Deal Structure  
<https://prod5.assets-cdn.io/event/5366/assets/8399064725-d9f9a42933.pdf>

The Stern review (2006) shows that the fight against global warming would cost around 1% of global GDP each year. But if urgent action is not taken, the cost would rise to 5% of global GDP every year.

Estimates in 2024 under climate action show that financial efforts to combat global warming could amount to 20% of global GDP.

It would take much less of the world's total GDP to invest in a low-emission economy.

In December 2015 at the 12th Conference of the Parties (COP 21) the first agreement on climate change was adopted. Carbon emissions are the main drivers in climate changes and the biggest impact on climate.

CBAM (Carbon Border Adjustment Mechanism) is a European Union mechanism that aims to prevent the risk of greenhouse gas leakage that can occur when EU companies move their production to countries with less stringent climate policies or when products of European origin are replaced by similar imported products, but whose production has directly or indirectly incorporated greenhouse gas emissions (Deloitte Romania, 2023). This mechanism is also part of the EU's efforts to encourage decarbonization abroad, and push for the global pricing of greenhouse gas (GHG) emissions.

The main industries that are polluting are the production of cement, fertilizers, iron, steel chemicals, energy. These types of industries are required, that starting with 2026, to pay a tax under the name of "CBAM Certificate" in order to cover the carbon dioxide emissions.

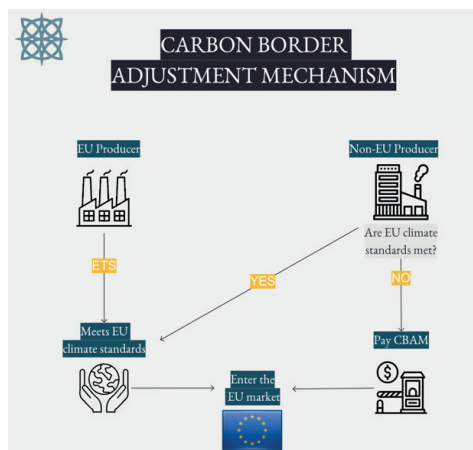


Figure 2. How CBAM works  
<https://www.apalagroup.com/angles/eus-carbon-border-adjust-mechanism-cbam-impact-on-asia>

This mechanism should guarantee that importers of pollutant-intensive products into the EU pay

the same price for carbon as domestic EU producers.

The CBAM rules will be implemented in several stages, starting with a transitional period that came into force from 1 October 2023. The period from 1 October 2023 to 31 December 2025 is defined as a transitional period with no obligation to pay a fee. After completion of the transition period, the CBAM is fully operational as of 2026. The major concern will be what CBAM reporting entails and which products are covered. There is a CBAM fee which brings with it the methodology of calculation. Priority will be given to those technologies that will lead over time to a reduction in carbon emissions. Perception of the readiness of the socio-economic space to implement CBAM, "Fit for 55" contains a set of rules, directions and proposals to meet the European Union's climate goal of at least 55% emission reductions by 2030.

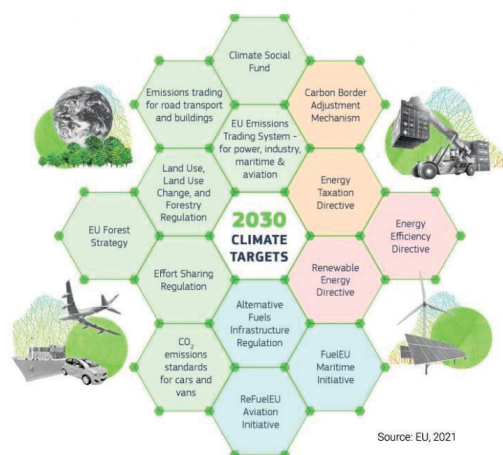


Figure 3. Understanding "Fit-for-55", (EU, 2021)

The "Fit for 55" package is a set of proposals to revise and update legislation to ensure that EU policies are in line with the climate targets agreed by the Council and the European Parliament. "Fit for 55" is defined as the European Union's objective to reduce net greenhouse gas emissions at least 55% by 2030. "Fit for 55" is considered a tool used by the European Union to a greener transition. The main purpose of "Fit for 55" is to turn the goals into laws.

The package of proposals aims to put in place a coherent and balanced framework to achieve the climate targets, as follows:

1. Providing an equitable and socio-balanced transition;
2. Innovation and competitiveness in EU industry and with third country operators;
3. European Union is recognised as a leader in climate change fight.

The proposals in the "Fit for 55" package were first presented and discussed at technical level in the Council working groups responsible for the specific policy area. Subsequently, they were discussed by Member States' ambassadors to prepare the ground for the agreements to be reached by the 27 Member States. Under the ordinary legislative procedure, the Council then engages in negotiations with the European Parliament to reach a common agreement with a view to the final adoption of the legislative acts. The "Fit for 55" legislative package:

1. Reform of the EU Emissions Trading Scheme (EU ETS) - is a carbon market based on a cap-and-trade system for energy-intensive industries and the power generation sector.

This is the main instrument used by the European Union to reduce emissions. Since 2005, EU emissions have fallen by 41%.

The "Ready for 55" package aims to reform the EU ETS to make it more ambitious, so the proposals are as follows:

- Extension to emissions from shipping;
- Faster reduction of emission allowances in the scheme and phasing out of free allowances for certain sectors;
- Implementation of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) worldwide through the EU ETS;
- Increased funding for the Modernisation Fund and the Innovation Fund;
- Review of the Market Stability Reserve.

The programme "Fit for 55" is considered to be a support for most affected citizen and industries and to boost renewable sources for life, energy, transport and industry.

A new stand-alone emissions trading system has been created for buildings, road transport and fuels for other sectors. The Environment

Council adopted a general approach on the EU ETS review in June 2022.

The Parliament of the European Union and the Environment Council reached an agreement to reduce emissions in the EU ETS sectors to 62% by 2030, compared to the proposed 61% target. A (provisional) political agreement was also reached on the revision of the rules of the EU Emissions Trading Scheme for aviation.

The agreement is a guarantee that aviation is committed to and guarantees the EU objectives that are part of the EU ETS.

In December 2022, the Council adopted a decision on the notification of offset requirements under CORSIA. CORSIA (Carbon Offset and Reduction Scheme for International Aviation) is a global scheme to offset CO<sub>2</sub> emissions from international aviation.

For the period 2024-2027, Romania wants to increase the national perspective of balanced economic development through the funding negotiated under the National Recovery and Resilience Plan (NRRP). Romania will have at its disposal almost €80 billion (€46.3 billion in non-reimbursable funds from the EU Multiannual Budget for 2024-2027 and €33.5 billion from the NextGenerationEU (economic recovery fund). Priorities are projects for: Cohesion, agriculture and infrastructure (Cohesion policy €18.57 billion), Common Agricultural Policy (€12.5 billion for direct payments and €6.22 billion for rural development), Fair Transition Fund (€7.6 billion). Our future is looking closely at the open and developed economies of the world.

In a world where EU carbon regulations are constantly evolving, it is important to have clear information and support in complying with the new regulations.

Expectations are very high as we all want economic predictability, fair and concrete partnerships, a return to normality, if we can still hope for that.

## CONCLUSIONS

A memorandum has been signed by all countries of the world that every five years each country will submit a transparent report showing the nationally determined contributions to economic

and social climate change that have resulted in climate change mitigation.

Measures, such as financial support from each country under the Climate Change Plan should highlight water conservation, crop rotation, public planning, public awareness, raising the height of dams, increasing renewable energy, forest conservation, associated with the negative effects of climate change (CCS, 2023)

Ratification of the agreement requires that at least 55% of total global GHG emissions be formally ratified after Paris, globally.

Of course, the Paris Agreement of 5 October 2016 ratified the effort of all countries in the world with the ambition to decrease global GHG emissions by more than 50%.

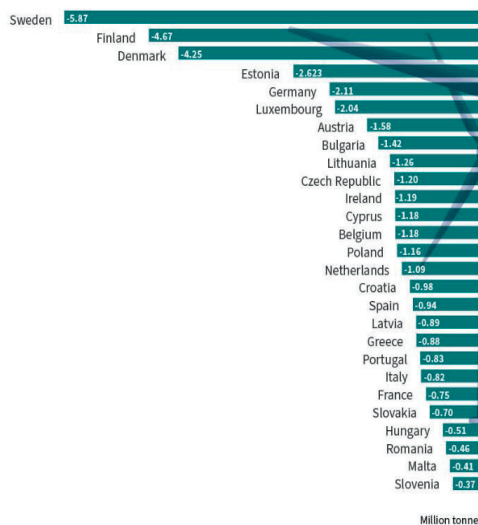


Figure 4. Quantity of emissions avoided due to renewable energy, million tons of CO<sub>2</sub>  
 Fit for 55: how the EU plans to boost renewable energy - Consilium (europa.eu)

We are today in 2024 in front of clear evidence that every country has received the financial contribution dedicated to climate change under the Paris Agreement. In the countless conferences I have attended in many of the world's countries, I have found that the Renewable Energy Directive by 2030 appears to be the most ambitious with reversible results.



Figure 5. EU targets for 2030

Fit for 55: how the EU plans to boost renewable energy - Consilium (europa.eu)

A large part of Romania's carbon emissions is produced by the coal industry, which is causing our country to reconfigure this type of industry. Cars and trucks produce around 15% of the EU's CO<sub>2</sub> emissions, so reducing them can make a significant contribution to fighting climate change. EU legislation sets clear emission limits that manufacturers must respect.

Studies on the influence of climatic factors on the various modes of transport as well as on new technologies resilient to the effects of climate change are essential to ensure that Romania's transport system will not be affected by expected or unexpected climate change.

Mobility planning policies need to be improved and alternative and environmentally friendly means of transport need to be supported, especially in urban areas.

Romania's green economy transition needs to focus on sustainable energy. The country has signed up to the Paris Agreement and targets a 40% reduction in greenhouse gas emissions by 2030.

Romania was the first EU country to achieve the bloc's target of 20% renewables share ahead of the 2020 deadline, but investment in renewable energy has stalled in recent years due to a lack of commitment (EBRD, 2022).

Soil energy, hydropower, wind energy, biomass energy contributes at least one third of total EU energy consumption for electricity generation, transport, heating and cooling.

Now, more than ever, we need to realise that the climate and environmental crisis is intensifying year by year.

The droughts of recent years have dramatically reduced agricultural production, putting great obstacles in the way of future agricultural planning. Devastating fires in European countries, as well as around the world, have

brought the resilience of global climate disasters into focus. Floods, too, have posed serious problems in Southern European countries (Greece, Italy, Cyprus, Spain). The danger is common and as a result every country must contribute to our adaptation, that of all mankind. Climate neutrality is no longer just a story with frothy declarations, it needs a White Carta of the Responsibilities of all countries in the world.

I hope we can all contribute to what decarbonisation of the European Union means. Of course, this is not easy, but Romania is easily and safely on the path to achieving the "Fit for 55" targets.

Sustainable Development is about ensuring a balance between the economic and social dimensions considering the essential aspects of Government and Civil Society, inclusive and recognising the necessary interconnections between its objectives and targets.

The essence of the sustainable development of human society lies in the current and future management of its natural, energy, material, and information resources in relation to the objectives of economic growth and ensuring an increasingly high quality of environment and life.

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Year after year, the Foundation "Group for Ecological Initiative and Sustainable Development", a public utility organization under the auspices of the Ministry of Environment, headed by its President, PhD. Eng. Cristiana Sirbu and Mr. Ion Iliescu, the Founding President, campaigns for better environmental protection and the fight against climate change. In almost 20 years of activity, we have carried out reforestation campaigns, forums for sustainable development with partners from civil society, academia, the Romanian Government, the European Union, World Watch Institute, Earth Policy.

The paper is a sum of all themes and subjects of discussion approached in the conferences, seminars and online events attended in the last years.

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