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## **CARBON REGULATION MECHANISM AT THE BORDER AND ITS EFFECTS ON TURKEY**

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**Abstract:** *One of the main instruments for achieving the greenhouse gas emission reduction target set by the European Union with the European Green Deal is the Border Carbon Regulation Mechanism. With this mechanism, the EU aims to protect Europe's competitiveness against the cost of green transformation on the one hand and to increase the effort to combat climate change at the global level on the other.*

*While the Border Carbon Regulation Mechanism aims to align the competitiveness of high-emission products, which are generally produced at lower cost, with alternative products that can be produced with relatively lower emissions but at higher cost, its essence is a tax on imported products based on their carbon content.*

*Carbon regulation at the border will certainly affect Turkey's foreign trade relations with the EU, along with major economies such as China, Russia, India and the US. Research shows that sectors exporting from Turkey to the EU will be affected by increased costs. According to different scenarios, GDP would be 5.7 per cent and 6.6 per cent higher, respectively, and greenhouse gas emissions would be 16.5 per cent and 15 per cent lower, respectively, if measures are taken in line with the EU's green economic transformation.*

*In this study, can the European Green Deal be considered as a risk for Turkey as well as a brand new opportunity as a means of transformation aiming at sustainable development? Can significant improvements in greenhouse gas emissions be achieved in this way? Can it be an important alternative to Turkey's search for a sustainable development strategy? The answers to these questions have been investigated.*

### **1. INTRODUCTION**

The "New Green Deal" refers to the revitalisation, with the addition of the word "Green", of the comprehensive public policy that Franklin Roosevelt introduced in 1933 when he became president in the United States, whose economy and social life had been turned upside down by the Depression of 1929, and which basically aimed at increasing employment and expanding the scope of social welfare. The concept was first introduced into political and academic life in 2007 by Thomas Friedman, a well-known writer for The New York Times, and since then it has become increasingly important in our lives - so much so that the

European Union now recognises it as their official policy, based on the decision taken by the European Council in 2019 ( ADAMAN F.,). The transition to the Green New Deal comes with serious costs and questions to be resolved.

The famous historian Yuval Noah Harari, in his book titled 21 Lessons for the 21st Century, stated that the three most important risks threatening humanity are climate change, robotisation and unemployment, nuclear and cyber attacks (Harari, 2018:19). In recent years, the World Economic Forum has also listed climate change among the top five global risks in the "Global Risks Report" and emphasised that climate change has not been effectively combated. When climate change is not effectively combated, economies will be negatively affected by this risk in different ways, the costs caused by these risks will lead to losses in the added value provided by countries and it will be very difficult to ensure a sustainable life for all living things (Uyduranoglu, A.),

This initiative is not only an environmental strategy as it includes 'green' in it, but as Yeldan et al. (2020) state, it is a sanction argument for the new international trade system and the revision of sectors that affect global climate change. It is based on the goal of reorganising holistic and systems. This reorganisation stands out as an effective force in the fields of industry and trade. The consensus is considered as a rewriting of the rules of the next generation trade system and a new generation growth strategy and is considered as a kind of new generation industrial revolution (Yeldan, 2020: 19).

## **2. GREEN CONSENSUS**

The European Green Deal put forward by the European Commission at the end of 2019, as the long-awaited final climate action plan of the European Union, aims to decarbonise Europe by 2050 and envisages a fundamental transformation of the economy and the achievement of climate neutrality on the European continent. In line with the goal of a broad and deep transformation, the European Union needs to strike a reasonable balance between risks and opportunities among member states and regions. (Catuti, Kustova and Egenhofer, 2020). The Green Deal, as the new growth strategy of the European Union, cannot be said to be designed only to improve the welfare of people; as part of the new growth strategy, making Europe climate neutral and protecting natural habitats will not only reflect positively on people, but also on other living beings, the economy and the planet in total, and will make their welfare sustainable. It aims to be climate neutral by 2050; protect human life, animals and plants by reducing pollution; help companies become world leaders in clean products and technologies; and ensure a fair and inclusive transition (European Commission, 2019a).

While researches reveal that emission trading system and carbon tax may be the cheapest way to reduce CO<sub>2</sub> emissions, it is thought that carbon pricing will also encourage new and innovative technologies. Emission trading system and carbon tax, which are the two most widely used applications of carbon pricing, may be preferred by different countries or regions due to their unique advantages and disadvantages.

### **2.1. Key Objectives and Policies**

The main objective of the European Green Deal is to reduce carbon dioxide emissions and accelerate the transformation of the energy system. The Border Carbon Regulation Mechanism is a policy of the European Union to strengthen its global leadership role in the fight against climate change and to reduce carbon emissions. This mechanism aims to ensure both environmental justice and equality of competition in international trade by introducing a carbon content-based pricing system for products imported from outside the European Union.

This mechanism aims to balance the environmental standards faced by local producers and imported products, thus creating a fairer playing field in achieving global climate goals.

As of 1 October 2023, the transition period started and the definitive period will start in 2026. During the transition period, the number of certificates and financial obligations will be calculated taking into account the actual emission values of facilities producing imported products and the EU's free allowances. The cement, iron/steel, aluminium, fertilisers, hydrogen and electricity sectors were selected due to their carbon leakage risks and high emission intensity.

**Table.1 Products covered by the Carbon Regulatory Mechanism at the Border**

<b>Sector</b>	<b>Material or product</b>
<b>Iron and Steel</b>	Primary forms of iron and steel, Hot rolled Hot rolled Coated hot rolled Forging, drawing and wire
<b>Cement</b>	Clinker Portland cement
<b>Aluminium</b>	Unwrought aluminium Unwrought alloy aluminium Aluminium products Alloy aluminium products
<b>Fertiliser</b>	AAmmonium Nitrate
<b>Electricity generation</b>	Electricity

Taking into account the carbon intensities of products imported into the European Union, trade intensities and the required embedded emission reference data, the European Commission has defined the scope of the SDCC as certain basic materials of the iron and steel, cement, aluminium and fertiliser sectors and electricity generation.

**3.HOW WILL THE EUROPEAN GREEN DEAL AFFECT TURKEY?**

It is important for Turkey to comply with the requirements of the European Green Deal in order to keep its trade relations with the EU sustainable and protect its export activities. Sustainability-oriented trade and green investments will help Turkey increase its competitiveness in the EU market and ensure successful co-operation in the long term.

Turkey did not ratify the Paris Agreement until October 2021 on the grounds that it would be an obstacle to receiving financial support for the renewable energy installations it needs to build to reduce greenhouse gas emissions. It was a correct interpretation that Turkey could not benefit from the Green Climate Fund because it was incorrectly categorised in the annexes of the Framework Convention in 1992 and that Turkey was unfairly treated while countries with higher national income were considered developing countries. However, under the Paris Agreement, the Annexes system has lost its former importance and it seems almost impossible to change the categories in the Annexes or to make an important exception decision for Turkey since it would require a consensus (Yeldan E, <https://tr.boell.org/tr/yayinlar>).

Turkey's European Commission, taking into account the carbon intensities of products imported into the European Union, trade intensities and the required embedded emission reference data, determined its scope as certain basic materials of the iron and steel, cement, aluminium and fertiliser sectors and electricity generation.

The official work on the Green Deal is being carried out under the coordination of the Ministry of Trade. As a result of a working group formed from ministries and interviews with

the business world, the "Green Deal Action Plan" came to us on 16 July 2021 as the most concrete output of these studies. The plan, which consists of 32 targets and 81 actions listed under nine main areas, also presents an implementation schedule. As presented in the Green Consensus Action Plan Circular, the working group that has prepared the Action Plan will continue to work during the implementation of the Plan and specialised working groups may be established if needed.

In the calculation for Turkey, which is also included in TIM's report, the cement and glass sector faced a carbon tax of 12.3% in exports to the EU with 2020 carbon emission values, while 1.1% for paper products, 1.2% for aluminium, 2.9% for iron-steel, 1.2% for refinery petroleum products, and 2% for chemical products and fertilizers. The EU accounts for more than 50% of the export market of the Turkish aluminium sector and the net zero carbon emission policy should be quickly adopted. <https://www.linkedin.com/pulse/al%C3%BCminyum-sekt%C3%B6r%C3%BCn%C3%BCn-ye%C5%9Fil-mutabakat-ve-sinirda-karbon-erdem-erdin%C3%A7-2f/?originalSubdomain=tr>

**Table.2 Turkey's Exports**

<b>Years</b>	<b>Export to the World(Million USD)</b>	<b>Exports to the European Union (Million USD)</b>	<b>%</b>
<b>2018</b>	167.921	72.847	43
<b>2019</b>	180.833	76.726	42
<b>2020</b>	169.658	70.028	41
<b>2021</b>	225.291	93.082	41
<b>2022</b>	254.170	103.049	40,5
<b>2023</b>	255.777	104.289	40,7

**Source:** <https://www.tuik.gov.tr/>

Turkey, which obtains more than 70 per cent of its foreign trade volume from the European market. Since Turkey has better average emission values than non-EU countries, there is an opportunity for domestic firms to gain market share in exports (Keleş, 2021:25).

Turkey, whose most important trading partner in terms of exports is the European Union, will inevitably be affected economically and commercially with the transition to carbon regulation at the border. The European Union, which imposes a customs/carbon tax or a similar financial burden on carbon-rich imports, will try to prevent carbon leakage and provide a competitive balance between local producers and foreign producers. Studies show that the European Union carbon price will bring an additional financial burden of approximately 1 billion dollars per year to Turkey's trade, and instead of bearing the cost, it would be appropriate to further strengthen trade relations with the European Union by transferring it to environmentally friendly investments (Keleş, 2021; Diriöz, 2021: 113-114).

The Banking Regulation and Supervision Agency published the impact analysis study titled "Potential Effects of the European Union Border Carbon Regulation Mechanism on the Turkish Banking Sector Loan Portfolio".

**Table.3 Sectoral Information**

	<b>CEMENT</b>	<b>ELECTRICITY</b>	<b>FERTILISER</b>	<b>IRON-SEEL</b>	<b>ALUMINIUM</b>
<b>RATIO OF SECTOR EXPORTS TO TOTAL SECTOR PRODUCTION (%)</b>	21,6	0,8	6,5	56,9	52,8
<b>SHARE OF EXPORTS TO THE EUROPEAN UNION IN THE SECTOR'S TOTAL EXPORTS %2020</b>	11,2	84,2	22,9	31,5	52,6
<b>RATIO OF EXPORTS TO THE EUROPEAN UNION TO THE SECTOR'S TOTAL PRODUCTION (%)</b>	2,4	0,7	1,5	17,9	27,8

Source: <https://www.bddk.org.tr/>

According to the statement made by the BRSA, it is foreseen that companies producing with high emissions may face additional costs and competitive disadvantages in their exports to the European Union. It was stated that these additional costs and competitive disadvantages may have financial effects on the firms and may also lead to an increase in the credit risk of the financial institutions with which they have close relations. <https://www.bddk.org.tr/KurumHakkinda/EkGetir/18?ekId=114>

The "Green Consensus Action Plan" published by the Ministry of Trade was one of the first pioneering studies. The plan, which covers a total of 32 targets and 81 actions under 9 main headings, is a road map. With the plan, targets were set in many areas ranging from green maritime to green port practices, from the development of railway transport to the reduction of fuel consumption and emissions, and the widespread use of micro mobility vehicles. Combined Transport Regulation entered into force. With the regulation, which will play a key role in harmonisation with the European Green Deal, the term "green logistics" found its place in Turkish legislation for the first time. The regulation defines the scope of combined freight transport and green logistics activities. According to the Regulation, "Green Logistics Certificate" will be issued to enterprises engaged in combined freight transport. Another important regulation was made for Ro-Ro transport. With the Regulation on Supporting the Transfer of Cargo Carried by Road to Sea, the support package for Ro-Ro transport was announced. "Green Port Project" was implemented in order to bring more environmentally friendly port facilities to the country (UTA,2022:51).

Threats for Turkey are the carbon price turning into a trade barrier, clean energy, green raw material supply, access to green technologies, financing of green transformation. Opportunities are the integration and dynamism of the industry with the European Union, high sustainable energy potential, strong Green Organised Industrial Zone infrastructure.

The transport sector will need to increase its share of renewable energy to around 24 per cent by 2030 through the use of renewable and low-carbon fuels such as electrification, advanced biofuels or other sustainable alternatives. 80,000 trucks in the European Union are targeted to be zero emission by 2030 (ÖZCEYLAN, 2022:46).

## CONCLUSION

Opportunity for Turkey to become a leading country in low carbon steel production In an environment where possible trade restrictions on scrap metal and regulations originating from the US and the EU (carbon tax applications at the border) will enter into force in the near future, there is a risk of losing competitiveness on a global scale if the sector does not take action to accelerate its adaptation to new market conditions.

The Turkish crude steelmaking sector may face several competitiveness challenges due to rising raw material and energy costs and a possible shortage of scrap metal supply. Turkey's harmonisation with the European Green Deal will not only be a commercially significant development. It will require Turkey and the European Union to be much more engaged, working together, in constant dialogue and converging their strategies towards common goals.

If Turkey does not make a rapid transformation, it will be adversely affected by this situation. This is because Turkey, which realises approximately 60% of its total exports to the EU, especially in carbon-intensive sectors, will face a carbon tax at the border. This will create additional costs for producers and importers and weaken their competitiveness. In addition, if greenhouse gas emissions, which have increased by 130% in the last 30 years, are not reduced, Turkey will experience serious losses in exports to EU countries.

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# МЕХАНИЗЪМ ЗА РЕГУЛИРАНЕ НА ВЪГЛЕРОДНИТЕ ЕМИСИИ НА ГРАНИЦАТА И НЕГОВОТО ВЪЗДЕЙСТВИЕ ВЪРХУ ТУРЦИЯ

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*Ключови думи:* Турция, граничен механизъм за регулиране на въглеродните емисии, износ

*Резюме:* Един от основните инструменти за постигане на целта за намаляване на емисиите на парникови газове, определена от Европейския съюз с Европейската зелена сделка, е граничният механизъм за регулиране на въглеродните емисии. С този механизъм ЕС цели да защити конкурентоспособността на Европа от разходите за зелена трансформация, от една страна, и да увеличи усилията за борба с изменението на климата на глобално равнище, от друга.

Макар че механизмът за регулиране на въглеродните емисии на границата има за цел да приведе в съответствие конкурентоспособността на продукти с високи емисии, които обикновено се произвеждат на по-ниска цена, с алтернативни продукти, които могат да бъдат произведени с относително по-ниски емисии, но на по-висока цена, същността му е данък върху вносните продукти въз основа на тяхното въглеродно съдържание.

Регулирането на въглеродните емисии на границата със сигурност ще се отрази на външнотърговските отношения на Турция с ЕС, както и с големи икономики като Китай, Русия, Индия и САЩ. Проучванията показват, че секторите, които изнасят от Турция за ЕС, ще бъдат засегнати от повишените разходи. Според различните сценарии БВП ще бъде съответно с 5,7% и 6,6% по-висок, а емисиите на парникови газове ще бъдат съответно с 16,5% и 15% по-ниски, ако бъдат предприети мерки в съответствие с екологичната икономическа трансформация на ЕС.

В това проучване може ли европейската зелена сделка да се разглежда като риск за Турция, както и като съвсем нова възможност като средство за трансформация, насочена към устойчиво развитие? Може ли по този начин да се постигнат значителни подобрения в емисиите на парникови газове? Може ли тя да бъде важна алтернатива в търсенето на стратегия за устойчиво развитие на Турция? Отговорите на тези въпроси бяха проучени.