

CLIMATE CHANGE MITIGATION THROUGH FISCAL INNOVATION AND NEW FISCAL APPROACHES IN THE EUROPEAN DIMENSION*

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Abstract: The EU is facing increasing pressure to reform its fiscal framework to secure sustainable financing and ensure those climate commitments. This paper analyses the nature and impact of an EU climate tax in the context of globalisation, focusing on the interaction of the proposed EU-level climate tax with existing instruments such as the EU ETS and CBAM. The paper also addresses the question of whether it is possible to align the EU Climate Tax 2.0, how this could be done and proposes four concrete pillars for its design. Additionally, the paper reviews current significant climate-related instruments of both tax and quasi-tax character, adopted by selected member states or at the EU level. Finally, it discusses whether new fiscal instruments can bring sustainability and resilience and strengthen the EU's position as a global leader in green finance. Through this comprehensive analysis, the paper aims to analyse new approaches to environmental taxes so that they can play a truly effective and innovative role in climate protection and provide a pathway for the EU to adopt innovative real Climate Tax 2.0, based on the complex set of relevant factors.

Keywords: own resources; EU budget; fiscal innovation; climate tax; EU ETS, CBAM

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INTRODUCTION

Climate change cannot be ignored anymore. Protecting the planet against climate change is not free, however. On the contrary, climate protection is very expensive and requires the creation of large funds allocated for these purposes. It is important

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to realize that climate change is not limited to the territory of one or several countries, regions, or continents, but it is a global problem that can only be solved through a comprehensive, responsible approach that is highly coordinated and well thought out in advance. However, the first step is to stop denying it and to realize its consequences, which are becoming increasingly apparent and measurable. Only then will we be able to begin to address it effectively. In this context, it is necessary to consider what tools we have at our disposal to stop or slow down the climate change. We need to start talking openly about the fact that times have changed and climate protection is no longer just one of the modern issues of our time but has become a necessity. The objective factors causing it cannot be dismissed as non-existent. If anyone continues to deny this fact, it is not because they doubt the existence of ongoing climate change on the planet, but because climate change is denied for economic reasons. It is precisely the financial and fiscal aspects of climate protection that form the crux of the matter, on which the fight against climate change currently stands or falls. We need completely new approaches to fiscal policy. We cannot regulate the present for a successful future with a legal system created in the past, but we must focus on fiscal innovations that will be ready to reflect dynamic developments in this area. Glaciers are melting, sea levels are rising, and some places on the planet are already struggling with water shortages. Few people realize that climate change is already causing significant economic losses, which is also evident from changes in weather patterns and the increased frequency and severity of phenomena such as tornadoes, floods, and hurricanes, and the damage associated with them. Approaches to dealing with damage caused by natural disasters focus solely on resolving damage within the framework of insurance. However, the social, cultural, and humanitarian consequences are completely overlooked.¹ It is important to realize new approaches to climate change and fiscal innovation before the economic, social, and cultural damage will be much greater. With the right fiscal policy in place for climate protection, every euro invested in this way cannot only be recouped in the future but also appreciate in value for future generations. This paper therefore aims to outline possible fiscal policy approaches to combating climate change and to create new legal frameworks and instruments within the sphere of environmental taxes so that they can play a truly effective and innovative role in climate protection.

This climate protection challenge is further intensified by the European Union's environmental goals and the need to find new own resources of funding for the EU budget. This raises the following research question: *"Is the current fragmentation of climate levies and policies effective, or do we need a completely new real Climate Tax 2.0, and what legal parameters should define the true EU-Level Climate Tax 2.0, so that it becomes a real tax, distinct from instruments (levies) such as the EU ETS and CBAM?"* This article will focus not only on mapping and analysing of the existing instruments that resemble some form of climate tax, but also on outlining the concept of a possible completely new Climate Tax 2.0, because for truly effective EU climate fiscal policy,

¹ BROBERG, M. – ROMERA, B. M. Loss and damage after Paris: More bark than bite? In: *Climate Policy* [online]. 1. 7. 2020, p. 665 [cit. 2025-09-30]. Available at: <https://doi.org/10.1080/14693062.2020.1778885>.

we need to abandon historical concepts and open the door to completely new fiscal approaches.

Several basic hypotheses need to be formulated on this research question. The first hypothesis is based on the premise that the current fragmentation of climate levies in EU Member States and the current fragmented approach within the EU are not effective in achieving the Union's environmental and climate objectives, either in terms of reducing emissions or in ensuring balance within the EU single market, and as a result cause a different tax burden. The second hypothesis is based on the approach that the EU ETS and CBAM are not taxes, but only a certain regulatory levy, because they do not meet all the characteristics of a tax, and therefore not only cannot objectively serve as uniform climate taxes at the EU level, but it is also not possible to achieve fiscal efficiency through them, as with real taxes. The third hypothesis deals with the EU's need to create a genuine EU climate tax, the Climate Tax 2.0 at EU level, which should first supplement and then completely replace the existing fragmented national instruments, which will meet all the characteristics of a tax and, in terms of its structural elements, will be defined on a harmonized uniform basis and rate.

METHODOLOGY

Within the research presented in this paper, a legal analysis of the current system of levies connected to environmental goals of the EU will be applied. For this analysis there will be an analysis of the EU ETS and CBAM system and their characteristics in the context of the term "climate tax". At first, the descriptive method will be used, for the systematic analysis of the current legal framework, additionally the analytical and synthetic methods will be applied. Subsequently, the hypotheses will be further developed and refined. To identify the possible functional attributes of existing climate taxes and their potential use in the design of Climate Tax 2.0, a comparative method will be applied and a comparison of current climate tax concepts in selected European countries will be carried out. By examining the current legal framework of the EU ETS and CBAM, more general rules will be derived, trends in this field will be identified, the Climate Tax 2.0 will be explained, and specific fiscal measures will be outlined using the induction method, and new hypotheses will be created. Using the deduction method, we will then identify how Climate Tax 2.0 can be legally classified.

RESEARCH AND RESULTS

The aim of this paper is to present new legal pathways and approaches to EU-level climate taxation. There is considerable fragmentation in approaches to climate taxation and its legal forms, not only between countries but also between individual sectors. Significant differences can be identified in the energy, steel, shipping, and agriculture sectors. It is necessary to find a legal mechanism that will be able to consider the specifics of each sector and their impact and intensity with which they contribute to

climate change or, conversely, to its protection. Furthermore, it is necessary to identify the risks of overlaps associated with the application of the EU ETS and CBAM. Climate Tax 2.0 would thus have to take all these factors into consideration and overcome them. To this end, it is necessary to create a sophisticated mechanism that combines technical and empirical knowledge, innovation, and the establishment of a legal framework and fiscal principles and rules. This is a very difficult task. However, only this approach will make it possible to create a truly effective system.

Many steps have already been initiated on this journey. However, there is still a lack of consistency, allowing the highest possible level of efficiency to be achieved. When considering Climate Tax 2.0, it is necessary to take all circumstances into account, such as the double taxation agreements and WTO rules. From a fiscal policy perspective, it is necessary to work on both the revenue and expenditure sides. When considering these issues, it is therefore appropriate to also consider the revenues generated by climate taxes and correlate them with expenditures based on ESG criteria, which not only supports the legitimacy of these measures but also their sustainability in the long term.

DISCUSSION

1. THE ROLE OF FISCAL POLICY AND CLIMATE PROTECTION IN THE EU

Before analysing individual climate instruments, we consider it necessary to define the role of fiscal policy in efforts to achieve the set climate goals. When drafting the European Green Deal² as the main EU environmental strategic document, the European Commission was already aware of the significant role that fiscal policies at both the EU and member states level would play in achieving the set climate and environmental objectives. In the search for a fair path to transforming the current EU economy into a sustainable and environmentally friendly one, a number of measures need to be taken that undoubtedly fall within the realm of fiscal policy.

Public investments plays a primary role in this regard, particularly investments in new technologies, sustainable solutions, and breakthrough innovations in the field of climate action. These investments may also take the form of appropriate incentives to promote sustainable behaviour among producers, users, and consumers. Part of the transformation in terms of fairness is also the provision of affordable solutions to those directly affected by individual policies, in particular measures to tackle energy poverty and support retraining. At the household level, such efforts may include energy renovation programmes aimed at improving the energy efficiency of homes.

Conversely, an equally important aspect involves the identification and elimination of existing incentives that promote environmentally harmful behaviour among

² European Commission. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: The European Green Deal, COM(2019) 640 final [online]. 11. 12. 2019 [cit. 2025-09-03]. Available at: https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF.

economic subjects. These include, for instance, fossil fuel subsidies and tax exemptions and legal loopholes, that allow the subject to engage in environmentally harmful activities under fiscally advantageous conditions.

In order to effectively achieve the general objectives outlined above, both the European Union and its member states must adopt a range of measures designed to ensure the proper allocation and flow of financial resources. One of the most effective measures for mobilising financial resources, which will be addressed in the following chapters of this paper, is the appropriate design and structuring of the tax system. The advantage of appropriate taxation of environmentally harmful activities is, in particular, a possibility for fulfilling the essence of the “The Polluter Pays” principle, which is one of the basic theoretical foundations in the ecological transformation of the economy. According to this principle, the damage caused by environmentally harmful behaviour should be borne by the industries or individuals responsible for causing it.³ Damages resulting from environmentally harmful activities primarily refer to non-market costs associated with “*increased mortality and morbidity (illness causing, for example, pain and suffering), degradation of air and water quality and consequently ecosystems health, as well as climate change*”.

2. DEFINING CLIMATE TAXES AND THEIR CURRENT FORMS IN EUROPE

The following chapter deals with defining and examining various possibilities of designs of climate taxes, strives to highlight the advantages and disadvantages of different options, and provides examples of solutions chosen by selected member states.

2.1 DEFINITION OF CLIMATE TAXES

Defining a climate (or environmental) tax is not entirely straightforward, particularly given the complications associated with defining both the word *tax* and its combination with the word “climate”. For the purposes of this work, is the term *tax* generally understood as an irrevocable, involuntary, non-equivalent, non-punitive monetary payment imposed by law, administered by the state, which constitutes revenue for public budgets.⁴ Radvan’s definition of tax includes another defining feature of the concept of tax that is significant from the perspective of defining climate taxes, that it is an amount determined in advance by law.⁵ We consider it highly impractical to tie the climate-related nature of a tax directly to the purpose of its introduction, as this purpose is often not explicitly stated by the legislature or may even be deliberately concealed.

³ SHANKAR, A. Introduction. In: SHANKAR, A. (ed.). *Green tribunal, green approach: The need for better implementation of the polluter pays principle* [online]. New Delhi: Centre for Science and Environment, 2018, p. 7 [cit. 2025-09-03]. Available at: https://cdn.cseindia.org/attachments/0.93040300_1519796939_green-tribunal-green-approach-report.pdf.

⁴ KARFÍKOVÁ, M. (ed.). *Teorie finančního práva a finanční vědy* [Theory of Financial Law and Financial Science]. Prague: Wolters Kluwer ČR, 2018, p. 150.

⁵ RADVAN, M. *Místní daně* [Local Taxes]. Prague: Wolters Kluwer ČR, 2012, p. 18.

We are of the opinion that the climate element should be identified based on the actual effect of the tax.⁶ Therefore, in this paper we understand the term “climate tax” broadly, as an irrevocable, involuntary, non-equivalent, non-punitive monetary payment, the amount of which is predetermined by law, administered by the state, which constitutes revenue for public budgets levied on tax-bases, that can reasonably be associated with relevant negative effects in the area of climate. Regarding the aforementioned concept of taxation, it is important to emphasize that, despite significant common elements, we do not consider the ETS, respectively emission allowances to be a climate tax. Given its market-based character, the price of emission allowances is not predetermined by law. Therefore, we consider the EU ETS and CBAM to be more like levies in terms of their nature and characteristics.

2.2 FISCAL AND REGULATORY FUNCTION

There are four fundamental functions of taxation: the fiscal function, the regulatory function, the redistributive function, and the allocative function. Climate taxes can generally be classified as Pigouvian taxes, which means that they take into account the non-market costs of negative market externalities of certain market activity.⁷ This is inherently linked to their significant fiscal function, as these taxes generate revenue that can be directly or indirectly used to mitigate the caused damage. An equally important function, inherently linked to this aspect, is the regulatory function, especially in the light of the achievement of established environmental goals. Although climate taxes are not legal norms that directly restrict environmentally harmful behaviour of the subjects, it can be assumed that this will happen *de facto*. The imposition of taxes motivates changes in the market behaviour of individual entities. On the production side, climate taxes create incentives to minimize environmentally harmful behaviour or to invest in the development of more environmentally friendly technologies in order to reduce the tax burden. On the consumption side, as higher costs will undoubtedly be reflected in the price of goods or services that the end consumer has to pay,⁸ and for this reason, it is reasonable to expect a decline in demand for climate-unfriendly goods and services.

2.3 POSSIBLE MODELS AND DESIGN OPTIONS

The most effective way to achieve the stated environmental objectives in the theory, would be to impose taxation on all activities associated with negative

⁶ Similarly, RODI, M. – ASHIABOR, H. Legal Authority to Enact Environmental Taxes. In: MILNE, J. E. – ANDERSEN, M. S. *Handbook of Research on Environmental Taxation*. Cheltenham: Edward Elgar Publishing, 2012, p. 61.

⁷ The original concept of Pigouvian taxes is based on: PIGOU, A. C. *The Economics of Welfare*. London: Macmillan, 1932.

⁸ NELLOR, D. C. L. – MCMORRAN, R. T. Tax Policy and the Environment: Theory and Practice. *IMF Working Papers* [online]. 1994, No. 106, p. 3 [cit. 2025-09-07]. Available at: <https://doi.org/10.5089/9781451947083.001>.

climate-related externalities. However, this idea encounters practical limitations, as the extent of negative externalities is not always easily measurable across all activities, and, in some cases, the potential tax revenue may be disproportionately low in comparison to the associated tax administration and monitoring costs. When choosing an appropriate climate tax design, the political issue is equally important. The broader the range of taxed activities, the greater the resistance from interest groups defending specific interests. On the other hand, the more widely the climate tax is applied, the lower the resulting tax burden can be for each affected party. Finally, when selecting an appropriate climate taxation, it is necessary to consider, whether the certain environmentally harmful activities should be taxed already at the production (at the origin basis) or at the consumption (at the destination basis).⁹ Another important aspect that must be taken into account when choosing the appropriate climate tax design option is the base on which the tax liability will be determined. One of the methods used in practice is to link the tax base to the amount of an average carbon content of the certain fuel. The advantage of this approach lies in the relatively direct link to CO₂ emissions during combustion, as there is a clear and well-established relationship between the carbon content of a fuel and the amount of CO₂ released when it is burned, and in its low administrative costs.¹⁰ A logical disadvantage of this method is that it does not take into account other environmental factors, such as the technological efficiency of fuel combustion, and that it does not cover other greenhouse gases emissions other than the CO₂ ones, that also have a negative impact on the environment. Another commonly applied method of determining the tax base in practice is to link it to energy consumption, measured for example in MJ, kWh, or m³. Unlike the first method mentioned above, this way of setting the tax base generally reflects the technological efficiency of combustion and thus supports efforts to achieve energy efficiency. Another benefit of such a tax base setting is that it discourages users from excessive energy consumption, as the cost exceeds their private benefits.¹¹ On the other hand, without sufficient diversification of individual bases in relation to the specific properties of fuel, in particular the amount of CO₂ or other harmful substances released during combustion, such taxation settings may not reflect the real environmental impact. Nevertheless, the environmental impact might be easily taken into account in the cases where the tax base is determined as the quantity of individual fuel, as this allows the imposition of a tax rate proportionate to the climatic impact of its combustion.

⁹ WEISBACH, D. A. – METCALF, G. E. The Design of a Carbon Tax. *Harvard Environmental Law Review* [online]. 2009, Vol. 33, No. 2, pp. 521–522 [cit. 2025-09-25]. Available at: <https://journals.law.harvard.edu/elr/wp-content/uploads/sites/79/2019/07/33.2-Metcalf-and-Weisbach.pdf>.

¹⁰ ÅKERFELDT, S. – HAMMAR, H. *CO₂ Taxation in Sweden: 20 Years of Experience and Looking Ahead* [online]. Stockholm: Swedish Ministry of Finance, 2011, pp. 7–8 [cit. 2025-09-25]. Available at: <https://www.government.se/contentassets/419eb2cafa93423c891c09cb9914801b/hammar-and-akerfeldt-2011-co2-taxation-in-sweden.-20-years-of-experience-and-looking-ahead.pdf>.

¹¹ OECD. *Taxing Energy Use 2019: Using Taxes for Climate Action* [online]. Paris: OECD Publishing, 2019, p. 14 [cit. 2025-09-25]. Available at: <https://doi.org/10.1787/058ca239-en>.

In some European countries, certain variants of specific forms of climate taxes, targeting certain specific tax items, have already been introduced. These taxes exhibit partial overlap with environmental taxes, and energy taxes. Currently, twenty-three European countries have implemented a carbon tax in some form in their national tax¹² fifteen of which are the EU Member States. Sweden is an example of a country that has introduced a carbon tax, the tax base of which is indirectly linked to the carbon content of a specific fuel. The tax base is set as the unit (m³, tonne, 1000 m³ etc.) of a specific fuel. The tax rate depends on the amount of CO₂.¹³ Considering the above-mentioned advantages and disadvantages of different methods for determining the tax base, the Sweden model can be seen as a hybrid model that generally responds appropriately to the main shortcomings of each typical solution. Taxes directly linked to energy consumption have been introduced in Norway, Finland, Sweden, and Denmark.¹⁴ The area of excise duties imposed on individual fuels is partially harmonized at the EU level, as the minimum tax rate imposed on a specified quantity of a particular fuel is regulated by Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity, in accordance with which member states may, however, levy a higher tax rate.

If we apply a comparative approach, it is appropriate to compare the currently valid taxes in some EU Member States (or member states of the European Economic Area) and identify which elements seem to also be functional and usable for modelling EU-level Climate Tax 2.0. Climate taxes in France and in the Nordic countries (Norway, Denmark, Finland, and Sweden) seem suitable for comparison. If we consider the French approach to carbon taxation, several key attributes can be highlighted. A study focusing on French attitudes toward carbon and climate taxation¹⁵ specifically in relation to the introduction of carbon taxes in France identified some factors that need to be taken into account when introducing a climate tax, not only focusing on households, but also their energy security, as well as the important role played by the issue of personal mobility and the associated carbon footprint. The availability of environmentally friendly transport also plays an important role. One relatively overlooked issue to date is “climate literacy”, meaning that a large part of the population understands the basic attributes of climate change relatively well, but does not understand in depth the specific factors in which climate change already affects their daily lives.¹⁶

¹² MENGDEN, A. – NIEDER, A. Carbon Taxes in Europe [online]. In: *Tax Foundation Europe* [online]. 1. 7. 2025 [cit. 2025-09-05]. Available at: <https://taxfoundation.org/data/all/eu/carbon-taxes-europe/>.

¹³ ÅKERFELDT – HAMMAR, c. d., p. 8.

¹⁴ THORNSTRÖM, E. (ed.). Nordic Tax Report 2023: Electricity sector [online]. 2023, p. 4 [cit. 2025-09-05]. Available at: <https://www.energiforetagen.se/4a0314/globalassets/dokument/nordenergi/sk-21-nordenergi-tax-2023-final.pdf>.

¹⁵ DOUENNE, T. – FABRE, A. French attitudes on climate change, carbon taxation and other climate policies. *Ecological Economics* [online]. 2020, Vol. 169, pp. 1–8 [cit. 2025-09-05]. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0921800919310705?via%3Dihub>.

¹⁶ Ibid.

Many studies have confirmed the so-called “dividend effect” of energy taxes¹⁷ and their subsequent impact on the prices of commodities and other resources. It has also been confirmed that energy taxes and the abolition of subsidies, reflected in energy prices place a greater burden on low-income groups, which are often directly dependent on energy prices, while bringing greater benefits to higher-income groups.¹⁸ The introduction of green taxes in the Nordic countries has not only led to a reduction in the use of fossil fuels in the long term, but has also resulted in a complete transformation of the energy structure and an increase in GDP, partly because the introduction of these taxes has also shifted the tax burden and reduced the tax burden on labour and capital. In Sweden in particular, the tax burden has shifted to green taxes. These steps are aimed at achieving tax neutrality. Therefore, if the revenue from the climate tax is used effectively to reduce the tax burden in other areas, it is possible, as the Nordic countries have demonstrated, to achieve positive results and apply the climate tax as a kind of “booster” for the tax system.¹⁹

At this point, it is worth asking why the approach of the Nordic countries is so different from that of Central Europe and some Western European countries. One factor that may play a significant role is the high level of development of the social system in the Nordic countries.

3. NON-TAX INSTRUMENTS FOR ENVIRONMENTAL PROTECTION

Beyond the climate taxes described above, we consider it appropriate to also pay attention to selected current environmental instruments of a non-tax (or quasi-tax) character.

3.1 CARBON PRICE FLOORS

One of the carbon pricing tools, that cannot be considered a climate tax as defined in this paper, are the carbon price floors. However, they are the tools that complement and enhance the effectiveness of other measures discussed in terms of achieving climate goals, so we consider it necessary to at least briefly comment on their essence. The point of carbon price floors is that the legislature sets a minimum

¹⁷ WALID, O. – ZIPPERER, V. – ROUSSELIERE, D. – DIMITROPOULOS, A. Energy taxes, reforms and income inequality: An empirical cross-country analysis. *International Economics* [online]. 2017, Vol. 150, pp. 80–95 [cit. 2025-09-05]. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S2110701716300890>. See HE, P. – LU, CH. – XIAONAN, Z. – SHUFENG, L. – HUAYU, S. – JIANHUI, J. Energy Taxes, Carbon Dioxide Emissions, Energy Consumption and Economic Consequences: A Comparative Study of Nordic and G7 Countries. *Sustainability* [online]. 2019, Vol. 11, No. 21, pp. 2, 5, 14 [cit. 2025-09-05]. Available at: <https://doi.org/10.3390/su11216100>.

¹⁸ FENG, K. – HUBACEK, K. – LIU, Y. – MARCHÁN, E. – VOGT-SCHILB, A. Managing the distributional effects of energy taxes and subsidy removal in Latin America and the Caribbean. *Applied Energy* [online]. 2018, Vol. 225, pp. 424–436 [cit. 2025-09-05]. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0306261918306834?via%3Dihub>. See HE – LU – XIAONAN – SHUFENG – HUAYU – JIANHUI, *c. d.*, pp. 2, 5, 14.

¹⁹ *Ibid.*, pp. 2, 5, 14.

entry price at which emission allowances can be sold on the market. Currently, this tool is not harmonized at the EU level, but several member states have introduced it in various national forms. Germany, for example, has introduced a minimum entry price for emissions certificates entitling the holder to emit 1 ton of greenhouse gases equivalent to CO₂ over a specified period of time. This price gradually increased from EUR 25 to EUR 55 between 2021 and 2025.²⁰ The potential introduction of this instrument at the EU or national level would bring a number of advantages in terms of efforts to achieve the climate targets set. Firstly, the carbon price floor, in conjunction with the quantity-led ETS, creates a hybrid carbon pricing tool, as it complements it with a price-based element. Secondly, it guarantees a minimum return on investment in emission reductions. The introduction of national carbon price floors is undoubtedly easier than introducing them at the EU level, but they come with the disadvantage of disrupting intra-EU trade, due to the varying and often differently transparent conditions across the individual member states.²¹

3.2 ETS 2: EXTENSION OF EMISSIONS TRADING SYSTEM

Another important non-tax instrument that deserves the attention of this article is the expected full effect of the so-called ETS 2 legal regulation. Its aim is to price carbon emissions generated by fuel combustion in buildings, road transport, etc., by the introduction of the ETS of marketing the emission allowances for emissions generated in these expanded areas. Therefore, it mainly targets households and small to medium sized businesses. The rules are set to become fully effective as of 2027 however, the fuel suppliers are already subject to provisions relating to the monitoring and reporting of emissions from fuels used in road transport and buildings. Given that this is a measure that will primarily affect ordinary citizens, it is currently considered to be a highly sensitive political issue. The main reason for this is that, in addition to the promise of achieving the set environmental goals, the impending effectiveness of this regulation also brings with it a whole range of challenges, concerns, and uncertainties.

The first challenge is the rising costs for households and target businesses, especially the vulnerable ones. Although it will be fuel suppliers who will be obliged to purchase emission allowances and redistribute them appropriately, the associated costs will be largely passed on to end customers, i.e., the target groups mentioned above. One of the tools the EU plans to use to contribute to a socially just transition to climate neutrality is the establishment of a Social Climate Fund,²² primarily through temporary direct income support and through measures and investments supporting green building

²⁰ Section 10(2) of the Brennstoffemissionshandelsgesetz (Fuel Emissions Trading Act) of 12 December 2019 (Federal Law Gazette I, p. 2728; 2022 I, p. 2098), last amended by Article 2 of the Act of 27 February 2025 (Federal Law Gazette 2025 I, No. 70).

²¹ NEWBERRY, D. M. – REINER, D. M. – RITZ, R. A. When is a carbon price floor desirable? In: *JSTOR* [online]. Energy Policy Research Group, University of Cambridge, 2018 [cit. 2025-11-24]. Available at: <https://www.jstor.org/stable/resrep30393>.

²² Social Climate Fund was established by the Regulation (EU) 2023/955 of the European Parliament and of the Council of 10 May 2023 establishing a Social Climate Fund and amending Regulation (EU) 2021/1060.

improvements and green modes of transport. The second important safeguard is the establishment of a soft price cap in Article 30(2)(h) of Directive 2003/87/EC,²³ according to which 20 million allowances will be released if the average price of emission allowances exceeds EUR 45 for more than two months.

Another challenge that causes concern is the predictability of the emission allowance prices. In this regard, we consider it necessary to emphasize the quasi-fiscal character of this instrument. This instrument fulfils most of the defining characteristics of a tax, on which there is broad agreement among the academic community, but in principle it introduces an uncertain tax rate. We can hardly imagine that legislature would adjust the tax in such a way that the tax rate would be determined according to the market situation such an instrument would withstand constitutional review.

The above concerns in particular were the reason why the Czech Republic launched an initiative whereby, on behalf of 18 other EU Member States, has sent a call to the European Commission to adopt changes and guarantees in the area of ETS 2 regulation. This document contains five main requirements, which can be summarized as (i) a requirement to publish price information to facilitate investment and operating cost planning, (ii) the launch of earlier auctions to improve predictability for 2027, (iii) the introduction of a Market Stability Reserve mechanism to ensure market stability, (iv) the extension of the Market Stability Reserve mechanism beyond 2031 to avoid market shocks, and finally (v) the strengthening of price control mechanisms, which would set out the precise conditions for the release of further emissions and allow for the release of additional allowances more than once a year.²⁴ Although this is a legally non-binding document (soft law), we believe that, given the number of signatory states, it represents significant political pressure that the European Commission cannot ignore.

4. THE EFFECTS OF THE EU ETS AND CBAM

4.1 FISCAL EFFECTS OF THE EU ETS AND CBAM

Important point is to discuss, what fiscal effects levies the EU ETS and CBAM bring. From the environmental point of view many studies have been conducted and their impact on emissions reduction have been analysed.²⁵ The issue of the

²³ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC.

²⁴ KREJČÍ, V. et al. ČR odeslala Evropské komisi požadavky 18 unijních států na změnu obchodování s emisními povolenkami. Zajistí stabilní cenu povolenek a zabrání negativním dopadům [The Czech Republic has sent the European Commission requests from 18 EU member states for changes to emissions trading. This will ensure stable permit prices and prevent negative impacts]. In: *Ministerstvo životního prostředí* [Ministry of the Environment] [online]. 2. 7. 2025 [cit. 2025-09-28]. Available at: <https://mzp.gov.cz/cz/pro-media-a-verejnost/aktuality/archiv-tiskovych-zprav/cr-odeslala-evropske-komisi-pozadavky-18>.

²⁵ DECHETLEPRÊTRE, A. – NACHTIGALL, D. – VENMANS, F. The joint impact of the European Union emissions trading system on carbon emissions and economic performance. *Journal of Environmental Economics and Management* [online]. 2023, Vol. 118, pp. 11–14 [cit. 2025-09-29]. Available at: <https://doi.org/10.1016/j.jeem.2022.102758>.

neutrality of the allocation mechanism of the emissions trading system in general is also a focus of attention.²⁶ When considering the impact of the EU ETS and CBAM, it is necessary to assess both its environmental impact and its economic consequences. However, it is necessary to distinguish between the economic effect and the fiscal effect. The economic effect is more related to the impact on the economic performance of companies subject to emissions regulation,²⁷ while the fiscal effect must be viewed from the perspective of public budget revenues and expenditures. From this perspective, however, the EU ETS and CBAM create an additional significant tax burden that affects businesses and, at the end of the chain, citizens, which is why carbon taxes face a lot of opposition. These approaches are limiting in terms of any further development of climate and environmental taxes. A breakpoint in this regard could be the so-called revenue recycling system. Its essence could be the allocation of a certain portion of revenue from carbon taxes to socially beneficial expenditures, which would also act as a significant stimulus and motivating factor for citizens. Past studies have identified two problem areas: concerns about the even distribution of the tax burden from an international perspective, and declining levels of support as the tax burden increases.²⁸

4.2 EFFECTS ON COMPETITIVENESS AND EU AS A GLOBAL LEADER IN GREEN TRANSITION

In terms of the effects on competitiveness, it is necessary to view the situation more comprehensively. Given that climate policy is not uniformly coordinated at the global level, there is a high risk of a negative impact on the competitiveness of businesses on a global scale, which in turn leads to the relocation of operations to countries that do not have strict climate policies, ultimately leading to much more significant consequences from a climate perspective.²⁹ The European Union has taken on the role of global leader in the field of green transition³⁰ and has created programs to support developing countries and countries in the Least Developed Countries (LDCs)³¹ category. Of particular note is the Global Gateway program through the European Commission,³² although the expected revenues are not directly allocated to support green

²⁶ See *ibid.*, p. 14.

²⁷ *Ibid.*, p. 16.

²⁸ See BEISER-MCGRATH, F. – BERNAUER, T. Could revenue recycling make effective carbon taxation politically feasible? *Science Advances* [online]. 2019, Vol. 5, No. 9, p. 1, p. 6 [cit. 2025-09-29]. Available at: <https://doi.org/10.1126/sciadv.aax3323>.

²⁹ AMENDOLA, M. Winners and losers of the EU carbon border adjustment mechanism: An intra-EU issue? *Energy Economics* [online]. 2025, Vol. 142, pp. 1–2 [cit. 2025-09-30]. Available at: <https://www.sciencedirect.com/science/article/pii/S014098832400848X>.

³⁰ Green Transition. In: *European Commission* [online]. 20. 11. 2025 [cit. 2025-06-07]. Available at: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/green.html.

³¹ European Commission. CBAM and Developing Countries/LDCs: Policy Note [online]. [cit. 2025-09-30]. Available at: https://taxation-customs.ec.europa.eu/document/download/7abe56cc-4af0-490d-90e1-0a0825aabe37_en?filename=CBAM%20and%20developing%20countries.pdf.

³² Global Gateway: Information on the roll out of the Global Gateway strategy, partnerships, projects and funding opportunities. In: *European Commission: International Partnerships* [online]. [cit. 2025-09-30]. Available at: https://international-partnerships.ec.europa.eu/policies/global-gateway_en.

transformation in these developing countries. An important tool in this regard is the World Bank's CBAM Exposure Indexes,³³ which assess the exposure of third countries to the CBAM. These globally coordinated activities are important precisely because they prevent companies from avoiding environmental taxes by moving production to third countries. The Africa-EU³⁴ initiative and the Partnership for a Just Energy Transition with South Africa, India, Indonesia, Vietnam, and Senegal are also important in this regard.³⁵

5. CLIMATE TAX 2.0 MECHANISM AND REAL CLIMATE TAXATION

The approaches taken so far and the above-mentioned research have confirmed that the steps taken to date can be considered the first signs of change, but their concept is not yet sufficient to achieve climate protection goals. Within the European Union, which could be considered a global leader in the effort towards green transformation, there is still great potential that could be activated in this area. The current system is not linked by a unified mechanism, access to it is fragmented across Europe, and although some countries are gradually introducing some form of national climate tax, this fragmentation is not capable of generating the effect that could be achieved by a coordinated, harmonized approach. The EU should move to a higher level, using existing approaches as a platform for creating a completely new, revised, and sophisticated real Climate Tax 2.0.

The OECD report on effective carbon rates in 2025, which focuses on analysing current trends, confirmed significant differences between sectors in many of the areas examined, including the share of CO₂ emissions, as well as in the area of free allocation of allowances. Therefore, current instruments appear to be “flat” and unable to be modelled flexibly enough according to current data and conditions for individual sectors.³⁶

5.1 CLIMATE TAX 2.0 AS A NEW FISCAL INSTRUMENT TO STRENGTHENING THE EU'S FINANCIAL BASE AND CLIMATE PROTECTION

However, current efforts to create certain forms of “climate taxes” cannot be considered a fortunate solution and, by their nature, should be viewed more as a form

³³ CBAM Exposure Indexes. In: *World Bank Group* [online]. 2. 7. 2025 [cit. 2025-09-30]. Available at: <https://www.worldbank.org/en/data/interactive/2023/06/15/relative-cbam-exposure-index#:~:text=The%20CBAM%20Exposure%20Indexes%20is%20designed%20to%20identify,and%20exports%20of%20CBAM%20products%20to%20the%20EU.>

³⁴ EU-Africa: Global Gateway Investment Package. In: *European Commission: Aid, Development cooperation, Fundamental rights* [online]. [cit. 2025-09-30]. Available at: [https://international-partnerships.ec.europa.eu/policies/global-gateway/initiatives-sub-saharan-africa/eu-africa-global-gateway-investment-package_en#accelerating-the-green-transition.](https://international-partnerships.ec.europa.eu/policies/global-gateway/initiatives-sub-saharan-africa/eu-africa-global-gateway-investment-package_en#accelerating-the-green-transition)

³⁵ CBAM and Developing Countries/LDCs.

³⁶ OECD. *Effective Carbon Rates 2025: Recent Trends in Taxes on Energy Use and Carbon Pricing* [online]. OECD Series on Carbon Pricing and Energy Taxation. Paris: OECD Publishing, 2025, pp. 21, 30 [cit. 2025-11-23]. Available at: [https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/11/effective-carbon-rates-2025_a578dc11/a5a5d71f-en.pdf.](https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/11/effective-carbon-rates-2025_a578dc11/a5a5d71f-en.pdf)

of levy. It is very important, that we have embarked on this path, but the effects are still insufficient and the concept is imperfect. However, in order to talk about a real climate tax, it is necessary to apply a comprehensive approach. In this regard, it is important to try to create a Climate Tax 2.0 model based on four basic pillars: the first pillar will be a tax based on the volume of harmful substances produced and imposed on the entity carrying out this activity; as the second pillar the classification of climate damage must also be linked to the specifics of the particular sector; the third pillar should be regional, as there are large differences between regions within the EU and globally in terms of climate impact,³⁷ finally the fourth is the question of how to establish a new own resource for the EU budget based on Climate Tax 2.0. By taking all these components into account in the climate tax, we will be able to create a tax concept that will fulfil a stimulating, allocative, stabilizing, and redistributive function. In this regard, it is necessary to consider whether a fifth pillar of Climate Tax 2.0 could be the direct link between revenue and expenditure. In this respect, Climate Tax 2.0 would, in a sense, become a hybrid institution, which would be, by its nature, somewhere between a tax and a levy. In particular, the equivalent aspect could play a role as a certain stimulus in the case of climate tax.

Climate Tax 2.0 could be a direct basis for supporting green investments. Several possible concepts are available. The first would be based on the volume of emissions released into the atmosphere, which would require allocating a portion of the collected resources back to areas or regions where environmental damage has occurred, in a precisely defined amount. Green investments could thus include not only investments in renewable energy sources, but also, for example, green roofs, tree planting, the construction of flood control ponds, landscape protection against erosion, electric mobility, as well as health, cultural, and social purposes. The second option could be aimed directly at polluters, who would pay Climate Tax 2.0, but at the same time would receive a certain percentage of their payments back, which they could claim back for the technological renewal of their operations or as a subsidy for the purchase of such new technology. In the maritime sector, for example, this could be a subsidy for the purchase of a ship that is more environmentally friendly to operate. The third concept could give polluters the option of deciding for themselves to allocate part of their Climate Tax 2.0 payments directly to climate support, whether within the EU or outside it, e.g., in developing countries. Furthermore, there is a complete gap in the allocation of revenues collected from climate-damaging activities to address the health consequences of citizens living in areas with damaged climates.

5.2 THE MECHANISM OF CLIMATE TAX 2.0

The structure and mechanism of the climate tax could be based on the following specific elements:

The first perspective, the volume of harmful substances produced and imposed, it is a relatively well-researched and technically measurable and detectable component

³⁷ See AMENDOLA, *c. d.*, p. 4.

of the climate tax. However, in order to define the climate tax in a way that reflects the changing variables and volatility of this component, it is necessary to model it in such a way that there is a certain degree of progressivity, taking into account certain levels.

The second perspective, reflecting the individual characteristics of each sector, must be modelled specifically, as there are significant differences between sectors in terms of the nature of their activities that negatively impact climate change. The sectors applied in the CBAM³⁸ could serve as a basis for expansion to other sectors. However, we should not limit ourselves solely to heavy industry sectors but also target sectors whose impact on the environment is direct, while a certain gap remains in sectors whose impact on the environment is indirect, such as agriculture, automotive, food, and tourism. These are sectors that do not themselves indirectly produce large volumes of climate-damaging substances, but whose by-products are pollutants that disrupt the climate.

The third perspective, which is relatively neglected, is the potential for climate protection on a regional basis. Article 191(2) TFEU emphasizes that Union policy on the environment takes account of the diversity of situations in the various regions of the European Union.³⁹ Climate change is a global problem and requires global solutions, but the journey should start at the regional level and then spread to the global level. Climate protection in the region where people live could also play an important role as a stimulus. Let's start in every single village where people heat with solid fuels. We will protect the climate and air of villages, towns, regions, countries, states, and continents. From small areas to larger ones, with knowledge of regional specifics. The level of pollution and the amount of climate-damaging substances vary from region to region and also vary according to the nature of the landscape, as some landscapes may have greater reserves to recover from minor climate damage, while others may not have such potential. All of this could be taken into account by the new fiscally innovative Climate Tax 2.0 mechanism.

From the perspective of the fourth pillar of Climate Tax 2.0, which seeks to find new own resources for the EU budget, under the Climate Tax 2.0 mechanism, a certain portion of the revenue could be allocated directly to the EU budget as a new own resource, divided into two halves, with 50% of the revenue from this tax earmarked for expenditure allocated to activities pursuing the EU's environmental objectives under the TFEU, while 50% would flow without earmarking as a pure and true own resource of the EU budget.

As indicated above, the fifth pillar could be a link between revenue and expenditure. Whether in relation to healthcare expenditure for citizens, allocation in relation to investment in technology renewal, or science and research in the field of climate protection. A sufficient fund should be created for all of this. In connection with the redistributive, allocative, and stimulatory functions of taxes, Climate Tax 2.0 could thus be beneficial for all involved.

³⁸ See AMENDOLA, *c. d.*, p. 3.

³⁹ Article 191(2) TFEU.

From the perspective of introducing the Climate Tax 2.0, it is necessary to ensure that the subject of the tax overlaps with the subject of the EU ETS and CBAM levies in certain parameters. For this reason, it will be necessary to set up a sophisticated transitional mechanism that will gradually activate the individual parameters of Climate Tax 2.0, and in the part that overlaps with the EU ETS and CBAM levies, the Climate Tax will only be activated after their complete abolition, so that it fully replaces them. Given that the Climate Tax will have a broader scope, there is nothing to prevent its parallel gradual introduction in those parts of the tax where it does not overlap with the EU ETS and CBAM charges. This is more of a technical legislative issue.

However, it is important to consider the implications for welfare and development when implementing Climate Tax 2.0, as it is necessary to assess its impact and consequences, as Climate Tax 2.0 may be another tax burden that could ultimately be passed on to households. The limiting factor here will be the amount of the tax burden that, on the one hand, actually contributes to climate protection, measurably, and on the other hand, does not represent a disproportionate tax burden that would become a brake on further development.⁴⁰

5.3 POTENTIAL POLITICAL AND LEGAL REACTIONS OF INDIVIDUAL MEMBER STATES

Given that our proposed concept of Climate Tax 2.0 is, by its nature, somewhere between a tax and a levy, it is important to consider the EU's limited powers in the area of taxation, when adopting the concrete provisions. In accordance with Article 113 of the TFEU the Council shall adopt provisions for the harmonisation of legislation concerning the indirect taxation unanimously. In the area of direct taxation, the TFEU does not expressly grant any competences to the EU legislature. However, directives have been adopted in this area in the past, for example in the field of corporate taxation, on the legal basis of Article 115 TFEU, according to which the Council shall unanimously issue directives for the approximation of such laws, regulations, or administrative provisions of the member states that directly affect the establishment or functioning of the internal market. If the provisions introducing Climate Tax 2.0 are not adopted unanimously, they are exposed to the risk of being appealed by member states to the CJEU under Article 263 TFEU due to exceeding the EU's competence.

The recent growth of the Eurosceptics' and populist radical rights' parties is generally a challenge for all climate measures⁴¹ and has a significant impact on the

⁴⁰ MAIER, S. – VANDYCK, T. – RICCI, M. – REY, L. – TAMBA, M. – WAGNER, F. Minimum energy taxes for climate and clean air in the EU: Environmental and distributional impacts. *Energy Economics* [online]. 2025, Vol. 152 [cit. 2025-11-20]. Available at: <https://www.sciencedirect.com/science/article/pii/S014098832500831X?via%3Dihub>.

⁴¹ POLLEX, J. – BERKER, L. E. The European Parliament and Fridays for Future: analysing reactions to a new environmental movement by Europe's climate policy champion. *Journal of European Integration*

further development of the EU climate policy.⁴² Considering the goals and pillars of Climate Tax 2.0, it's reasonable to expect that its adoption will face similar challenges as the ETS 2 provisions, especially the risk of disproportionate impacts on vulnerable households and businesses. Therefore, the similar negative political reaction of the member states, such as the initiative of the most of them discussed in subsection 3.2 of this paper, can be expected, which will, in the best scenario, highlight its shortcomings, in the worst scenario, challenge the adoption of the legislation as a whole.

CONCLUSION

Article 191(1) of the Treaty on the Functioning of the European Union⁴³ defines the European Union's policy on the environmental area and sets out its objective of contributing to the pursuit of the following objectives in the field of preserving, protecting, and improving the quality of the environment, supplemented by objectives in the field of human health protection. However, the article also mentions the prudent and rational use of natural resources. This whole complex is complemented by the objective of promoting measures at the international level to deal with regional and global environmental problems, with the Treaty explicitly highlighting the fight against climate change.

A number of measures have already been introduced in this regard, but the journey is still just beginning. The plastic tax, EU ETS, and CBAM are the first signs that it can be done. However, the potential in the area of environmental goals has not yet been fully exploited and requires more sophisticated solutions. This research has outlined some completely new perspectives on how a real, genuine Climate Tax 2.0 could be designed, which would allow the full potential of the European Union's climate targets to be exploited, while also serving as a stimulus, allocation, and redistribution fiscal tool, and representing one of the new and stable own resources of the EU budget.

As follows from the conclusions of this article, it would be appropriate for the EU to consider, when constructing Climate Tax 2.0, the possibility, if the Climate tax becomes one of the revenues of the European Union budget, as a new own resource, the tax burden in another area could be reduced and the revenue from the Climate Tax could provide to the EU economy important renewed impetus. We leave it as an open question whether instead of further indebtedness of the European Union it could be more beneficial to redistribute the tax burden to another area, to one stable and sustainable

[online]. 2024, Vol. 46, No. 8, pp. 1133–1150 [cit. 2025-11-20]. Available at: <https://www.tandfonline.com/doi/full/10.1080/07036337.2024.2334079?scroll=top&needAccess=true#abstract>.

⁴² VON HOMEYER, I. – OBERTHÜR, S. – JORDAN, A. J. EU climate and energy governance in times of crisis: towards a new agenda. *Journal of European Public Policy* [online]. 2021, Vol. 28, No. 7, p. 965 [cit. 2025-11-20]. Available at: <https://www.tandfonline.com/doi/citedby/10.1080/13501763.2021.1918221?scroll=top&needAccess=true>.

⁴³ 191(1) TFEU.

EU budget's own resource secured through a Climate tax, which could support GDP growth, to open up space for higher investments in technological development and ultimately strengthen higher performance of the EU economy.

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