EVOLUTION OF THE LEGISLATIVE FRAMEWORK FOR ACHIEVING CLIMATE NEUTRALITY AT EU LEVEL

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DOI: https://doi.org/10.36004/nier.cecg.III.2024.18.26

Abstract. *The article has as starting point, the major need to achieve climate neutrality, the initiation of those measures to support the implementation of the green economy, as part of the transition to a new sustainable model of economy, due to future threats and risks presented by the appearance of climate changes, the increase in the degree of aging of the population and the irrational use of resources that we are facing. In the current context, the analysis carried out takes into account aspects starting from the European framework of the climate transition and the consequences of the legislative proposals, to the existing barriers and the actions in order to identify the characteristics at the EU level that can facilitate this process of transition and last but not least, the opportunities that will arise in the future. Finally, we highlight the consequences of the legislative proposals, aiming at the active contribution to achieving the objective of climate neutrality, which is identified as the central pillar of the European climate framework. As a final consideration, achieving climate neutrality requires coherence in supporting the process of economic recovery, in correlation with mitigating the effects of climate change, reflecting of the challenges we face.*
Key-words: *sustainability, transition, climate neutrality, initiatives, challenges, opportunities*
JEL: *Q01, Q53, Q54, Q56*
UDC: *338+502.15](4)*

Introduction. Climate neutrality is an essential objective for combating climate change, being able to contribute to preventing the worsening of these phenomena. By drastically reducing emissions and compensating the inevitable, the possibility of stabilizing the increase in global temperature and preventing catastrophic climate consequences is sought (Edenhofer et al., 2014).

The main reasons why climate neutrality is crucial include:

- reducing the impact of climate change because if emissions are not drastically reduced, significant increases in global temperatures are expected, with severe effects on ecosystems, water resources, food security and human health (Fuss et al., 2014);
- prevention of natural disasters, otherwise extreme weather phenomena will become more frequent and more severe with global warming;

- the conservation of biodiversity because many species are threatened by climate change due to the loss of natural habitats and the disruption of ecosystems.

The European Union and many developed countries have set the goal of achieving climate neutrality by 2050. This ambitious goal requires major economic and technological transformations, as well as a change in society's behavior. Achieving climate neutrality is one of the most important solutions to limit climate change and ensure a sustainable future for future generations.

Literature review. A review of the literature regarding the need to implement the legislative framework in order to achieve climate neutrality involves knowing the evolution of the concept of climate neutrality and its applications in various fields. It is vast and has involved many intense discussions in fields such as climate change, environmental law, political science and economics. We mention several reference authors who have significantly contributed to the understanding of this concept of climate neutrality and its context at the European and global level:

- *climate change and the transition towards climate neutrality.* Authors like Maslin (2014) "Climate Change: A Very Short Introduction" clearly explained the concept of climate neutrality and the urgent need to achieve this goal to prevent the worst effects of climate change. It addresses climate neutrality in the context of the need for coordinated global action.
- *the slow pace of climate action and the emphasis on the need for drastic measures to achieve climate neutrality.* Anderson (2011) in "Beyond Dangerous Climate Change: Emission Scenarios for a New World" and through his many contributions to IPCC reports on global temperature limits, developed the definition of climate neutrality in a practical framework, emphasizing the difference between "zero emissions" and neutrality, and argued that a distinction must be made between actual climate neutrality and unfulfilled promises.
- *climate transitions and strategies to achieve climate neutrality.* Geden (2019) in "Net Zero Emissions: Long Term Targets and Short Term Action" wrote about the political strategies needed to achieve climate neutrality by 2050 and emphasized the importance of developing clear and credible pathways to reducing emissions, not just theoretical commitments . He often criticizes the slowness of political action and provides a clear analysis of the various definitions of climate neutrality.
- *climate neutrality, human climate change and future scenarios.* Mann (2019) "The New Climate War: The Fight to Take Back Our Planet" and his articles provide a scientific approach to the context in which climate neutrality is needed, linking it directly to data on the concentrations of CO_2 and other greenhouse gases greenhouse. He emphasizes the urgency of climate action and the need to achieve neutrality by the middle of this century.
- *the context of climate neutrality from a historical and political perspective.* Oreskes (2010) Merchants of Doubt, explores the political and social context

of climate change, including the concept of climate neutrality, the link between political action and the science of climate change.

- *defining climate neutrality in a wider context.* Rockström et al (2013) "A Safe Operating Space for Humanity" and in (2012) "The Human Quest: Prospering Within Planetary Boundaries", helped to define climate neutrality in a broader context related to maintaining the ecological stability of the planet. He discussed the importance of reducing carbon emissions and conserving natural resources to prevent the collapse of global ecological systems.

These authors have contributed to the development of the concept of climate neutrality and to the understanding of the need for urgent action, their work providing essential insights into how the European legislative framework for achieving climate neutrality should be implemented to prevent catastrophic climate change (IPCC, 2018).

Research methodology used in establishing the legislative framework for climate neutrality involves a multidisciplinary approach and considering the complexity and global nature of climate issues.The main research methods used in this process – literature review and the establishment and consequences of legislative proposals regarding climate neutrality at the EU level.

Objective: to identify and analyze the existing legislation at national and international level aimed at the transition to climate neutrality.

Methodology: a systematic review of existing policies and regulations, international agreements (Paris Agreement on Climate Change), national and regional legislation (European Green Deal) and institutional strategies already adopted.

Tools: Documentary analysis of treaties, directives and other relevant normative acts. Establishing the legislative framework of climate neutrality is a complex process to ensure that the legislation adopted is effective, fair and adaptable to current and future challenges.

Main results in the establishment of the European legislative framework regarding the achievement of climate neutrality**.** As it appears from the specialized literature, the establishment of a legislative framework at the European level to achieve climate neutrality is a central component of the European Union's climate policy. (European Parliament, 2021). The objective of the EU is to become the first climate-neutral continent by 2050 at the level of all EU member countries, being an example to be followed by the other States Parties to the Paris Agreement (Bodansky, 2016). The European climate transition framework proposes an intersectoral vision that aims to move from a low-carbon economy to a higher stage, to achieve climate neutrality, which will allow member states to identify and solve, in a unitary way and in a real time horizon of climate problems (Masson-Delmotte et al., 2021).

Given the need for an integrated approach to the measures included in the legislative framework to achieve the objective of climate neutrality, the following were adopted:

European Green Deal. The European Green Deal is the EU's strategy for transforming the European economy into a sustainable, competitive and resource-efficient economy, with the objective of generating no net greenhouse gas emissions by 2050 (European Commission, 2019). It covers essential areas for reducing emissions such as:

- energy - the transition to renewable sources, energy efficiency and the gradual elimination of fossil fuels;
- industry - creating a greener industry by reducing emissions, promoting the circular economy and recycling materials;
- agriculture - aims to reduce the environmental impact of agriculture and fishing.
- transport - the promotion of electric vehicles, the decarbonisation of air and maritime transport and the development of green infrastructure (European Environment Agency, 2020).

The European Green Deel is identified as a key instrument in supporting the financing of the transition to fair climate neutrality at the level of the European Union, aiming at the regulation of some important areas, such as those described above, as well as climate change, environmental protection, finance and regional development. The existence of a dialogue is absolutely necessary for the reconfiguration of strategies and policies in all economic sectors, for the implementation of new sustainable production and consumption models at the sectoral level (Geden, 2018).

We have identified a series of synergies at the level of strategic documents:

- The new EU Industrial Strategy guides european industrial policies towards a sustainable and resilient European Union at the international level;
- The EU Strategy On Energy System Integration is synergistic with the EU Hydrogen Strategy, respectively with that of methane in the EU, in support of the decarbonization of the energy system;
- Sustainable and Smart Mobility Strategy - correlated with actions regulated by the EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil';
- The From Farm to Fork Strategy - For a fair, healthy and environmentally-friendly food system and is synergistic with the Common Agricultural Policy: 2023-27 (CAP) and with EU Action Plan For Organic Agriculture;
- The EU Biodiversity Strategy for 2030 is synergistic with the new EU Forest Strategy for 2030 – Sustainable Forest Management in Europe (2022).

The European Green Deal will form the basis of a competitive and efficient EU economy, from the point of view of the use of resources, having as primary targets:

- zero net greenhouse gas emissions by 2050;
- recording an economic growth dissociated from the use of resources;
- the fairness of citizens, sectors and regions.

European Climate Law. Adopted in June 2021, the European Climate Law legally sets the EU's goal of achieving climate neutrality by 2050. This legislation requires the following:

- climate neutrality by 2050 - member states must reduce their greenhouse gas emissions and adopt concrete measures to eliminate net emissions;
- intermediate objectives - by 2030, the EU has set out to reduce net emissions by at least 55% compared to 1990 levels, known as "Fit for 55";
- national action plans - member states are obliged to draw up and implement national plans on energy and climate, which must be reviewed and updated periodically;
- monitoring and reporting – performance will be monitored by the European Commission, which will issue annual reports and recommendations for each member state.

The European Climate Law establishes the time horizon for achieving climate neutrality - the year 2050, highlighting as a mandatory objective at the EU level, the net domestic reduction of greenhouse gas emissions by at least 55% by 2030, compared to the levels since 1990, determining the contribution of limitations and absorptions of emissions (European Parliament, 2021).

They consider:

- more stricte dispositions on adaptation to climate change;
- stronger synergies between European Union policies and the objective of achieving climate neutrality;
- commitment to negative emissions after 2050;
- monitoring the progress made by the member states towards achieving climate neutrality, as well as the establishment of the The European Scientific Advisory Board on Climate Change;
- the initiation of mechanisms regarding effective collaboration with the various sectors of activity to achieve the objective of climate neutrality in various economic fields at the EU level;
- a methodology for the conceptualization of the climate objective for 2040, considering the indicative budget regarding GHG emissions, for the period 2030-2050;

The European Green Deal and the European Climate Law strengthen the normative framework of climate change, having a strategic role in the actions that each member state will initiate, ensure the general framework of action to translate into legislation the achievement of the objective of climate neutrality by the year 2050.

Fit for 55 . In July 2021, the European Commission presented the legislative package "Fit for 55", which contains proposals to achieve the objective of reducing emissions by 55% by 2030 (European Commission, 2021). It includes measures on:

- the reform of the Emissions Trading System (ETS) aims to extend the ETS to cover additional sectors such as maritime transport and buildings;
- the transition to clean energy envisages increasing the share of energy from renewable sources to 40% of total energy consumption by 2030;

- carbon taxes by introducing a Carbon Border Adjustment Mechanism (CBAM), which imposes taxes on products imported from countries with less strict climate regulations;
- zero-emission vehicles - accelerating the adoption of electric vehicles and phasing out sales of cars with internal combustion engines by 2035.

Priority is given to aspects that have the role of ensuring an effective approach to the climate effort at the sectoral level, with an emphasis on the transformation of all sectors of the economy, with an emphasis on energy, transport and mobility, agriculture. The Fit for 55 package consists of a set of interconnected proposals, which aim to achieve a fair, competitive and green transition by 2030 and in the next period.

The implications of the legislative proposals included in the Fit for 55 Package envisage a mixed approach to achieving the objective of climate neutrality, aiming at: the application of the trading system of GHG emission certificates in new sectors of activity (buildings and road transport), increasing the use of renewable energy and of energy efficiency, the development of transport modes with low GHG emissions, infrastructure and alternative fuels. Also, attention is paid to the issues related to the prevention of the relocation of GHG emissions.

The implementation of the legislative measures included in the Fit for 55 Package is a complex process, starting from the aspects regarding the transition from fossil fuels to efficient ones, energy, transport, mobility, energy efficiency of homes, impact on the workforce.

As a conclusion, the framework of the mentioned legislative proposals aims at its active contribution to the achievement of the objective of climate neutrality, which is identified as the central pillar of the European climate framework. The EuropeanGreen Deal, the European Climate Law, as well as the proposals included in the Fit for 55 Package give specificity to the climate effort at the EU level in correlation with other existing initiatives at the international level.

To support regions and economic sectors affected by the transition to climate neutrality, the EU has created the Just Transition Fund, which will provide funding for:

- coal regions and industries with high carbon emissions through financial and technological assistance for the adaptation and diversification of local economies;
- retraining and supporting the labor force through funds for vocational training programs, retraining and job creation in ecological sectors (European Commission, 2021).

Green financing and investments. The EU aims to mobilize massive funds to support the transition to climate neutrality. The European Green Deal Investment Plan (EGDIP)aims to mobilize at least €1 trillion in green investment over the coming years. The Green Energy Financing Facility and green bond initiatives will also help finance the transition (European Commission, 2020).

Discussion and conclusions. The European Union's legislative proposals on achieving climate neutrality by 2050 have significant consequences for the economy, society and the environment, both at the level of the member states and globally:

Economic consequences:

- the energy and industrial transition will cause the industry and the energy sector to go through profound transformations, with massive investments in renewable energy sources, green technologies and energy efficiency. While these changes will create new markets and green jobs, traditional sectors such as fossil fuels and heavy industry will suffer economic losses and redundancies;
- increased costs in the short term because the implementation of new technologies and adaptation of existing infrastructures will require considerable initial investments, which could lead to increased costs for businesses and consumers, at least in the short term;
- The Carbon Border Adjustment Mechanism (CBAM) will impose taxes on imports of goods from countries that do not have strict regulations on carbon emissions, in order to prevent the relocation of industry outside the EU ("carbon leakage"), which will affect trade flows European/global and could generate trade tensions with countries that do not implement similar measures;
- innovation and competitiveness - in the long term, investments in green technologies and innovation can increase the EU's global competitiveness, strengthening its role as a leader in the green economy. Companies that adopt sustainable solutions will be more resilient and more competitive in European/global markets.

Social Consequences:

- jobs and reskilling – while the green transition will generate new jobs in areas such as renewable energy, sustainable transport and resource management, there will be significant job losses in polluting industries such as mining and power generation based on coal. The Just Transition Fund will be key to reskilling workers and supporting affected communities;
- economic and regional inequalities so that regions heavily dependent on fossil fuels, such as the coal-bearing regions of Eastern Europe, will be more affected by the climate transition, requiring considerable financial support for these regions in order to avoid increasing economic inequalities;
- costs to consumers – in the early stages of implementing climate measures, energy bills are likely to increase due to investments in infrastructure and green technologies, and social protection measures and subsidies are needed to mitigate the impact on vulnerable populations.

Environmental consequences:

- reducing greenhouse gas emissions by implementing the legislative proposals will have a major positive impact on the environment, by significantly reducing

CO_2 and other greenhouse gas emissions, stabilizing global temperatures and mitigating the effects of climate change;
- improving air quality as with the transition from fossil fuels to clean energy sources, air quality in the EU will improve considerably, reducing respiratory diseases and premature deaths associated with atmospheric pollution;
- the protection of biodiversity will be ensured through policies related to climate neutrality that will support the restoration of ecosystems and the conservation of biodiversity, especially through reforestation and restoration projects of natural habitats.

Geopolitical consequences:
- EU global leadership in combating climate change by implementing the ambitious measures mentioned, will influence other countries to adopt similar measures;
- trade tensions - The CBAM mechanism and other carbon adjustment measures could generate trade tensions for countries that do not adopt similar standards. In particular, developing countries that depend on exports to the EU might consider these measures a form of protectionism;
- dependence on critical resources as the transition to green technologies will lead to increased demand for rare materials (such as lithium and cobalt, used in electric batteries), the EU having to manage import dependencies for these critical resources, diversifying suppliers and promoting recycling.

Consequences for technology and innovation:
- accelerating green innovation through climate policies will stimulate research and development in areas such as renewable energy, energy storage, electric vehicles and energy efficiency; new economic opportunities will be created and transition costs will be reduced;
- creating new markets - the climate transition will generate new markets for sustainable products and services, such as green construction, sustainable agriculture and carbon capture and storage technologies.

The EU's legislative proposals on climate neutrality will have transformative effects at economic, social, technological and geopolitical levels. Although the short-term challenges will be considerable, they are necessary to prevent the serious consequences of climate change. In the long term, the green transition could position the EU as a global leader in the sustainable economy, creating a more resilient, healthier and fairer society.

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