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# Utas és holdvilág

„Ismétlés a tudás anyja” – tartja a közmondás, ugyanakkor az ismétlés nemcsak a tudás, hanem az unalom anyja is.

Vajon mikor jön el az a pillanat, amikor felismerjük, hogy a még az elején hasznosnak tűnő mantra már nem előny, csupán önismétlés? És amennyiben ez az önismétlés nem belülről fakad, akkor annak reprodukálása már nemcsak unalmat, hanem meghasonlást is okoz. Ezzel a meghasonlással szembesül olaszországi nászútján Szerb Antal *Utas és holdvilág* című regényének szereplője, Mihály is. Hol jön el az a pont, ahol a külvilág elvárásait a belső énünk már nem képes tovább cipelni? Meddig lehet megerőltetnie magát az embernek, hogy „más legyen, mint amilyen”? Amíg ki nem fullad és össze nem esik. Ez történik Mihállyal is egy névtelen olasz kisvárosban egy csillagfényes éjszakán a holdvilágban.

Mennyit bír el az unió? A szerződés megfogalmazása biztos, hogy a krízisek sorozatára lett kalibrálva, és hiteles koherenciát biztosít azok megoldása terén? Ilyen és hasonló kérdések merülnek, merülhetnek fel az idestova lassan húsz éve a válság-stáb-üzemmódban működő uniós politikákat szemlélőkben. És ez ma sincs másképp.

Ha más megközelítésből is, de hasonló témákat járnak körül az *Európai Tükör* jelen számában megjelenő tanulmányok Tóth Tibor, Vértesy László, Matuz János, illetve Farkas Csamangó Erika tollából az uniós források regionális felhasználása, a szén-dioxid-gazdálkodás, a fenntarthatóság, valamint a Covid-19-járvány gazdasági hatásainak kezelésére létrehozott uniós Új Generációs (Next Generation EU) finanszírozás kapcsán.

Kecsmár Krisztián  
főszerkesztő



Tibor Tóth<sup>1</sup>

# The Social and Territorial Dimension of the Recovery and Resilience Facility

## Innovative Solutions and its Constraints

*One of the most important financial instruments for recovery from the pandemic crisis is the Recovery and Resilience Facility (RRF), which replaces austerity-oriented conditionality introducing a demand-driven and results-oriented framework, with access to support conditional on forward-looking reforms and investment plans. All this contributes to the renewal of European economic governance, which in the post-pandemic period relies heavily on the principles of the European Pillar of Social Rights (EPSR) and the general objectives of the RRF. Based on an analysis of the relevant literature, EU documents and databases, the study argues that the interconnection of the EPSR and RRF governance architectures has created an opportunity to strengthen the socialisation and territorialisation of European economic governance, at the same time the effectiveness of implementation is influenced by several factors, above all, the diversity of social policy and regional development practices represented by Member States, the differing domestic priorities of recovery strategies, and the unclear relationship between the RRF and cohesion policy.*

**Keywords:** recovery, social and economic policy coordination, governance architectures, social and territorial cohesion, complementarity

## Introduction

In response to the complex effects of Covid-19, the European Union (EU) established the NextGeneration EU (NGEU) funds with the aim of successfully managing the burdens of the green and digital transitions by stimulating public investment, while contributing to a socially inclusive recovery from the pandemic. With this, the EU has taken another step that was previously considered taboo: following the temporary suspension of the Stability and Growth Pact, it has temporarily increased its fiscal capacity through joint European debt and bond issuance.<sup>2</sup>

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<sup>2</sup> GUILLÉN et al. 2022.

The main financial instrument of the seven programmes financed by the NGEU is the Recovery and Resilience Facility (RRF), which originally provides €723 billion in non-repayable grants and loans to Member States along six thematic pillars (calculated at 2018 prices) to promote economic, social and territorial cohesion, and address common challenges such as the diversification of energy supply.<sup>3</sup> The RRF represents a novel approach to support, primarily in that it breaks with the austerity-oriented conditionality policy of the European Stability Mechanism, which tied the disbursement of loans and credits to far-reaching structural reforms and cuts in social spending. Instead, it introduced a new demand-driven and results-oriented framework, which made access to support conditional on forward-looking reforms and investment plans.<sup>4</sup> The disbursement of grants and loans requested by the Member States is based on the National Recovery and Resilience Plans (NRRPs), which contribute to the development and strengthening of ownership.

The innovative nature of the RRF stems from the complexity of the problem it aims to address. Within this comprehensive framework, the new financial instrument aims not only to mitigate the socio-economic consequences of the pandemic crisis, but also to promote the economic, social and territorial convergence and cohesion of the EU on this basis.<sup>5</sup>

The social and territorial dimensions of recovery from the crisis give particular importance to the creation of the RRF, thanks to the shift in perspective that sees social welfare systems not merely as a means of cost competitiveness, but as a key prerequisite for productivity and economic growth. In this context, the integration of the social dimension into EU economic governance through the European Semester (hereinafter referred to as the Semester) introduced in 2011 and the related country-specific reports (CSRs) has become particularly important. The socialisation of the Semester progressed gradually between 2011 and 2016 and became embedded in the EU's new post-crisis governance architecture.

One of the key outcomes of this process was the European Pillar of Social Rights (EPSR) adopted in 2017 and the action plan approved in 2021. From this point onwards, the CSRs also reflect the principles of the EPSR, which is a further key step towards the coordination of the EU's social and economic policies.<sup>6</sup> The close link between the EPSR and the Semester has also had an impact on the functioning of the RRF, as the legal framework for the RRF stipulates that Member States must take into account the CSRs set out in the Semester and the principles of the EPSR when compiling their NRRPs, and that the European Commission (hereinafter: Commission) shall assess the plans submitted on the basis of these requirements when assessing the plans submitted.<sup>7</sup>

The literature on the subject deals separately and in detail with the “socialising” of the Semester, the “compass” role of the EPSR, and the planning, design and governance structures of the RRF and NRRPs. However, less attention has been paid to the extent and under what conditions the coordinated functioning of European economic

<sup>3</sup> European Commission 2023.

<sup>4</sup> ARMINGEON et al. 2022; CORTI-VESAN 2023.

<sup>5</sup> Official Journal of the European Union 2021b; FÁSI 2024.

<sup>6</sup> ZEITLIN-VANHERCKE 2018; VESAN et al. 2021; DE BECKER 2024.

<sup>7</sup> Official Journal of the European Union 2021b.



governance, the EPSR and the RRF can support the EU's social and territorial cohesion. The aim of this study is to examine the international literature, EU documents and expert materials, as well as the data from the scoreboards published by the Commission, to explore the interrelationships between the overall objectives, integrated governance mechanisms, and progress in social and territorial cohesion.

Based on both primary and secondary data, the paper seeks to answer the question of to what extent does the integration of the EPSR and RRF governance architectures effectively drive social and territorial cohesion in practice, and what governance failures constrain this potential?

To test the assumption that administrative constraints and the unclear relationship with cohesion policy prevent effectiveness, the study conducts a gap analysis using the 2025 Recovery and Resilience Scoreboard. Specifically, it contrasts the nominal financial allocations for social goals against their classification as “primary” or “secondary” objectives. This allows for an empirical test of whether Member States are undertaking deep social reforms or merely attaching existing infrastructure projects to meet quota requirements.

## **The EPSR and post-Covid-19 recovery: Relaunching the notion of Social Europe**

The global financial and economic crisis that emerged in 2008 and the euro crisis that unfolded in 2010 were managed by a logic focused on competitiveness, fiscal stability and austerity, which further deepened social and territorial disparities.<sup>8</sup> However, the socio-political tensions that arose during this period of strict economic surveillance and austerity measures, as well as the noticeable erosion of public support for the EU, have, over time, called into question the dominance of the neoliberal paradigm, which promotes competition in terms of wage taxes, and welfare spending, and led to the recognition that social policy is not only a tool for social redistribution but also plays an important role in the effective functioning of modern market economies.<sup>9</sup>

A key element of this contradictory process was the differing interpretations of social policy, which also largely determined the nature of the financing and management instruments used. Social policy as a policy area remained within the competence of the Member States for a long time. However, in the 1980s and 1990s, the need for EU-level social policy grew because of the single market, the European Economic and Monetary Union (EMU) and the coordination of economic policies. The debates arising from this dilemma were, on the one hand, between the welfare state model developed by most Member States, based on the concept of the welfare state, which is protective, redistributive, or the productive, economy-oriented social policy models represented by the EU, which are based on individual responsibility and support active participation in the labour market. On the other hand, the debate has been dominated by the search for

<sup>8</sup> CSATH et al. 2018; KAISER 2023a.

<sup>9</sup> ARANGUIZ 2022: 78; HACKER 2023.



common ground between the two.<sup>10</sup> In practice, the application of the two basic social policy models has led to a kind of division of labour between the EU and the Member States, as the Member States have adopted several elements of productive social policy while seeking to preserve the positions and achievements of their protective social policy systems.<sup>11</sup>

However, as a direct result of the 2010 European debt crisis, the decade of crisis management has been dominated since 2011 by the European Economic Governance and the Semester mechanism. The introduction of the Semester raised several previously controversial issues in the field of social and economic policy coordination, which was framed by the EU's new post-crisis governance architecture. The starting point for the criticism was that during the crisis management, the emphasis shifted clearly towards economic and financial coordination, which had serious social consequences (e.g. raising the retirement age, restructuring collective agreements). On the one hand, this led to the marginalisation of social policy actors in decision-making and, on the other hand, reinforced the coercive, prescriptive and uniform (one-size-fits-all) character of the Semester.<sup>12</sup>

However, other studies point out that CSR has gradually become more balanced, with social and employment policy issues and investment proposals gaining increasing importance.<sup>13</sup> According to authoritative estimates, the proportion of the latter rose from 50% to 64% between 2011 and 2016.<sup>14</sup> Another empirical study also highlights that between 2010 and 2016 there was a partial shift towards the “socialisation” of the Semester, which accelerated particularly from 2014, when the Juncker Commission took office.<sup>15</sup> This is demonstrated, on the one hand, by the growing number of social objectives in CSRs, but equally important is the increasing involvement of EU social and employment actors in the planning of reforms by Member States and in monitoring their implementation.<sup>16</sup> Under the Juncker Commission, CSRs have been streamlined and further socialised. In the spirit of streamlining, the Macroeconomic Imbalance Procedure Detailed Reviews and the staff working documents were integrated into a single Country Report, which was discussed by the Commission and the Member States concerned in bilateral negotiations before and after its publication. However, the most significant change was the reduction in the number and thematic focus of the CSRs and the introduction of a results-oriented approach, which also gave Member States greater leeway to plan the necessary measures. Social and employment policy issues have nevertheless retained their position in the new framework. This is also shown by the fact that in 2016, compared to 2015, the number of CSRs decreased from 102 to 89, while the number of social recommendations decreased only slightly, from 118 to 114.<sup>17</sup> This is also due to the

<sup>10</sup> TÓTH 2018; TÓTH 2024.

<sup>11</sup> ZIMMERMANN–GENGNAGEL 2023: 528.

<sup>12</sup> ZEITLIN–VANHERCKE 2018: 150–151.

<sup>13</sup> JESSOULA 2015; BEKKER 2016.

<sup>14</sup> CRESPIY–VANHEUVERZWIJN 2016: 77–78.

<sup>15</sup> According to an analysis by the European Trade Union Institute, between 2011 and 2014, approximately 40–47% of CSR reports published each year addressed social and employment policy issues (CLAUWAERT 2015: 11).

<sup>16</sup> ZEITLIN–VANHERCKE 2018: 152.

<sup>17</sup> ZEITLIN–VANHERCKE 2018: 164.



new, integrated nature of CSRs, as several previously separate social objectives have been incorporated into other policy areas, such as the labour market, education and taxation.

The above-mentioned changes – an integrated approach, streamlining, a focus on results, encouraging social investment, extended consultation obligations between the actors concerned – were nevertheless aimed at strengthening Member States' commitment to reforms (“ownership”) and the effectiveness of implementation. The traditional hierarchical mode of governance of the Semester has been replaced by a more interactive approach, in which the CSRs have become less uniform and prescriptive, particularly in the areas of social and employment policy, thus better adapting to the specific circumstances of the Member States.

Nevertheless, it is important to note that the proposals set out in the Semester, which covers economic, social and employment policy coordination, are only recommendations, and their implementation at national level is entirely up to the Member States. The partial “socialisation” of the Semester can be seen as a response by the Commission and other EU institutions to widespread social dissatisfaction with austerity policies. The most tangible consequence of this can be seen in the “socialisation” of CSRs, but more broadly in the fact that by the middle of the decade, the idea of a Social Europe had returned to economic and political discourse at the EU level.

The first major milestone in this process was the adoption of the EPSR in 2017, with which the EU clearly expressed its intention to move away from a period of unilateral economic governance and austerity. This is also reflected in the fact that the Semester now incorporates the objectives of the EPSR, whose implementation and performance at Member State level is monitored by means of the Social Scoreboard. Although the implementation of the EPSR is not binding on Member States, but rather serves as a guiding framework or “compass”, it has nevertheless become a point of reference and a catalyst for new legislative and other initiatives in the discourse on the realisation of a Social Europe.<sup>18</sup> Although it incorporates certain parts of the EU's social acquis (e.g. gender equality, anti-discrimination), it also covers new areas that fall within the competence of the Member States (e.g. education, wage and pension policy). The Commission has referred to the principles of the EPSR in several legislative initiatives, including among others the Council Recommendation on the introduction of a child guarantee in 2021 and the adoption of the Minimum Wage Directive in 2022.<sup>19</sup>

The first serious test of the European Pillar of Social Rights (EPSR) came with the outbreak of the Covid-19 pandemic in 2020. The management of the health, economic and social consequences of the pandemic has enhanced and placed in a new context the relationship between the Semester and the EPSR, with particular regard to its social dimension.<sup>20</sup> This is also reflected in the May 2021 Social Summit in Porto, where the European Council expressed its strong commitment to the EPSR, setting the goal of

<sup>18</sup> BEKKER 2022; HACKER 2023.

<sup>19</sup> Official Journal of the European Union 2021a; Official Journal of the European Union 2022.

<sup>20</sup> CORTI-VESAN 2023.



revitalising the social dimension of EU integration.<sup>21</sup> This led to the Porto Declaration, which defined the EPSR as a tool for post-crisis recovery that respects the values of a fair and social model.<sup>22</sup>

## **Strengthening the social dimension: Instruments of integrated approach and modes of governance**

When examining the social dimension of economic governance in the European Union, it is particularly important to understand the theoretical and practical frameworks within which European social policy is shaped.<sup>23</sup> These conceptual differences are closely linked to the various governance instruments and policies.<sup>24</sup> In the context of European social policy, there are three main types of instruments: rule-based (e.g. guidelines, minimum standards), coordination-based (such as the Open Method of Coordination, policy guidelines and the CSRs) and monetary-based instruments (such as the European Social Fund and the RRF). All three types of instruments define the division of responsibilities between Member States and EU actors in different ways, influencing the achievement of social policy objectives.<sup>25</sup>

However, these instruments rarely work in isolation. They are typically part of governance architectures that seek to address complex problems as long-term, strategic institutional arrangements. During the Covid-19 crisis, the EU has developed several strategies along the priorities of green, digital and inclusive growth. The RRF, which can be seen as a new generation of financial instruments, fits into this framework. On the one hand, it originally provides a combination of grants (€338 billion) and loans (€385.8 billion), and on the other hand, it links the financing of planned investments to the fulfilment of specific conditions. Accordingly, a certain level of expenditure must be allocated to green and digital objectives (37% and 20% respectively), the “do no significant harm” principle must be applied in line with the EU’s environmental objectives, and it must be demonstrated that Member States’ efforts contribute to the implementation of the EPSR, with particular regard to the reforms and challenges proposed in the 2019 and 2020 CSRs. Socially relevant investments had already appeared in the CSRs, but the social dimension became even more prominent in 2020. The CSR emphasised the role of traditional social protection: extending social protection coverage, strengthening healthcare and reviving social dialogue.<sup>26</sup> The reference to CSRs means that coordination-based elements play an important role in the monetary-based management of the

<sup>21</sup> The action plan for implementing the EPSR set three main objectives: achieving an employment rate of at least 78%; ensuring that at least 60% of adults participate in training; and reducing the number of people at risk of social exclusion or poverty by at least 15 million (European Commission 2021).

<sup>22</sup> European Council 2021.

<sup>23</sup> FÁSI–SZŰCS 2024.

<sup>24</sup> For example, the issue of pensions can be interpreted from both a budgetary (expenditure) and a social (old-age security and livelihood) perspective, but it also raises serious dilemmas (e.g. how to reconcile budgetary restraint with the fight against poverty).

<sup>25</sup> BEKKER 2022: 4.

<sup>26</sup> European Commission 2020.



RRF.<sup>27</sup> However, conditionality is not the same as top-down governance. Unlike previous crisis management mechanisms, the RRF is based on a demand-driven process aimed at strengthening national ownership and commitment to reforms. In practice, national governments are responsible for preparing NRRPs, which shows that they have significant leeway in the process, creating opportunities for the application of certain elements of participatory governance. The plans must be consistent with the recommendations set out in the CSRs, which is one of the most important elements of the Commission's assessment and approval.

The RRF also introduces a new performance-based approach, linking the disbursement of financial support to compliance with an “operational agreement” between the Commission and national governments. In practice, this means that the Member State concerned must meet quality milestones and quantitative indicators within a specified timeframe. At the same time, the plans were developed in close consultation and negotiation with the Commission, resulting in a kind of contractual relationship between the Commission and the Member States. Although it was necessary to coordinate the planned reforms and investments with the CSRs, the RRF milestones and targets are not imposed by the Commission but proposed by the Member States. On the other hand, the plans are not declarations of intent on the part of the Member States, but commitments to achieve the objectives. To this end, Member States must establish effective implementation and monitoring structures.

Overall, financial support is closely linked to coordination instruments, so the RRF itself constitutes a hybrid governance structure. The three architectures presented – EPSR, Semester, and RRF – are good examples of how EU social policy objectives can be promoted through a combination of different instruments. While the EPSR primarily fulfils a political and normative function, the Semester applies a coordination logic, and the RRF operates with financial incentives. These structures are becoming increasingly interconnected in practice, providing opportunities to exploit synergies, but at the same time, the growing complexity poses new challenges for the effectiveness and legitimacy of EU governance.

The links between the architectures are multifaceted. The EPSR, for example, is integrated into both the Semester and the RRF. The EPSR contributed to the “socialisation” of the Semester, while the Semester supports the monitoring of Member States' social performance in line with the EPSR through the Social Scoreboard.<sup>28</sup> This indicator system uses metrics to monitor how well Member States are performing against social objectives, thereby supporting the integration of the social dimension into EU economic governance. The link between the EPSR and the Semester is clearly visible in the RRF regulation.<sup>29</sup> The preamble states that the Semester, which also incorporates the principles of the EPSR, provides the framework for national reform priorities and their implementation. In practice, this means that the NRRPs must consider the CSRs set out in the Semester and the principles of the EPSR, as well as the consultations carried

<sup>27</sup> The recommendations cover a wide range of social policies, such as vulnerable labour market groups and the self-employed.

<sup>28</sup> European Commission 2026a.

<sup>29</sup> Official Journal of the European Union 2021b.



out with social partners, local authorities and civil society organisations. The Commission will assess the NRRPs taking these aspects into account. This multi-level and multi-instruments approach allows Member States to shape their social policy reforms in line with EU expectations, but in accordance with their own priorities. The Semester and the CSRs set constraints and conditionalities for Member States' reforms, but the soft mechanism of the Semester leaves sufficient room for national considerations and the selection of appropriate policies. On this basis, the RRF provides the necessary funding for implementation.

However, within this extremely complex set of conditions, the RRF does not clearly specify what governance structures it expects Member States to put in place during the implementation. Although the role of the European Commission and Member State governments proved to be crucial during the planning phase, a new coordination logic emerged, linking multiple modes of governance and creating opportunities for Member States and social partners to play an active role in shaping European social policy.<sup>30</sup> Based on the above, the conditionality applied in the RRF like linking access to funds to specific reforms – is not the same as the strict governance represented by the troika (European Central Bank, IMF, European Commission) during the previous crisis. Instead, a more balanced and flexible model is emerging, which, through synergies between architectures, can strengthen the achievement of EU-level social objectives while maintaining flexibility at the national level. However, assessing the success of this system requires looking beyond the governance architecture to the actual allocation of resources. The following analysis investigates whether the RRF's performance-based logic has strengthened social cohesion or if administrative constraints have led to a “cannibalisation” of funds. We will test this by comparing the nominal volume of social investment against the actual strategic focus (primary objectives) of Member States, thereby determining if the “socialisation” of the Semester is translating into practice or remains a bureaucratic exercise.

## **The position and prospects of the social and territorial cohesion pillar in the context of the RRF and cohesion policy**

While supporting recovery, resilience, crisis management, as well as increasing the competitiveness of Member States, the RRF has a key role in fostering economic, social and territorial cohesion in the EU. Accordingly, one of its six pillars is specifically designed to promote social and territorial cohesion. Member States must demonstrate in their NRRPs that the proposed investments and reforms have social and economic impacts on various social groups in line with the principles of the EPSR.

However, geopolitical events, the Russian–Ukrainian war, high inflation, supply chain disruptions and occasional natural disasters have made it difficult for Member States to implement certain reforms and investments set out in their NRRPs. In light

<sup>30</sup> BEKKER 2022; RAINONE 2022; LADI–POLVERARI 2025.



of the changing and uncertain environment, Member States were allowed to amend the relevant measures under Article 21 of the RRF Regulation if objective circumstances made it impossible to achieve the original milestones and targets.<sup>31</sup>

The €723 billion mentioned at the beginning of the paper represented the maximum amount of RRF grants (€338 billion) and RRF loans (€385 billion) under the RRF Regulation.<sup>32</sup> The amended RRF Regulation made additional support available to Member States under the Emissions Trading System (€20 billion) and the Brexit Adjustment Reserve (€2 billion). As a result of these changes, the total financial envelope of the RRF stood at €577 billion at the end of February 2026, divided into €360 billion in grants and €217 billion in loans.<sup>33</sup>

The above-mentioned changes to the structure and allocation of the financial envelope had an impact on the RRF thematic priorities as well as its estimated expenditure.<sup>34</sup> The priorities are structured around six pillars, namely green transition, digital transformation, smart, sustainable and inclusive growth, social and territorial cohesion, health, economic, social and institutional resilience, and policies for next generation. Each NRRP must cover these pillars, taking account of domestic demands as well as its European relevance. However, each measure of the NRRPs contributes towards two of the six policy pillars as the primary and secondary objective of the measure. Therefore, the total contribution to all pillars amounts to 200%, and not to 100% of the RRF funds allocated to Member States.<sup>35</sup>

Taking into account these specific elements and requirements of the RRF Regulation, the estimated costs of each policy pillar have increased in absolute terms, compared to the plans drawn up prior to the amended regulations. Among them, the measures contributing to Pillar 1 (green transition) and Pillar 3 (smart, sustainable and inclusive growth) have been particularly strengthened, and a larger share of the RRF financial envelope currently contributes to these two objectives (Table 1).

The reasons behind these changes can essentially be attributed to two factors. Firstly, the planning process – and in particular the development of the institutional capacities required for implementation and monitoring – entailed higher costs than anticipated. As a result, when amending their NRRPs, Member States began to prefer development measures that were already partially prepared in their national plans, as their implementation entailed less administrative and financial burden for them. Secondly, as the two coexisting EU funding instruments (RRF and cohesion policy) with two different approaches (performance-based and costs-based) largely overlap, it has become necessary to delineate the planned measures from one another in the light of the aforementioned constraints and requirements for implementation.

<sup>31</sup> Official Journal of the European Union 2021b.

<sup>32</sup> Official Journal of the European Union 2021b.

<sup>33</sup> European Commission 2026b.

<sup>34</sup> Both the thematic priorities of the green transition and the digital transition exceeded the targets set in the original legislation (European Commission 2026b).

<sup>35</sup> See details in Annexes VI and VII of the RRF Regulation (Official Journal of the European Union 2021b).



Table 1: Current contribution of the RRF to each policy pillar

RRF pillars											
Green transition		Digital transformation		Economic cohesion, productivity and competitiveness		Social and territorial cohesion		Health, economic, social and institutional resilience		Policies for the next generation	
Share of expenditure (%)		Share of expenditure (%)		Share of expenditure (%)		Share of expenditure (%)		Share of expenditure (%)		Share of expenditure (%)	
Total: 50.7		Total: 24.41		Total: 56.78		Total: 41.03		Total: 17.04		Total: 9.99	
Primary objectives: 37.9	Secondary objectives: 12.79	Primary objectives: 20.18	Secondary objectives: 4.22	Primary objectives: 17.76	Secondary objectives: 39.02	Primary objectives: 11.06	Secondary objectives: 29.58	Primary objectives: 6.35	Secondary objectives: 10.09	Primary objectives: 6.29	Secondary objectives: 3.70

Source: compiled by the author based on European Commission 2026b

As a matter of social cohesion, despite the fact that the RRF does not set a mandatory quota for social spending, the revised NRRPs continue to provide significant support for social and territorial objectives in the areas of education and childcare, employment and vocational training, social policies, and health and long-term care.<sup>36</sup> Most of these fall under the following three RRF pillars: policies for the next generation, social and territorial cohesion, and health, economic, social and institutional resilience. The European Commission's guidance emphasises that measures under the fourth pillar should strengthen cohesion at all levels – local, regional and national – including urban and rural areas.<sup>37</sup> The growing importance of the social dimension is also reflected in the fact that the RRF Regulation empowered the Commission to adopt additional regulations establishing a methodology for social spending, defining common indicators and developing a recovery and resilience scoreboard (hereinafter referred to as the RRF Scoreboard).<sup>38</sup>

Following the review of the NRRPs, 31% of social spending in the broad sense will go to education and childcare, with a further 32% going to investments and reforms in health- and long-term care, 21% to employment and skills, and the remainder to social policies in the narrower sense. Based on this, the estimated total of approximately €162.3 billion in the NRRPs will be spent on social policy measures, accounting for approximately 25% of total estimated expenditure.<sup>39</sup>

The fourth pillar (social and territorial cohesion) accounts for 41.03% of the approved RRF financial envelope, which is the third largest contribution after the first

<sup>36</sup> Member States had to justify how they would contribute to strengthening growth potential, job creation and institutional resilience, including in the areas of education and childcare, employment, social policy and health (European Parliament 2024a).

<sup>37</sup> Social and territorial cohesion are two policy areas covering an extremely broad spectrum. Although Article 3 of the RRF Regulation lists the six pillars of the instrument, it does not specify exactly what types of measures fall under the fourth pillar, i.e. social and territorial cohesion.

<sup>38</sup> Official Journal of the European Union 2021b; Official Journal of the European Union 2021c.

<sup>39</sup> European Commission 2026b.



pillar (green transition) (50.7%) and the third pillar (economic cohesion, productivity and competitiveness) (56.78%). As mentioned earlier, all measures were assigned to two pillars – as the primary and secondary objectives of a measure. Remarkably, measures targeting social and territorial cohesion as their primary objective account for only around 11.46% of the total RRF resources under the fourth pillar.

To illustrate the diversity of national implementation strategies, it is instructive to look at contrasting examples of financial allocation. Poland, for example, appears to have the highest commitment to the fourth pillar with 67.10% of total expenditure; however, a closer look reveals that only 16.44% is tied to primary social objectives.<sup>40</sup> This highlights a significant difference between nominal tagging and actual strategic focus. In contrast, Member States such as Portugal and the Netherlands demonstrate a stronger alignment between their plans and social goals, allocating a relatively large share of expenditure to primary objectives.<sup>41</sup> These cases are included to demonstrate that high social expenditure figures in the NRRPs can mask significantly different levels of substantive commitment to social reform.

This shows that, despite the strong links between the Semester, the EPSR and the RRF, the social impact remains below initial expectations. The data suggests that the RRF has not effectively acted as a strategic tool for social rights. A large portion of funds relies on secondary objectives. This indicates that social goals are often treated as side effects of other projects, such as “hard” infrastructure, rather than the main focus. Consequently, while the total amount of money is high, the depth of actual social reform is limited. Member States preferred low-risk, tangible assets over complex social policies to meet strict deadlines.

Theoretically, the Member States’ commitments and choices among the primary and secondary objectives can be attributed to several factors, such as the diversity of social and development policy models and paradigms represented by Member States, differences in territorial development, or the differing domestic priorities of recovery strategies. However, this study examines only one, albeit key, factor, namely the relationship and interplay between the RRF and EU cohesion policy.

Our starting point is that the RRF significantly increases the share of EU-funded public investment with a cohesion policy profile in the Member States. The diversity of financing instruments gives Member States a high degree of discretion in choosing which instrument to use to finance a given investment. The need to strategically choose between the financial instruments also makes it necessary that it is explicitly prohibited to receive funding from RRF and cohesion policy at the same time. Under these circumstances, the decision may be influenced by several factors, which may point in the direction of “cannibalisation”, demarcation and synergies.<sup>42</sup>

The six pillars of the RRF show a high degree of overlap with the five thematic objectives of cohesion policy for 2021–2027: a more competitive and smarter Europe;

<sup>40</sup> European Commission 2026b.

<sup>41</sup> In case of Portugal, the estimated budget for the fourth pillar is 32.01%, of which 20.38% can be allocated to primary objectives and 11.63% to secondary objectives. Similarly, the Netherlands’ estimated budget for the fourth pillar is 32.12%, of which 20.37% is allocated to primary objectives and 11.75% to secondary objectives (European Commission 2026b).

<sup>42</sup> LOPRIORE 2022; BATCHLER–MENDEZ 2023; BATCHLER et al. 2024.



a greener, low-carbon economy transitioning towards net zero carbon emission; a more connected Europe by enhancing mobility; a more social and inclusive Europe; and a Europe closer to citizens by fostering the sustainable and integrated development of all types of territories. The common ground is formed by the green and digital transitions, smart and inclusive growth, and the link to the EPSR. The interaction between the RRF and cohesion policy is particularly evident in the fourth pillar of the RRF (social and territorial cohesion), which is linked to both the fourth and fifth objectives of cohesion policy (a more social and inclusive Europe; a Europe closer to citizens by fostering the sustainable and integrated development of all types of territories). The realisation of this process would require intense coordination and reconciliation between cohesion policy, the RRF and other territorial development strategies at national level, as well as fine-tuned capacity building in terms of institutions, knowledge and expertise.<sup>43</sup>

The interaction between NRRP and Cohesion Policy governance varies widely across countries in terms of administrative coordination, synergies, resource competition, governance structures and flexibility.<sup>44</sup> Experience to date with the planning and implementation of the RRF and cohesion policy, as well as mid-term evaluations, suggest that Member States are likely to favour investments financed through the RRF due to time pressure and more favourable financing conditions.<sup>45</sup> This is particularly so because, although the two instruments are being implemented in parallel, the eligibility period for the RRF ends in August 2026, while the 2021–2027 multiannual financial framework ends in December 2029. In addition, RRF measures or reforms are 100% financed from the EU budget, while national or regional co-financing applies in the case of cohesion policy.

The short-term “cannibalisation effect” of the RRF is reinforced by the existence of a “single project pipeline” at Member State level, i.e. a limited number of projects that Member States intend to implement in the coming years and for which national administrations have limited capacity. In addition, in many countries, the same authorities are responsible for implementing both cohesion policy and the RRF, which increases the pressure on their administrative capacity.

The Czech Republic has seen competition between the frameworks for similarly focused projects and administrative resources. In Romania, the NRRP has overshadowed Cohesion Policy, leading to concerns about ministerial ability to manage both frameworks effectively. Poland’s organisational changes following the NRRP’s launch have also drawn resources away from Cohesion Policy. In Germany, more favourable state aid conditions under the RRF are perceived to have led to some shifts in investment away from Cohesion Policy.<sup>46</sup>

The coexistence of performance-based (“what have we achieved with our money?”) and cost-based (“how much have we spent?”) approaches to the RRF and cohesion policy has further exacerbated this situation. In case of cohesion policy, the co-financing requirement and, in case of the RRF, the focus on investments have placed a heavy burden on Member States’ absorption capacity.

<sup>43</sup> KAISER 2023b: 17.

<sup>44</sup> BATCHLER–MENDEZ 2023: 20.

<sup>45</sup> European Commission 2024a; European Commission 2024b.

<sup>46</sup> BATCHLER et al. 2024: 25.



Some Member States – including Belgium, Latvia, France, Germany and Portugal – have developed specific demarcation strategies, and the literature has identified various approaches in this regard.<sup>47</sup> In thematic demarcation, certain areas of funding are reserved exclusively for the RRF. For example, in Germany, the RRF has restricted the scope of Cohesion programmes, with a clear division established between RRF and Cohesion Policy funding in areas like energy efficiency and hydrogen. This type of demarcation is significantly influenced by the regulatory framework, as the RRF can also support sectors that do not typically fall within the scope of the cohesion policy, such as the justice sector. In case of territorial demarcation, the RRF and cohesion policy focus on different types of geographical regions, demarcation based on the type of beneficiary establishes priorities between, among others, public and private organisations, and temporal demarcation refers to the timing of the use of resources between the RRF and cohesion policy. Belgium is a good example of a mixed approach, where Flanders aligns themes between Structural Funds and the NRRP, while Brussels and Wallonia develop complementary but different programme guidelines.<sup>48</sup>

As far as synergies and complementary effects are concerned, national authorities are responsible for ensuring the harmonious cooperation of the two instruments within the RRF regulatory framework. Estonia has aligned both frameworks, particularly in green and digital investments, using shared management systems. Cyprus is addressing absorption targets by coordinating projects under both frameworks. While the Finnish RRP and Cohesion Policy programmes were designed to address different areas of support, (e.g. broadband will only be supported by the RRP), synergies between instruments are still evident.<sup>49</sup>

As the partnership agreements ensuring the implementation of cohesion policy were still at an early stage of development, the NRRPs could only provide a brief description of how the developments planned under the RRF and cohesion policy complement each other. In addition to the tight planning timeframe, other challenges included the priority given to RRF implementation, discrepancies between the economic rationale and governance structure of the two instruments, the marginal territorial dimension of the RRF, and the aforementioned limitations of institutional and absorption capacities.

The number of reforms and investments related to the pillars of the RRF (Table 2) provides a useful analytical framework for analysing the relationship between the RRF and cohesion policy based on the previously mentioned three options: demarcation, cannibalisation and synergy.

<sup>47</sup> LOPRIORE 2022: 2–3.

<sup>48</sup> BATCHLER–MENDEZ 2023: 21.

<sup>49</sup> BATCHLER–MENDEZ 2023: 20–21.



Table 2: The overall number of reforms and investments related to the pillars of the RRF

RRF pillars	Reforms	Investments
Green transition	682	2,000
Digital transformation	515	1,500
Smart, sustainable and inclusive growth	1,200	1,800
Social and territorial cohesion	877	1,600
Health and economic, social and institutional resilience	2,000	682
Policies for the next generation	231	353

Source: compiled by the author based on European Commission 2026b

A good example is a comparison of the second and fourth pillars. Investments in social and territorial cohesion rank third in terms of volume, close to digital transformation. However, if we compare the number of investments with the budget shares in Table 1, it appears that the digital transformation pillar achieved this volume with a smaller budget (24.41% vs. 41.3%), but with a much higher proportion of expenditure allocated to primary objectives (20.18% vs. 11.46%). To understand this, it is worth considering that the primary objectives mentioned earlier are related to the reform/investment in general, while secondary objectives are intended to achieve spillover effects for specific target groups or for a specific branch of the primary objectives. It can therefore be concluded that Member States generally preferred “hard” infrastructure projects as primary objectives, that had already been prepared in advance.<sup>50</sup> As a result, even within the relatively short project timeline, the strictly defined milestones and objectives established in the NRRPs can be achieved with relatively low risk.

This demarcation methodology between primary and secondary objectives can be observed in both pillars under examination. However, digital transformation – due to the high funding rate of the primary objectives – may also involve the “cannibalisation” of some of the digitisation developments that are potentially eligible for support under the cohesion framework. The eligible actions under the social and cohesion pillar, projects in the investment area of territorial infrastructure and services account for around 66% of the overall costs of the pillar.<sup>51</sup> Given the small proportion of funds allocated to primary objectives (11.06%) and, in contrast, the relatively large number of investments (1,600), the much higher budget share of secondary objectives suggests that Member States tend to link RRF-funded developments to cohesion policy objectives, programmes and projects. In other words, in this case, rather than “cannibalisation” and demarcation, interactions and synergies may form the basis for planning. This is also shown by the fact that, according to the Commission’s assessment, only nine Member States’ NRRPs identify more than three development components that are fundamentally linked to the social and territorial cohesion pillar.<sup>52</sup> The case of Poland is particularly instructive in this respect. Here, the ratio of expenditure under the primary and secondary objectives is 69.80%, but only 17.85% of this is linked to the primary objectives. However, the

<sup>50</sup> BOKHORST–CORTI 2024: 726–727.

<sup>51</sup> European Commission 2026b.

<sup>52</sup> European Parliament 2024b: 14.



Commission's assessment also questions this, stating that none of the six development components identified in the Polish NRRP under the social and territorial cohesion pillar contribute significantly to the objectives of the pillar.<sup>53</sup>

## Conclusions

Assessing the social situation in the European Union has become a key issue, particularly in times of crisis. Economic shocks – from the 2008–2009 financial crisis to the Eurozone debt crisis of 2010–2015 and the Covid-19 pandemic – have strongly highlighted that social protection is not only a national but also an increasingly EU challenge. It was in this context that the EPSR emerged as a new orientation framework which, although not legally binding, has nevertheless created new priorities in the social dimension, particularly in the areas of employment, social inclusion and welfare services. The EPSR is not a revolutionary breakthrough in itself but rather offers a longer-term social narrative for the EU. In response to the complex effects of Covid-19, the NGEU was established in July 2020, and the most important innovative feature of the RRF is that it links access to grants and loans to forward-looking reforms and investment plans aimed at promoting the EU's economic, social and territorial cohesion and supporting the green and digital transitions.

The Semester, i.e. the linking of the EPSR and RRF governance architectures, has created an opportunity to give European economic governance a more social dimension, primarily through the European Semester mechanism. This has had a positive impact by facilitating Member States' ability to comply with the CSRs of the Semester through pre-financing provided in the context of the recovery from the pandemic. Approximately 25% of the RRF budget is allocated to social measures. Within this, the social and territorial cohesion pillar is the third largest expenditure after the green transition and smart, sustainable and inclusive growth pillars.

Budgetary expenditure and general objectives will be assessed during the implementation process. In other words, can the new EU financial instrument (additional EU funding) contribute to the EU's social and territorial cohesion, and if so, to what extent? Mid-term evaluations of the implementation of the RRF show that, during the planning process, Member States successfully coordinated the rule-based and monetary-based instruments of the EPSR, the Semester and the RRF. At the same time, the implementation of the RRF has placed a greater than expected burden on the institutional, administrative and absorption capacities of Member States, particularly at local and regional levels. However, the lack of a territorial dimension to the RRF raised concerns about increasing regional disparities between Member States, particularly if investments are more likely to flow to regions with stronger institutional frameworks and growth potential.

<sup>53</sup> The counterexample is Italy, where 11 of the 16 development components identified under the social and territorial cohesion pillar are significantly linked to the pillar's objectives, according to the Commission's assessment (European Parliament 2024b: 12).



Another contradiction arises from the fact that the performance logic of the RRF makes Member States interested in meeting their commitments on time, but rigid timetables that are unable to respond to changes in external circumstances tend to shift the implementation process towards compliance with formal criteria. In the near future, it will also be necessary to clarify the relationship between the RRF and cohesion policy, which is urgent and relevant in view of the preparations for the EU budgetary period after 2027.

Our analysis shows that despite the integrated approach of the Semester, the EPSR and the RRF in terms of their perspectives and governance architecture, the weight, influence and expected impact of the social and territorial dimensions in Member States' implementation fall short of initial expectations. This is largely due to the unclear relationship between the RRF and cohesion policy, which could lead to cannibalisation, synergies and complementary effects, or thematic and temporal demarcation. According to the NRRPs, investments under the social and territorial cohesion pillar show that Member States have preferred infrastructure and service developments related to "hard infrastructure" that can be implemented with relatively low risk, while other developments are more dependent on the implementation of cohesion policy.

These issues have also emerged in the debate on the future of cohesion policy. The design and implementation of the RRF raise several questions related to the management and disbursement of EU funding and the role of structural reforms. Given the temporary nature of the RRF, it is particularly important to identify which innovations can be applied and inspire the next EU budgetary programming period. To this end, further research is needed to examine the implementation of Member States' NRRPs, in particular the extent to which they have integrated the principles of the EPSR, whether they have aligned detailed social programmes with the green and digital transitions, or whether they have merely made formal references without any substantive commitment. A limitation of this study is that, as Member States are at different stages of implementation, we can only assume that the depth and quality of social investments and reforms vary across countries and only partially follow the EPSR indicator system or objectives.

In conclusion, we believe that it is crucial for the future that the link between the EPSR and the EU's development policy RRF does not remain a symbolic reference, but that it is given a real strategic steering role in European economic and social coordination processes. To this end, more effective monitoring of social indicators and the effectiveness of reforms, closer links with national budgetary and policy-making processes, and the provision of sustainable financial resources for social and territorial investments in the post-NGEU period appear necessary.

## References

ARANGUIZ, Ane (2022): *Combating Poverty and Social Exclusion in European Union Law*. London: Routledge. Online: <https://doi.org/10.4324/9781003222125>



- ARMINGEON, Klaus – DE LA PORTE, Caroline – HEINS, Elke – SACCHI, Stefano (2022): Voices from the Past: Economic and Political Vulnerabilities in the Making of Next Generation EU. *Comparative European Politics*, 20(2), 144–165. Online: <https://doi.org/10.1057/s41295-022-00277-6>
- BATCHLER, John – MENDEZ, Carlos (2023): *Navigating Stormy Waters: Crises and Cohesion Policy beyond 2027*. EoRPA Report 23/3, European Policies Research Centre, University of Strathclyde, Glasgow and EPRC Delft. Online: <https://eprc-strath.org/publication/navigating-stormy-waters-crises-and-cohesion-policy-beyond-2027/>
- BATCHLER, John – MENDEZ, Carlos – DOWNES, Ruth (2024): *Charting a New Course for Cohesion Policy after 2027*. EoRPA Report 24/3, European Regional Policy Research Consortium. University of Strathclyde Publishing. Online: <https://pure.strath.ac.uk/ws/portalfiles/portal/246984750/Bachtler-et-al-EPRC-2024-Charting-a-New-Course-for-EU-Cohesion-Policy-After-2027.pdf>
- BEKKER, Sonja (2016): Is There Flexibility in the European Semester Process? Exploring Interactions between the EU and Member States within Post-Crisis Socio-Economic Governance. *SIEPS Swedish Institute for European Policy Studies*, (1). Online: <https://doi.org/10.2139/ssrn.2743238>
- BEKKER, Sonja (2022): The Social Dimension of EU Economic Governance after the Covid-19 Pandemic: Exploring New Interlinkages. *Italian Labour Law e-Journal*, 15(Special Issue 1), 1–14. Online: <https://doi.org/10.6092/issn.1561-8048/15702>
- BOKHORST, David – CORTI, Francesco (2024): Governing Europe’s Recovery and Resilience Facility: Between Discipline and Discretion. *Government and Opposition*, 59(3), 718–734. Online: <https://doi.org/10.1017/gov.2023.14>
- CLAUWAERT, Stefan (2015): *The Country-Specific Recommendations (CSRs) in the Social Field: An Overview and Comparison. Update Including the CSRs 2015–2016. Background Analysis 2015.03*. Brussels: European Trade Union Institute. Online: <https://www.etui.org/sites/default/files/15%20Background%20CSRs%202015%2003%20Stef%20Clauw%20Web%20version.pdf>
- CORTI, Francesco – VESAN, Patrik (2023): From Austerity-Conditionality Towards a New Investment-Led Growth Strategy: Social Europe after the Recovery and Resilience Facility. *Social Policy & Administration*, 57(4), 513–548. Online: <https://doi.org/10.1111/spol.12906>
- CRESPY, Amandine – VANHEUVERZWIJN, Pierre (2016): What “Brussels” Means by Structural Reforms. *Les Cahiers du Cevipol Brussels Working Papers*, (5), 58–87. Online: <https://doi.org/10.3917/lcdc.165.0058>
- CSATH, Magdolna – FÁSI, Csaba – NAGY, Balázs – PÁLFI, Nóra – TAKSÁS, Balázs – VINOGRADOV, Sergey (2018): Measuring the Social Trust of Young People in the Light of Competitiveness – A Case Study in Hungary. *Vadyba: Journal of Management*, 32(1), 49–59. Online: [https://real.mtak.hu/158467/1/5\\_07\\_Ksath.pdf](https://real.mtak.hu/158467/1/5_07_Ksath.pdf)
- DE BECKER, Eleni (2024): The Principle of Adequate Social Protection in the European Pillar of Social Rights: Assessing the Instruments Used to Realise Its Potential. *European Journal of Social Security*, 26(2), 284–304. Online: <https://doi.org/10.1177/13882627241254613>



- European Commission (2020): *Country Specific Recommendations*. Online: [https://commission.europa.eu/publications/2020-european-semester-country-specific-recommendations-commission-recommendations\\_en](https://commission.europa.eu/publications/2020-european-semester-country-specific-recommendations-commission-recommendations_en)
- European Commission (2021): *European Pillar of Social Rights Action Plan*. Online: [https://commission.europa.eu/publications/european-pillar-social-rights-action-plan\\_en](https://commission.europa.eu/publications/european-pillar-social-rights-action-plan_en)
- European Commission (2023): *Report from the Commission to the European Parliament and the Council on the Implementation of the Recovery and Resilience Facility. Moving Forward*. Brussels, 25.9.2023, COM(2023), 545 final. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52023DC0545>
- European Commission (2024a): *Report from the Commission to the European Parliament and the Council on the Implementation of the Recovery and Resilience Facility*. Brussels, 10.10.2024, COM(2024), 474 final. Online: [https://commission.europa.eu/document/download/187852c2-07e0-4bef-af3f-5719b9077f2e\\_en?filename=COM\\_2024\\_474\\_1\\_EN\\_ACT\\_part1\\_v2.pdf](https://commission.europa.eu/document/download/187852c2-07e0-4bef-af3f-5719b9077f2e_en?filename=COM_2024_474_1_EN_ACT_part1_v2.pdf)
- European Commission (2024b): *Mid-Term Evaluation of the Recovery and Resilience Facility*. Commission Staff Working Document. Brussels, 21.2.2024, SWD(2024), 70 final. Online: [https://commission.europa.eu/document/download/17c82840-518c-4c3d-ba98-7dae436b3a70\\_en?filename=SWD\\_2024\\_70\\_1\\_EN\\_autre\\_document\\_travail\\_service\\_part1\\_v4.pdf](https://commission.europa.eu/document/download/17c82840-518c-4c3d-ba98-7dae436b3a70_en?filename=SWD_2024_70_1_EN_autre_document_travail_service_part1_v4.pdf)
- European Commission (2026a): *Social Scoreboard*. Online: <https://ec.europa.eu/eurostat/cache/dashboard/social-scoreboard/>
- European Commission (2026b): *Recovery and Resilience Scoreboard*. Online: [https://ec.europa.eu/economy\\_finance/recovery-and-resilience-scoreboard/](https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/)
- European Council (2021): *The Porto Declaration*. 8 May 2021. Online: <https://www.consilium.europa.eu/en/press/press-releases/2021/05/08/the-porto-declaration/>
- European Parliament (2024a): *Social and Territorial Cohesion in the Recovery and Resilience Facility*. Online: [https://www.europarl.europa.eu/thinktank/en/document/EPSR\\_BRI\(2024\)757590](https://www.europarl.europa.eu/thinktank/en/document/EPSR_BRI(2024)757590)
- European Parliament (2024b): *Social Expenditure in the Recovery and Resilience Facility*. Online: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2024/757591/EPSR\\_BRI\(2024\)757591\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2024/757591/EPSR_BRI(2024)757591_EN.pdf)
- FÁSI, Csaba (2024): The Future of Cohesion Policy. How the 9<sup>th</sup> Cohesion Report Was Prepared. In CECON, Franziska – COJOCARU, Igor – MÜLLER-TÖRÖK, Robert – SZÁDECZKY, Tamás – VRABIE, Cătălin (eds.): *Proceedings of the Central and Eastern European eDem and eGov Days 2024*. New York: Association for Computing Machinery (ACM), 159–165. Online: <https://doi.org/10.1145/3670243.3670258>
- FÁSI, Csaba – SZÜCS, Petra (2024): Bridging the Digital Divide: Pathways to a Competitive and Resilient European Union. *Európai Tükör – European Mirror*, 27(2), 95–122. Online: <https://doi.org/10.32559/et.2024.2.5>
- GUILLÉN, Ana M. – LEÓN, Margarita – PAVOLINI, Emmanuele (2022): Are ‘Carrots’ Better Than ‘Sticks’? New EU Conditionality and Social Investment Policies in the Aftermath of the Covid-19 Pandemic in Italy and Spain. *Comparative European Politics*, 20, 220–237. Online: <https://doi.org/10.1057/s41295-022-00281-w>



- HACKER, Björn (2023): The European Pillar of Social Rights: Impact and Advancement. Somewhere between a Compass and a Steering Tool. *Stiftung Wissenschaft und Politik*, 2023/RP 14. Online: <https://doi.org/10.18449/2023RP14>
- JESSOULA, Matteo (2015): Europe 2020 and the Fight Against Poverty – Beyond Competence Clash, Towards ‘Hybrid’ Governance Solutions? *Social Policy & Administration*, 49(4), 490–511. Online: <https://doi.org/10.1111/spol.12144>
- KAISER, Tamás (2023a): Understanding Narratives in Governance: Naming and Framing Regional Inequality in the United Kingdom. *Social Sciences*, 12(4), 1–16. Online: <https://doi.org/10.3390/socsci12040246>
- KAISER, Tamás (2023b): Post-2027 Cohesion Policy for All. A Need for Reinforcing Territorial Dimension. *Európai Tükör – European Mirror*, 26(4), 7–26. Online: <https://doi.org/10.32559/et.2023.4.2>
- LADI, Stella – POLVERARI, Laura (2025): Reconceptualising the EU – Member States Relationship in the Age of Permanent Emergency. *Comparative European Politics*, 23, 1–17. Online: <https://doi.org/10.1057/s41295-024-00384-6>
- LOPRIORE, Marco (2022): *Recovery Plans and Structural Funds: How to Strengthen the Link*. Online: [https://www.eipa.eu/wp-content/uploads/2025/03/EIPA-Briefing\\_Recovery-plans-and-strutural-funds\\_eng.pdf](https://www.eipa.eu/wp-content/uploads/2025/03/EIPA-Briefing_Recovery-plans-and-strutural-funds_eng.pdf)
- RAINONE, Silvia (2022): From Deregulatory Pressure to Laissez Faire: The (Moderate) Social Implications of the EU Recovery Strategy. *Italian Labour Law e-Journal*, 15(Special Issue 1), 31–52. Online: <https://doi.org/10.6092/issn.1561-8048/15705>
- TÓTH, Tibor (2018): Az európai szociális modell történeti változásai és perspektívái [The Changes and Perspectives of the European Social Model]. *Európai Tükör – European Mirror*, 21(2), 33–50. Online: <https://folyoirat.ludovika.hu/index.php/eumirror/article/view/1178?articlesBySimilarityPage=2>
- TÓTH, Tibor (2024): Social and Labour Market Impacts of the Green Transition in the European Union. *Európai Tükör – European Mirror*, 27(2), 75–93. Online: <https://doi.org/10.32559/et.2024.2.4>
- Official Journal of the European Union (2021a): *Council Recommendations (EU) 2021/1004 of 14 June 2021 Establishing a European Child Guarantee*. L 223/14. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H1004>
- Official Journal of the European Union (2021b): *Regulation (EU) 2021/241 of the European Parliament and the Council of 12 February 2021 Establishing the Recovery and Resilience Facility*. 18.2.2021, L 57/17. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0241>
- Official Journal of the European Union (2021c): *Commission Delegated Regulation (EU) 2021/2105 of 28 September 2021 Supplementing Regulation (EU) 2021/241 of the European Parliament and of the Council Establishing the Recovery and Resilience Facility by Defining a Methodology for Reporting Social Expenditure*. 1.12.2021, L 429/79. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R2105>



- Official Journal of the European Union (2021d): *Commission Delegated Regulation (EU) 2021/2106 of 28 September 2021 on Supplementing Regulation (EU) 2021/241 of the European Parliament and of the Council Establishing the Recovery and Resilience Facility by Setting Out the Common Indicators and the Detailed Elements of the Recovery and Resilience Scoreboard*. 1.12.2021, L 429/83. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R2106>
- Official Journal of the European Union (2022): *Directive (EU) 2022/2041 of the European Parliament and of the Council of 19 October 2022 on Adequate Minimum Wages in the European Union*. L 275/33. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022L2041>
- VESAN, Patrik – CORTI, Francesco – SABATO, Sebastiano (2021): The European Commission's Entrepreneurship and the Social Dimension of the European Semester: From the European Pillar of Social Rights to the Covid-19 Pandemic. *Comparative European Politics*, 19, 277–295. Online: <https://doi.org/10.1057/s41295-020-00227-0>
- ZEITLIN, Jonathan – VANHERCKE, Bart (2018): Socializing the European Semester: EU Social and Economic Policy Co-ordination in Crisis and Beyond. *Journal of European Public Policy*, 25(2), 149–174. Online: <https://doi.org/10.1080/13501763.2017.1363269>
- ZIMMERMANN, Katharina – GENGNAGEL, Vincent (2023): Mapping the Social Dimension of the European Green Deal. *European Journal of Social Security*, 25(4), 523–544. Online: <https://doi.org/10.1177/13882627231208698>



László Vértesy<sup>1</sup> 

# Reflections on Sustainability and SDGs in the Primary Law of the European Union<sup>2</sup>

*The concept of sustainability is expressly or indirectly embedded in the primary law of the European Union, as analysed in the Treaty on European Union, the Treaty on the Functioning of the European Union and the Charter of Fundamental Rights. The novel contribution of this research is that it illustrates how these documents have, in many cases, been conceived as aligning with the United Nations' Sustainable Development Goals (SDGs), thereby situating the EU's constitutional framework as an SDG-compliant normative framework. Whereas ideas of sustainability have typically been construed as limited to environmental protection, this research employs a broader conceptualisation, manifesting it comprehensively across environmental, economic, social and financial dimensions, including fiscal sustainability, macroeconomic stability and resource governance. Through an analysis of key CJEU case law, it demonstrates how judicial interpretation through adjudication operationalises the sustainability objectives enshrined in treaties and exposes the tensions between the freedom of the market and environmental or societal aims. The analysis demonstrates that sustainability has moved from a stated and aspirational principle to a structuring feature of EU integration, but there continues to be an ambition that grounds limitations. The EU's sustainability concept requires a climate-specific treaty provision, a horizontal sustainability compliance mechanism, and the elevation of environmental and intergenerational protection to fully justiciable rights.*

**Keywords:** sustainability, sustainable development goals, EU law, European Union, public finance, environment

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## Introduction

The concept of sustainability in European Union law encompasses environmental, economic and social objectives that are incorporated into the EU law framework. The notion of sustainability can be framed in two aspects, first with primary law comprised of founding treaties that create the commitment to sustainable development at the Union level, which then comprises secondary law including directives, regulations and decisions that set out the specific policies and legally binding obligations to implement these sustainability goals also with the consideration of the case law of the European Court of Justice. By examining these elements in further detail, this analysis will demonstrate how the EU has tailored its legal instruments to incorporate sustainability goals.

The widely cited *Brundtland Report: Our Common Future* (1987) – named after Gro Harlem Brundtland – defined sustainable development as a “development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: (i) the concept of ‘needs’, in particular the essential needs of the world’s poor, to which overriding priority should be given; and (ii) the idea of limitations imposed by the state of technology and social organisation on the environment’s ability to meet present and future needs”.<sup>3</sup> Although it has become one of the most frequently used concepts – alongside eco, green, bio and smart – its meaning and applicability are often interpreted and used differently in different contexts.

In 2013, the United Nations agreed to set up a thirty-member open working group to develop sustainable development goals. The open working group produced the *2030 Agenda for Sustainable Development*, which all UN member states adopted at the 2015 meeting, as a common and joint vision on how to ensure peace, prosperity and to preserve the planet; it articulated 17 sustainable development goals.<sup>4</sup>

Table 1: The UN's 17 Sustainable Development Goals

<b>Social equity and development</b>	Goal 4 Quality education Goal 5 Gender equality Goal 10 Reduced inequalities	Goal 11 Sustainable cities and communities Goal 16 Peace justice and strong institutions Goal 17 Partnership for the goals
<b>Economic life and technological development</b>	Goal 1 No Poverty Goal 2 Zero hunger Goal 3 Good health and well-being	Goal 8 Decent work and economic growth Goal 9 Industry, innovation and infrastructure
<b>Environmental resources and global challenges</b>	Goal 6 Clean water and sanitation Goal 7 Affordable and clean energy Goal 12 Responsible consumption and production Goal 14 Life below water	Goal 13 Climate actions Goal 15 Life on land

Source: compiled by the author based on KANG–KIM 2022

<sup>3</sup> Brundtland Report 1987.

<sup>4</sup> STOLL 2022.



From a legal-theoretical viewpoint, the Treaty on European Union (TEU) and Treaty on the Functioning of the European Union (TFEU) constitute the constitutional basis for the European Union. They are the primary law that has status and effect similar to a constitution in a federation. In contrast, the Charter of Fundamental Rights (CFR) is also a binding primary law, with the same rank as the Treaties, but acts more normatively as a rights-based overlay within the EU across its jurisdiction, rather than as a structural or operational provision alongside the TEU and TFEU.<sup>5</sup> Clearly, the TEU provides the ideational basis for sustainability; the TFEU provides the legal and operational mechanisms; and the Charter establishes sustainability as a principle within the EU’s fundamental rights framework.<sup>6</sup> Together, they can be understood as a model of constitutional sustainability, with three primary components.

Table 2: Comparison of the TEU, TFEU and CFR in the relation of Sustainability

Dimension	TEU	TFEU	CFR
<b>Legal role</b>	Foundational / Ideational	Functional / Operational	Rights-Based / Normative
<b>Type of sustainability norm</b>	Teleological (goal-based)	Regulatory (policy-based)	Interpretive principle
<b>Primary provisions</b>	Articles 3(3), 3(5)	Articles 11, 191–193	Article 37
<b>Enforcement potential</b>	Limited (framework)	High (legislative competence)	Moderate (soft constitutional)
<b>SDG alignment</b>	Vision-setting	Implementation-enabling	Rights-legitimising
<b>Theoretical lens</b>	Supranational ethics	Governance and legal pluralism	Green constitutionalism

Source: compiled by the author

This evolution can be seen not only in their negotiated, textual commitments, but also in the jurisprudence of the *Court of Justice of the European Union* (CJEU) and the EU’s normative arrangements surrounding the United Nations’ Sustainable Development Goals (SDGs). Altogether, these instruments and institutions have established sustainability as a structural principle of EU integration, rather than an aspirational policy. The treaty framework has engendered the EU’s main policy instruments. The *European Sustainable Development Strategy* (2001, revised 2006) aimed to implement Articles 3 TEU and 11 TFEU across all sectors. The *European Green Deal* (2019), initiated under the von der Leyen Commission, employs these treaty obligations in a unified programme of legislative change, encompassing energy, biodiversity, the circular economy and mobility.<sup>7</sup> Within this framework, through research and innovations, the EU is interested in 1. increasing the EU’s Climate ambition for 2030 and 2050; 2. supplying clean, affordable and secure energy; 3. mobilising industry for a clean and circular economy;<sup>8</sup> 4. accelerating the shift to sustainable and smart mobility; 5. from Farm to Fork – a fair, healthy

<sup>5</sup> KELLERBAUER et al. 2024.

<sup>6</sup> KROMMENDIJK–SANDERINK 2023.

<sup>7</sup> SZPILKO–EJDYS 2022.

<sup>8</sup> TURUNEN–ALARANTA 2021.



and environmentally friendly food system; 6. preserving and restoring ecosystems and biodiversity; 7. a zero-pollution ambition for a toxic-free environment; 8. building and renovating in a way that is energy- and resource-efficient.<sup>9</sup> Furthermore, the European Green Deal and the *Fit for 55 package* are also explicitly framed as mechanisms for the delivery of both treaty obligations and SDGs. These instruments demonstrate how treaty provisions, judicial enforcement and global goals can be mutually supportive strands of the EU's sustainability model.

## Treaty on European Union

The Treaty on European Union is programmatic and foundational, articulating the values, identity and objectives of the Union. Sustainability is presented as a core normative commitment in both internal and external dimensions [Articles 3(3) and 3(5)]. It reflects a teleological concept of sustainability, as it is an end goal of integration associated with long-term prosperity, solidarity and environmental stewardship. It embraces a holistic and forward-looking vision of sustainability aligned with intergenerational equity and global responsibility.

TEU, Article 3(3): “The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. [...] It shall combat social exclusion and discrimination, and shall promote social justice and protection, equality between women and men, solidarity between generations and protection of the rights of the child. It shall promote economic, social and territorial cohesion, and solidarity among Member States [...]”

This provision places sustainable development at the core of the EU's internal goals. It reiterates the interdependence of economic, social and environmental progress, thus reinforcing sustainability as a tripartite principle. Moreover, it brings in a “high level of environmental protection” as a guiding principle, which embeds environmental quality as a fundamental concern in the functioning of the internal market and all Union policies.<sup>10</sup> The CJEU has been instrumental in enforcing these treaty obligations and clarifying their legal edges. In the *Commission v. Council (C-176/03)* case, the Court held that the EU may require Member States to impose criminal penalties in environmental matters when necessary for environmental protection.<sup>11</sup> In *Commission v. Austria (C-28/09)*, the Court considered Austria's environmental justification for restricting transit traffic through the Tyrol region.<sup>12</sup> The Austrian measure was considered disproportionate under EU internal market law, although the court accepted environmental protection as a legitimate objective. This case illustrates the careful judicial balance between economic freedoms and environmental objectives, as required by Article 3(3) of the TEU.

<sup>9</sup> FETTING 2020.

<sup>10</sup> KRÄMER 2020a.

<sup>11</sup> Case C-176/03.

<sup>12</sup> Case C-28/09.



TEU, Article 3(5): “In its relations with the wider world, the Union [...] shall contribute to peace, security, the sustainable development of the Earth, solidarity and mutual respect among peoples, free and fair trade, eradication of poverty and the protection of human rights, in particular the rights of the child, as well as to the strict observance and the development of international law, including respect for the principles of the United Nations Charter.”

The TEU’s external dimension, Article 3(5) connects the EU’s sustainability ethos to global justice and planetary care in a post-national constitutional ethic. This paragraph extends the EU’s sustainability commitment to the area of its external action, making the EU a global actor for sustainable development, climate leadership and environmental justice.<sup>13</sup> It creates a normative framework to mainstream sustainability in EU trade policy, international development cooperation and climate diplomacy. In *Air Transport Association of America v. Secretary of State for Energy and Climate Change (C-366/10)*, the Court rejected the AG’s opinion and annulled the GHG Emissions Trading System (ETS) as applied to extra-European aviation.<sup>14</sup> This judgment is one of the most important landmarks, since it reinforced the EU’s authority to regulate environmental impacts with extraterritorial dimensions, underscoring the external sustainability commitment outlined in Article 3(5) of the TEU.

From the practice of the CJEU, the *PreussenElektra (C-379/98)* was a landmark ruling where the Court upheld national support schemes for renewable electricity against internal market complaints.<sup>15</sup> It shows an early recognition of environmental protection as a legitimate overriding reason of public interest. In the *Waddenzee case (C-127/02)*, the Court established the precautionary principle as a key standard for assessing environmental impacts under the Habitats Directive.<sup>16</sup> In the *Lesoochránárske zoskupenie (C-240/09)* the CJEU reaffirmed the Member States to provide effective judicial access and remedies in environmental cases.<sup>17</sup> The *Ålands Vindkraft (C-573/12)* case upheld Sweden’s green certificate scheme limiting access for foreign producers, which clarifies the balance between internal market freedoms and sustainability goals.<sup>18</sup>

Based on the concepts above, Article 3 TEU aligns with SDG 8: Decent Work and Economic Growth, SDG 11: Sustainable Cities and Communities, SDG 12: Responsible Consumption and Production, SDG 13: Climate Action, SDG 17: Partnerships for the Goals, SDG 16: Peace, Justice and Strong Institutions.

The described legal frameworks envision long-term, sustainable development, particularly as outlined in Article 3(3), which requires the Union to pursue strong environmental protection alongside social advancement in relation to the internal market. Additionally, Article 3(5) extends this normative obligation to the Union’s external action, stating that the Union must aid global sustainable development, environmental protection and the eradication of poverty. There is no denying of the symbolic importance of these provisions, as sustainability now sits at the constitutional heart of the European

<sup>13</sup> KRÄMER 2020b.

<sup>14</sup> Case C-366/10.

<sup>15</sup> Case C-379/98.

<sup>16</sup> Case C-127/02; KOKOTT-SOBOTTA 2019.

<sup>17</sup> Case C-240/09.

<sup>18</sup> Case C-573/12.



project. However, their legal impact is limited by the nature of their aspirational governance. They lack concrete obligations that are legally binding or justiciable, rendering them largely ineffectual in litigation or legislative review. The loose terminology, “shall work for”, provides minimal enforcement capabilities that rely heavily on the collective will from the Member States and institutions. In addition, while a commitment to global sustainability is made in Article 3(5), the EU tends to impose lower environmental protection standards in its external trade, agriculture and investment policies than those it upholds internally, exposing a normative gap between treaty-based ambition and geopolitical practice. Unlike some federal constitutions (e.g. Germany or the U.S.), the TEU does not establish an enforceable institutional or procedural infrastructure for evaluating sustainability across EU law.

## Treaty on the Functioning of the European Union

The Treaty on the Functioning of the European Union is both functional and legislative, specifying the competences, procedures and legal bases for action; it provides a legal instrument for sustainability while defining and describing the mechanism for implementation (particularly Articles 11, 191–193). It advances a regulatory notion as procedural and substantive obligations. It incorporates sustainability into legal policymaking and legislative practice through the use of the horizontal integration clause (Article 11), particularly through the application of the precautionary principle (Article 191).

Article 11: “Environmental protection requirements must be integrated into the definition and implementation of the Union’s policies and activities, in particular with a view to promoting sustainable development.”

This horizontal integration clause is a cornerstone of EU sustainability law. It imposes an obligation to mainstream environmental considerations across all EU policy areas, including agriculture, energy, transport and competition. The case law of the CJEU (e.g. *Commission v. Germany*, C-301/95) has interpreted Article 11 (and its predecessors) as requiring that environmental concerns be balanced and weighed alongside other objectives in policy design and implementation.<sup>19</sup> It highlighted the duty to integrate environmental considerations into state aid assessments. In the scope of marine pollution and internal market, the *Peralta case* (C-379/92) upheld the restrictions on ship engines in light of environmental protection.<sup>20</sup> Article 11 TFEU mirrors the cross-cutting logic of SDG 13 (Climate Action) and SDG 9 (Industry, Innovation and Infrastructure).

Despite the horizontal integration clause, environmental objectives are frequently subordinated to the imperatives of economic growth and market integration. The internal market logic often prevails over environmental considerations, as evident in the CJEU’s proportionality analysis. Environmental goals are treated as balancing factors, not foundational constraints. The application of proportionality, especially in internal market cases, frequently tilts in favour of economic freedoms, reducing the transformative potential of Article 11.

<sup>19</sup> Case C-301/95.

<sup>20</sup> Case C-379/92.



Article 119, however, already includes an additional *economic dimension*. Such activities by the Member States and the Union are subject to the following guiding principles: 1. stable prices; 2. sound public finances and monetary conditions; and 3. a sustainable balance of payments. For the accession to the euro zone these are known as the Maastricht criteria.

Table 3: Maastricht convergence criteria

<b>Price stability</b>	Harmonised Index of Consumer Prices (HICP)	Inflation rate cannot exceed the average of the inflation rates of the three Member States with the lowest indicators by more than 1.5% in a one-year reference period
<b>Public finance discipline</b>	Government deficit and debt	Annual budget deficit cannot exceed 3% of GDP
		Gross public debt cannot exceed 60% of GDP (or in the case of a debt ratio above 60%, a continuous and significant reduction in the debt ratio must be shown)
Not under excessive deficit procedure at the time of examination		
<b>Exchange rate stability</b>	Exchange rate developments in ERM II	Exchange rate of the national currency of the member state cannot exceed the $\pm 15\%$ fluctuation band for 2 years
<b>Interest rate convergence</b>	Long-term interest rate	Interest rate of long-term loans in the one-year reference period can be no more than 2% more than the average interest rate of the state loans of the three member states with the lowest inflation indicators (This value is currently 6%)

Source: VÉRTESY 2024: 301

Article 126 states that Member States avoid excessive government deficits maintaining a public finance discipline. The reference values are specified in *Protocol (No. 12) on the Excessive Deficit Procedure* annexed to the Treaties: 1. 3% for the ratio of the planned or actual government deficit to GDP at market prices; and 2. 60% for the ratio of government debt to GDP at market prices.<sup>21</sup> Later, Article 140 refers to the sustainability of public finances.<sup>22</sup>

*Protocol (No. 13) on the Convergence Criteria* states that the price stability criterion means that a Member State has achieved sustainable price stability and an inflation rate based on the harmonised index of consumer prices (HICP) that is no more than 1½ percentage points above the average inflation rate of the three best-performing Member States in terms of price stability over a period of one year preceding the examination.<sup>23</sup> The exchange rate of the national currency – within the European Exchange Rate Mechanism (ERM) – cannot exceed the  $\pm 15\%$  fluctuation band for 2 years. In practice, this also means that the given country must enter the European Exchange Rate Mechanism (ERM). Finally, the Member State has had an average nominal long-term interest rate that does not exceed by more than two percentage points that of, at most, the three best performing Member States.

<sup>21</sup> BRADY–MAGAZZINO 2018.

<sup>22</sup> ZETZSCHE – ANKER-SØRENSEN 2022; AHLSTRÖM–MONCIARDINI 2022.

<sup>23</sup> BALLABRIGA – MARTINEZ-MONGAY 2005; ONOFREI et al. 2020.



The TFEU (in Title XX – Environment) establishes the legal frameworks for harmonisation and subsidiarity in environmental policy (Articles 191–193), while still prioritising diversity in national ecological standards within an otherwise EU-wide coherence.

Article 191. 1: “Union policy on the environment shall contribute to pursuit of the following objectives: preserving, protecting and improving the quality of the environment; protecting human health; prudent and rational utilisation of natural resources; promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.”

2. “Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. [...]”

3. “In preparing its policy on the environment, the Union shall take account of: available scientific and technical data; environmental conditions in the various regions of the Union; the potential benefits and costs of action or lack of action; the economic and social development of the Union as a whole and the balanced development of its regions. [...]”

This article describes the main objectives of EU environmental policy that include: 1. preservation, protection and improvement of environmental quality; 2. protection of human health; 3. prudent and rational use of natural resources; 4. promoting measures to combat climate change at an international level. Article 191 also incorporates the precautionary, prevention, rectification-at-source, and “polluter pays” principles, which provide legal backing for a series of EU environmental legislation. It describes that environmental policy will, at a minimum, be based on high levels of protection, while acknowledging regional diversity and enhancing international cooperation – legitimising (potentially) the EU’s role in global climate and sustainability governance (e.g. the Paris Agreement, SDGs). The *Commune de Mesquer case (C-188/07)* contains the polluter pays principle, the Court held that polluters are financially liable under EU waste legislation.<sup>24</sup> In *Janecek v. Freistaat Bayern (C-237/07)*, the ECJ held that individuals have standing to demand action when air quality standards are violated, thereby giving effect to the objectives outlined in Article 191 TFEU.<sup>25</sup> This article supports SDG 3 (Good Health and Well-being) and SDG 15 (Life on Land), particularly through pollution prevention and the protection of ecosystems.

Article 192. 1: “The European Parliament and the Council, acting in accordance with the ordinary legislative procedure and after consulting the Economic and Social Committee and the Committee of the Regions, shall decide what action is to be taken by the Union in order to achieve the objectives referred to in Article 191. [...]”

Article 193: “The protective measures adopted pursuant to Article 192 shall not prevent any Member State from maintaining or introducing more stringent protective measures. Such measures must be compatible with the Treaties. They shall be notified to the Commission.”

<sup>24</sup> Case C-188/07.

<sup>25</sup> Case C-237/07.



Article 192 provides the EU with a legal basis to adopt legislation in environmental matters through the ordinary legislative procedure, as well as special procedures for taxation, planning, land use and energy. Article 193 provides a Member State with the ability to take measures which are stricter in nature than the EU minimum harmonisation rules in environmental law. Decisions on Package Waste were made in *Commission v. Germany (C-141/02)*, where Germany adopted regulations on packaging waste. The Court allowed Member States, subject to EU principles of proportionality and non-discrimination, to have stricter regulations. The environmental competences outlined in Articles 191–193 are fragmented and sectoral, lacking a systemic legal framework that could potentially streamline climate, biodiversity, energy and social justice under the concept of sustainability. The absence of a climate article in the TFEU at a time of existential climate crisis reflects this limitation. Compared to constitutional innovations in national systems, e.g. Germany’s Article 20a or the 2022 constitutional amendment in Italy, the TFEU appears doctrinally conservative and slow to respond.

Amendments should be made to the TFEU to include a specific article on climate, establishing climate neutrality and resilience as constitutional principles. Third, the EU should introduce a Sustainability Compliance Mechanism to guarantee the full realisation of Article 11 in all policy areas. Fourth, establishing an intergenerational stewardship body, such as a European Commissioner or Ombudsperson for Future Generations, could ensure continuity of systematic guardianship over long-term sustainability objectives.

## Charter of Fundamental Rights

The Charter of Fundamental Rights operates on the same legal level as Treaties, but it offers a rights-based lens. Sustainability is recognised not as a subjective right, but a constitutional principle. It is a principle that guides the interpretation of policies and legislation with a sustainability focus. The Charter treats sustainability as a normative principle, rather than as a subjectively defined right.<sup>26</sup>

Preamble: The Union [...] seeks to promote balanced and sustainable development and ensures free movement of persons, services, goods and capital, and the freedom of establishment.

Article 37 – Environmental protection: “A high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development.”

While Article 37 does not create enforceable rights, it provides a constitutional principle – a way to “green” rights and reconcile human dignity with ecological integrity. The Charter connects sustainability with individual rights and access to justice. While Article 37 is not directly justiciable in the same way as legal rights, it serves as a guiding principle when courts must balance competing rights of an individual, such

<sup>26</sup> PEERS et al. 2021.



as environmental and economic rights.<sup>27</sup> For example, in *TestBioTech (T-177/13)*,<sup>28</sup> the General Court stated that Article 37 provides a constitutional dimension to research sustainability, even though express reliance upon the Article was not grounds for invalidation; instead, it was to help interpret a binding right or legislation. In this respect, Article 37 serves as a constitutional interpretive principle and is utilised in reviewing regulatory acts and policy decisions, particularly in environmental matters, thereby establishing environmental protection as a constitutional interpretive principle.

In affirming the constitutionalisation of EU rights, the Charter does little for sustainability. For example, Article 37 of the Charter states that a high level of environmental protection and improving environmental quality must be integrated into Union policies. However, this provision remains classified as a principle and not a right, which limits its legal status.<sup>29</sup> Principles under the Charter do not confer subjective rights and cannot be relied upon in legal proceedings unless legislative acts give them effect. Citizens and civil society actors are not entitled to use the Charter to yield meaningful environmental results or challenge climate inaction. This significantly undermines its role in environmental litigation, juxtaposed to instances of regulatory inaction.

Furthermore, Article 37 is conceptually ambiguous, referring only to “a high level of protection”, and offers no criteria or indicators or thresholds to assess its level of compliance. It lacks content and remains vague as a yardstick for guiding legislative interpretation, retaining a strictly anthropocentric conception of environmental protection and missing a valuable opportunity to meaningfully engage with evolving paradigms, such as ecocentrism or the rights of nature. In contrast, recent jurisprudential developments in countries such as Ecuador and Colombia, as well as within domestic courts in the Global North, are far more progressive. The Charter appears cautious and established in its position vis-à-vis the environment. Article 37 of the Charter should be upgraded from a principle to a justiciable fundamental right, and where possible substantive and procedural standards grounded on environmental law should be incorporated and integrated.

In the *Associazione Italia Nostra Onlus (C-444/15)*, the CJEU interpreted access-to-justice rights in environmental matters broadly demonstrating how CFR principles guide interpretation.<sup>30</sup> In the *Commission v. Stichting Greenpeace (C-673/13 P)*, the Court reaffirmed limited standing underscoring the weakness of Article 37 as a non-justiciable principle. This decision is a perfect critical argument about CFR limitations.<sup>31</sup>

Lorubbio, Carducci, Bagni et al. propose the development of an EU Charter of the Fundamental Rights of Nature, which would create a legal framework for nature as a subject with rights, rather than being an object that can be protected solely for human benefit.<sup>32</sup> While European Union environmental law is improving, it continues to treat nature as a legal object to be protected for human and other relative uses. The authors draw on several developments in the constitutions of Latin American states, as well as

<sup>27</sup> QUIRICO 2021.

<sup>28</sup> Case T-177/13.

<sup>29</sup> SCOTFORD 2020.

<sup>30</sup> Case C-444/15.

<sup>31</sup> C-673/13 P.

<sup>32</sup> LORUBBIO et al. 2020.



recent global case law, and propose recognising nature as a legal subject with inherent rights, including the right to exist, the right to regenerate and the right to develop. The proposed policy would articulate the recognition of nature’s rights in an EU Charter on the Fundamental Rights of Nature, in conjunction with the existing EU Charter of Fundamental Rights. The proposed EU Charter of Fundamental Rights would signify statutory obligations for public delegations and individual citizens, requiring them to protect and restore ecological subsystems. The charter would also invoke frameworks such as intergenerational equity and the precautionary principle. The enforcement provisions are envisioned in the Charter and include principles and substantive rights, such as violations against rights themselves, and further encompass not only rights but also the parties responsible for upholding them.

Table 4: Summary of TEU, TFEU and CFR vs. SDGs content summary

Treaty Article	Key focus and content summary	UN’s SDGs
<b>TEU Article 3(3)</b>	Mandates sustainable development, environmental protection, social progress within internal market	SDG 8: Decent Work and Economic Growth SDG 11 Sustainable Cities and Communities SDG 12 Responsible Consumption and Production
<b>TEU Article 3(5)</b>	EU external actions contribute to global sustainable development, including poverty eradication and environmental protection	SDG 13 Climate Action SDG 17 Partnerships for the Goals SDG 16 Peace, Justice and Strong Institutions
<b>TFEU Article 11</b>	Environmental protection horizontally integrated across all EU policies to promote sustainability and environmental protection	SDG 7 Affordable and Clean Energy SDG 9 Industry, Innovation and Infrastructure SDG 12 Responsible Consumption and Production
<b>TFEU Article 119-144</b>	Sustainable economy, public finances, foundations of the Maastricht criteria	N.A.
<b>TFEU Article 191</b>	Sets objectives: environmental protection, public health, natural resource management, climate change mitigation and ‘polluter pays’ principles	SDG 3 Good Health and Well-being SDG 6 Clean Water and Sanitation SDG 15 Life on Land
<b>TFEU Article 192</b>	Allows EU to legislate on environment using ordinary legislative procedure, with exceptions needing unanimous Council agreement	SDG 10 Reduced Inequalities (through regulatory flexibility) SDG 13 Climate Action
<b>TFEU Article 193</b>	Member States may maintain or introduce more stringent protective measures, compatible with the Treaties	SDG 14 Life Below Water (reduction of plastics)
<b>CFR Article 37</b>	Environmental protection and quality improvement integrated into Union policies in line with sustainable development	SDG 1–2 Poverty and Hunger (via environmental justice) SDG 5 Gender Equality (through inclusive environmental policy) SDG 16 Institutional Justice and Access to Rights

Source: compiled by the author



## Conclusion

This analysis confirms that sustainability is embedded in the EU's primary law through a multilayered “constitutional” structure formed by the TEU, the TFEU and the Charter of Fundamental Rights. The TEU, especially Article 3 articulates sustainability as a teleological and value-based objective of European integration, while the TFEU operationalises it through concrete regulatory competences – most notably the horizontal integration clause of Article 11 and the environmental principles of Articles 191–193 with the sustainable finances in Articles 119–144. The Charter introduces a normative dimension through its rights-based approach, although Article 37 of the Charter is still a non-justiciable principle with limited legal force. The jurisprudence and the precedents of the CJEU illustrate both the potential and the constraints of judicially enforcing sustainability within the internal market and fundamental rights framework.

A key contribution of this analysis is showing that, although not drafted for this purpose, the EU's primary law exhibits substantial structural alignment with the United Nations Sustainable Development Goals across environmental, social, economic, furthermore financial domains. At the same time, the current architecture remains fragmented; sustainability provisions: 1. in the TEU meet with SDGs 8, 11–13, 16–17 but lack enforceability; 2. environmental integration under the TFEU is in harmony with SDGs 3, 6–7, 9–10, 12–15 but is often subordinated to market freedoms; and the Charter's environmental clause provides interpretive guidance (SDGs 1–2, 5, 16) but no actionable rights.

To address these deficiencies and consolidate sustainability as a constitutional norm, the Union would benefit from 1. the incorporation of an explicit climate clause in the TFEU; 2. the establishment of a horizontal sustainability compliance mechanism applicable to all Union action; and 3. the elevation of environmental and intergenerational protection to fully justiciable status. Without these reforms, sustainability will remain a guiding principle rather than a binding constitutional requirement within the EU legal order. Unfortunately, in most cases, the effectiveness depends on the further development of binding norms, institutional mechanisms and judicial standards capable of ensuring its full realisation across EU governance. An enhanced rights-based framework can be capable for supporting intra- and intergenerational and ecological protection. Strengthening the fundamental provisions would not only foster coherence but also the Union to respond more effectively to the ecological, economic, social and financial challenges of the coming decades. In this sense, aligning EU primary law with global sustainability aims is not just desirable but is necessary for the future of Europe.

## References

- AHLSTRÖM, Hanna – MONCIARDINI, David (2022): The Regulatory Dynamics of Sustainable Finance: Paradoxical Success and Limitations of EU Reforms. *Journal of Business Ethics*, 177(1), 193–212. Online: <https://doi.org/10.1007/s10551-021-04763-x>



- BALLABRIGA, Fernando C. – MARTINEZ-MONGAY, Carlos (2005): Sustainability of EU Public Finances. *European Commission, Economic Papers*, (225). Online: [https://www.euroframe.org/files/user\\_upload/euroframe/docs/2004/session4/eurof04\\_bal-labriga.pdf](https://www.euroframe.org/files/user_upload/euroframe/docs/2004/session4/eurof04_bal-labriga.pdf)
- BRADY, Gordon L. – MAGAZZINO, Cosimo (2018): Fiscal Sustainability in the EU. *Atlantic Economic Journal*, 46(3), 297–311. Online: <https://doi.org/10.1007/s11293-018-9588-4>
- CARADONNA, Jeremy L. (2022): *Sustainability. A History. Revised and Updated Edition*. Oxford: Oxford University Press. Online: <https://doi.org/10.1093/oso/9780197625026.001.0001>
- FETTING, Constanze (2020): The European Green Deal. *European Sustainable Development Network (ESDN) Report*, December 2020.
- KANG, Hyewon – KIM, Jinho (2022): Analyzing and Visualizing Text Information in Corporate Sustainability Reports Using Natural Language Processing Methods. *Applied Sciences*, 12(11). Online: <https://doi.org/10.3390/app12115614>
- KELLERBAUER, Manuel – KLAMERT, Marcus – TOMKIN, Jonathan eds. (2024): *The EU Treaties and Charter of Fundamental Rights. A Commentary*. Oxford: Oxford University Press. Online: <https://doi.org/10.1093/law/9780198913689.001.0001>
- KOKOTT, Juliane – SOBOTTA, Christoph (2019): The Contribution of the Case Law of the CJEU to the Judicial Enforcement of EU Environmental Law in the UK. *Journal for European Environmental & Planning Law*, 16(2), 109–124. Online: <https://doi.org/10.1163/18760104-01602002>
- KRÄMER, Ludwig (2020a): Direct Effect in EU Environmental Law: Towards the End of a Doctrine? In PEETERS, Marjan – ELIANTONIO, Mariolina (eds.): *Research Handbook on EU Environmental Law*. Cheltenham: Edward Elgar Publishing, 180–195. Online: <https://doi.org/10.4337/9781788970679.00021>
- KRÄMER, Ludwig (2020b): Environmental Justice and European Union Law. *Croatian Yearbook of European Law & Policy*, 16(1), 1–23. Online: <https://doi.org/10.3935/cyelp.16.2020.369>
- KROMMENDIJK, Jasper – SANDERINK, Dirk (2023): The Role of Fundamental Rights in the Environmental Case Law of the CJEU. *European Law Open*, 2(3), 616–635. Online: <https://doi.org/10.1017/elo.2023.30>
- LORUBBIO, Vincenzo – CARDUCCI, Michele – BAGNI, Silvia – MONTINI, Massimiliano – MUSARÒ, Elisabetta – BARRECA, Alessandra – Di FRANCESCO MAESA, Costanza – ITO, Mumta – SPINKS, Lindsey – POWLESLAND, Paul (2020): *Towards an EU Charter of the Fundamental Rights of Nature*. Brussels: European Economic and Social Committee. Online: <https://doi.org/10.2864/25113>
- ONOFREI, Mihaela – GAVRILUȚĂ, Anca V. – BOSTAN, Ionel – OPREA, Florin – PARASCHIV, Gigel – LAZĂR, Cristina M. (2020): The Implication of Fiscal Principles and Rules on Promoting Sustainable Public Finances in the EU Countries. *Sustainability*, 12(7). Online: <https://doi.org/10.3390/su12072772>
- PEERS, Steve – HERVEY, Tamara – KENNER, Jeff – WARD, Angela eds. (2021): *The EU Charter of Fundamental Rights. A Commentary*. London: Bloomsbury Publishing. Online: <https://doi.org/10.5040/9781509933495>



- QUIRICO, Ottavio (2021): Integrating Human Rights and Environmental Duties: Prospective Implications of Article 37 of the EU Charter of Fundamental Rights. *Boston University International Law Journal*, 39(1), 41–78. Online: <https://www.bu.edu/ilj/files/2023/01/Quirico.pdf>
- SCOTFORD, Eloise (2020): Environmental Rights and Principles: Investigating Article 37 of the EU Charter of Fundamental Rights. In BOGOJEVIC, Sanja – RAYFUSE, Rosemary (eds.): *Environmental Rights in Europe and Beyond. Swedish Studies in European Law*. London: Bloomsbury Publishing, 133–154. Online: <https://doi.org/10.5040/9781509911127.ch-006>
- STOLL, Peter-Tobias (2022): *European Union and Global Sustainable Development Through Law – The Research Agenda*. Jean Monnet Paper 1/22. Georg-August University of Göttingen. Online: [https://uni-goettingen.de/de/document/download/8b13467e-a85ee90f0be05b54ad4d41ce.pdf/Stoll\\_Res\\_Agenda\\_YP.pdf](https://uni-goettingen.de/de/document/download/8b13467e-a85ee90f0be05b54ad4d41ce.pdf/Stoll_Res_Agenda_YP.pdf)
- SZPILKO, Danuta – EJDYS, Joanna (2022): European Green Deal – Research Directions. A Systematic Literature Review. *Ekonomia i Środowisko*, 81(2), 8–38. Online: <https://doi.org/10.34659/eis.2022.81.2.455>
- TURUNEN, Topi – ALARANTA, Joonas (2021): The Role of the CJEU in Shaping the Future of the Circular Economy. *European Energy and Environmental Law Review*, 30(2), 51–61. Online: <https://doi.org/10.54648/eelr2021006>
- VÉRTESY, László (2024): *Financial Perspectives of Economic History. Volume I, Part III. Money*. Budapest: Gazdaságelemző Intézet – Institute for Economic Analysis. Online: <https://doi.org/10.5281/zenodo.12183632>
- ZETZSCHE, Dirk A. – ANKER-SØRENSEN, Linn (2022): Regulating Sustainable Finance in the Dark. *European Business Organization Law Review*, 23(1), 47–85. Online: <https://doi.org/10.1007/s40804-021-00237-9>

### Legal sources

- Brundtland Report 1987 of the World Commission on Environment and Development: Our Common Future. United Nations. Chapter 2: Towards Sustainable Development. Consolidated version of the Treaty on European Union. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12016M/TXT>
- Consolidated version of the Treaty on the Functioning of the European Union. Online: [https://eur-lex.europa.eu/eli/treaty/tfeu\\_2012/oj/eng](https://eur-lex.europa.eu/eli/treaty/tfeu_2012/oj/eng)
- Charter of Fundamental Rights. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12016P/TXT>
- Case C-127/02 Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v. Staatssecretaris van Landbouw, Natuurbeheer en Visserij. Opinion of Advocate General Kokott delivered on 29 January 2004.
- Case C-141/02 Commission of the European Communities v. T-Mobile Austria GmbH. Judgment of the Court (Grand Chamber) of 22 February 2005.
- Case C-176/03 Commission of the European Communities v. Council of the European Union. Judgment of the Court (Grand Chamber) of 13 September 2005.



- Case C-188/07 *Commune de Mesquer v. Total France SA and Total International Ltd.* Judgment of the Court (Grand Chamber) of 24 June 2008.
- Case C-237/07 *Dieter Janecek v. Freistaat Bayern.* Judgment of the Court (Second Chamber) of 25 July 2008.
- Case C-240/09 *Lesoochránárske zoskupenie VLK v. Ministerstvo životného prostredia Slovenskej republiky.* Judgment of the Court (Grand Chamber) of 8 March 2011.
- Case C-28/09 *European Commission v. Republic of Austria.* Judgment of the Court (Grand Chamber) of 21 December 2011.
- Case C-301/95 *Commission of the European Communities v. Federal Republic of Germany.* Judgment of the Court (Sixth Chamber) of 22 October 1998.
- Case C-366/10 *Air Transport Association of America and Others v. Secretary of State for Energy and Climate Change.* Judgment of the Court (Grand Chamber) of 21 December 2011.
- Case C-379/92 *Criminal proceedings against Matteo Peralta.* Judgment of the Court of 14 July 1994.
- Case C-379/98 *PreussenElektra AG v. Schleswag AG, in the presence of Windpark Reußenköge III GmbH and Land Schleswig-Holstein.* Judgment of the Court of 13 March 2001.
- Case C-444/15 *Associazione Italia Nostra Onlus v. Comune di Venezia and Others.* Judgment of the Court (Third Chamber) of 21 December 2016.
- Case C-573/12 *Ålands vindkraft AB v. Energimyndigheten.* Judgment of the Court (Grand Chamber) of 1 July 2014.
- Case C-673/13 P *Commission v. Stichting Greenpeace.* Judgment of 23 November 2016, *Commission v. Stichting Greenpeace Nederland and PAN Europe* (Appeal Case before the General Court T-545/11).
- Case T-177/13 *TestBioTech and Others v. Commission.* Judgment of the General Court (Fifth Chamber) of 15 December 2016.





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# Direct EU Funds in the Visegrád Group

*This study examines the absorption of direct European Union (EU) funding by the Visegrád Group (V4) countries – Czechia, Hungary, Poland and Slovakia – during the 2021–2023 period. Employing a mixed-quantitative analysis, data were sourced from the Financial Transparency System of the European Commission. The focus is on twenty-five key EU programmes, including Horizon, LIFE, Digital Europe Programme (DEP), EU4Health, European Defence Fund (EDF), Euratom, Military Mobility, Connecting Europe Facility (CEF), Erasmus+, Creative, Citizens, Equality, Rights and Values (CERV), Innovation Fund, Single Market Programme. The study reveals that 20 years after their accession to the EU, the V4 countries still receive one third of the EU average in direct EU funding. In absolute terms, their share has been 4.86% over the last three years, while their population represents 13.98% of the EU population. This means that the existing distribution of directly managed EU funds reinforces regional and national disparities and does not promote cohesion. Given the fact that the share, the number and scope of directly managed EU funds are steadily increasing and the share of the Cohesion Fund, which is jointly managed by the Commission and the Member States, is expected to decrease in the future, mainstreaming cohesion in the programming of EU direct funds will be crucial.*

**Keywords:** direct EU funds, EU grants, sovereignty, innovation, Horizon Europe

## Introduction

The European Union (EU) has long pursued a goal of reducing disparities among its regions and strengthening economic, social and territorial cohesion. This objective is enshrined in the EU Treaties, specifically Article 174 of the Treaty on the Functioning of the European Union (TFEU),<sup>2</sup> which mandates that the Union “shall develop and pursue its actions leading to the strengthening of its economic, social and territorial cohesion”.

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<sup>2</sup> Consolidated version of the Treaty on the Functioning of the European Union. OJ C 326, 26.10.2012, 47–390.

Similarly, Article 5 of the Treaty on European Union (TEU)<sup>3</sup> outlines the principles of subsidiarity and proportionality, emphasising that decisions should be taken as closely as possible to the citizens and that the EU should act only when objectives cannot be sufficiently achieved by Member States. The Protocol (No. 2) on the Application of the Principles of Subsidiarity and Proportionality of the TFEU<sup>4</sup> further reinforces this obligation. Article 1 of the Protocol states that “each institution shall ensure constant respect for the principles of subsidiarity and proportionality, as laid down in Article 5 of the Treaty on European Union”. These principles aim to balance the centralisation of decision-making with the autonomy of Member States, ensuring that EU actions complement rather than override local capacities and priorities.

A balanced development of regions is fundamental to ensuring that the benefits of integration are widely shared, supporting the stability and prosperity of the Union as a whole. In recent years, the structure of EU funding has evolved, with a growing share of resources being allocated through directly managed programmes. This shift raises important questions about the extent to which direct funding instruments contribute to or detract from cohesion objectives. This article analyses the direct funding absorption patterns of the Visegrád Four (V4) and assesses whether these mechanisms promote or undermine cohesion.

## Direct, indirect and shared EU funds

All the programmes defined by the Multiannual Financial Framework (MFF) fall under one of three types of implementation modes depending on the nature of the funding concerned:

- direct management: EU funding is managed directly by the European Commission
- shared management: the European Commission and national authorities jointly manage the funding
- indirect management: funding is managed by partner organisations or other authorities inside or outside the EU<sup>5</sup>

A “direct EU fund” refers to financial support provided by the European Union that is managed directly by the European Commission. In this management mode, the Commission and its appointed agencies such as the European Climate, Infrastructure and Environment Executive Agency (CINEA), the European Health and Digital Executive Agency (HADEA), the European Research Executive Agency (REA), the European Education and Culture Executive Agency (EACEA), European Innovation Council and SMEs Executive Agency (EISMEA), the European Research Council Executive Agency (ERCEA) are responsible for all stages of the funding process, including launching calls

<sup>3</sup> Consolidated version of the Treaty on European Union. OJ C 326, 26.10.2012, 13–390.

<sup>4</sup> Consolidated version of the Treaty on the Functioning of the European Union. OJ C 326, 26.10.2012, 47–390.

<sup>5</sup> European Commission s. a.



for proposals, evaluating applications, signing grant agreements, monitoring project implementation, assessing results and making payments.<sup>6</sup> This approach ensures that the funding is administered centrally without the involvement of national or regional authorities. Examples of EU programmes under direct management include Horizon Europe, Connecting Europe Facility (CEF), Digital Europe Programme (DEP), European Defence Fund (EDF), LIFE, EU4Health, etc. The budget of the programmes implemented in direct management account for around one-third of the total €1,210.9 billion of the MFF 2021–2027 (in current prices).

In shared management, both the European Commission and national authorities in Member States, such as ministries and public institutions, are in charge of running a particular programme. The Common Agricultural Policy (CAP), European Regional Development Fund (ERDF) and the Cohesion Fund (CF) are good examples for the shared management. Approximately 61% of the budget of the EU is managed in this way.

In case of indirect management, the execution is delegated to third parties, such as international organisations or national agencies. Programmes managed by the European Investment Bank, European Investment Fund and decentralised agencies such as the European Border and Coast Guard Agency (Frontex) belong here. Programmes implemented under indirect management account for around 6% of the overall EU budget.

Directly and indirectly managed funds make up approximately one-third of the MFF for 2021–2027. This ratio was 22.5% of the total budget in the MFF between 2014 and 2020.

Table 1: MFF for 2021–2027

Management mode	Amount (€ billion)	Share of total (%)
Shared	749.35	61.9
Direct	388.90	32.1
Indirect	72.65	6.0
<b>Total</b>	<b>1,210.90</b>	<b>100.0</b>

Source: compiled by the author based on Council Regulation (EU, Euratom) 2020/2093 of 17 December 2020 laying down the multiannual financial framework for the years 2021 to 2027 (OJ L 433I, 22.12.2020, 11–22) and its amendments and the budgets of the shared, direct and indirect funds and programmes

Table 2: MFF for 2014–2020

Management mode	Amount (€ billion)	Share of total (%)
Shared	744	77.5
Direct	192	20.0
Indirect	24	2.5
<b>Total</b>	<b>960</b>	<b>100.0</b>

Source: compiled by the author based on Council Regulation (EU, Euratom) No. 1311/2013 of 2 December 2013 laying down the multiannual financial framework for the years 2014–2020 (OJ L 347, 20.12.2013, 884–891) and its amendments and the budgets of the shared, direct and indirect funds and programmes

<sup>6</sup> European Commission s. a.



It is important to emphasise that the abovementioned figures were calculated only on the basis of the present and previous budgets of the MFF.

“A big part of the funds from NextGenerationEU, the temporary recovery instrument, will also be implemented in direct management mode, notably the Recovery and Resilience Facility (RRF) – which will make €723.8 billion in loans and grants available to support reforms and investments undertaken by Member States”<sup>7</sup>

– we can read on the website of the Commission. If we add RRF to the directly managed amount, it means that €1,185.35 billion (58.73%) of the cumulated €2,018 billion budget of the MFF and RRF is either directly or indirectly managed by the Commission. Therefore, it has a growing significance how successfully the legal entities of a Member State can win directly and indirectly managed funds.

## **Cohesion and subsidiarity: From principles to implementation**

Cohesion and subsidiarity, foundational principles enshrined in the EU Treaties, are not mere abstract ideals but operational imperatives that have tangible effects on the functioning and success of the Union. Cohesion ensures that economic and social disparities are reduced across regions, enabling all areas to contribute to, as well as, to benefit meaningfully from the single market. Subsidiarity, on the other hand, guarantees that decisions are made as closely as possible to the citizens, ensuring that interventions are tailored to regional needs and contexts.

Subsidiarity also ensures that cohesion policies do not devolve into one-size-fits-all solutions. Instead, it provides the flexibility to address unique regional challenges and leverage local strengths, thereby contributing to competitiveness in ways that resonate locally and integrate seamlessly into the broader EU strategy.

The relationship between cohesion, subsidiarity and competitiveness is inherently complex and often regionally specific. Cohesion policy successfully elevates regional competitiveness by addressing fundamental gaps in resources, infrastructure, or education. Subsidiarity ensures that these interventions are adapted to local contexts, making them more effective. Together, they create the conditions for a functioning internal market, equitable economic development and sustainable global competitiveness.

Unfortunately, as Leino-Sandberg (2024) notes, recent developments have signalled a deviation from the Treaty-based mission of Cohesion Policy:

“As a result, Cohesion Policy has lost its connection to Article 174 TFEU objectives and become a general legal basis for financing. Instead of serving as a general objective of all EU policies, as the Treaty stipulates, Cohesion Policy has become the servant of the topical institutional

<sup>7</sup> European Commission s. a.



agenda in the field of economic and fiscal policy, reaching deep into areas of national competence. The most far-reaching example of this is the ‘money-for-reforms’ model, promotion of structural reforms in Member States in exchange of monetary rewards.”<sup>8</sup>

This trend reflects a transformation of cohesion from a unifying principle into a tool for enforcing reform conditionality, thus weakening its capacity to reduce regional disparities.

Mario Draghi’s recent report on the future of European competitiveness underscores the urgent need for strategic realignment to enhance the bloc’s global standing.<sup>9</sup> The report identifies several critical dimensions where cohesion policy, subsidiarity and competitiveness intersect, offering a framework to reconcile these goals.

Draghi emphasises that innovation is a cornerstone of competitiveness.

“While the EU has a longstanding tradition of programmes that foster convergence across regions, these programmes should be updated to reflect the changing dynamics of trade and innovation. The EU must ensure that more cities and regions can participate in the sectors that will drive future growth, building on existing initiatives such as Innovation Valleys, Net-Zero Acceleration Valleys and Hydrogen Valleys. This will require new types of investments in cohesion and reforms at the subnational level in many Member States. Specifically, cohesion policies will need to be re-focused on areas such as education, transport, housing, digital connectivity and planning which can increase the attractiveness of a range of different cities and regions.”<sup>10</sup>

Many lagging regions lack the absorption capacity to fully leverage investments. Bridging this gap requires a dual approach: bolstering institutional capacity in less-developed regions while ensuring that advanced regions continue to drive innovation on a global scale.

Cohesion policy, along with its funding, is at the core of the EU project, accounting for almost a third of the total EU budget.<sup>11</sup> This budget doubled over the 1994–1999 programming period, stabilised during the 2006–2013 and 2014–2020 programming periods, but decreased for the 2021–2027 programming period.<sup>12</sup> In addition to the investment into cohesion, Draghi also proposed to invest annually €750–800 billion equating to approximately 4.5–5% of the EU’s GDP for 1. research and innovation; 2. green and digital transitions; 3. defence and strategic industries; and 4. capital market union.<sup>13</sup> *EuroStack – A European Alternative for Digital Sovereignty* is proposing €300 billion investment in the next 10 years in a European Sovereign Tech Fund.<sup>14</sup>

<sup>8</sup> LEINO-SANDBERG 2024.

<sup>9</sup> DRAGHI 2024.

<sup>10</sup> DRAGHI 2024: 19.

<sup>11</sup> JANČOVÁ et al. 2024.

<sup>12</sup> BACHTLER–MENDEZ 2020; BACHTLER et al. 2020.

<sup>13</sup> DRAGHI 2024.

<sup>14</sup> BRIA et al. 2025.



These reports (also) rang the bell for Europe and proposed investments and spending, which may have higher priority and urgency than cohesion. Although the budget of the Union has increased a lot since its foundation, but it is around 1% of the GDP of the Member States, which is certainly not enough for all the ambitious goals, which are competing from a financial point of view.

Beside the decreasing amount for cohesion in the last two MFFs, direct EU funds do not implement in practice the principles of cohesion and subsidiarity in their present form, which have a negative impact on competitiveness, economic development and the cohesion of the Union. This is also underlined by various experts, such as Alison Hunter, who, in her paper entitled “Addressing Cohesion Policy’s Identity Crisis in a Changing European Union” recommends to “confront the reality of an eroding Cohesion Policy and Respond to the EU’s convergence stagnation challenge”. I recommend the same also in the field of the centrally managed direct EU Funds.<sup>15</sup>

## Data and methodology

The data for this analysis were sourced from the Financial Transparency System, an open database managed by the Directorate-General for Budget (DG BUDGET) of the European Commission.<sup>16</sup> This database provides comprehensive information on EU funding allocations, including contracted grant amounts, programmes, periods, beneficiaries, countries of the beneficiaries, calls, etc.

I analysed the figures of the direct EU funds and programmes of the first three years of the present MFF. The data for 2021–2023 makes almost half of the present MFF. Unfortunately, data are still not available for 2024 at DG BUDGET. Typically, the first years of the MFFs starts slowly, therefore the first year typically results for all Member States with a significantly smaller amount of grants, than the following years. In case of Horizon Europe, I compared the data of 2021–2023 with the data of 2014–2017, the first three years of the present and previous MFFs.

The analysis spans 25 direct EU funding programmes, including Horizon, LIFE, Digital Europe Programme (DEP), Erasmus+, EU4Health, European Defence Fund (EDF) and Creative Europe. These programmes are centrally managed by the European Commission, with funding decisions based on project competitiveness and alignment with EU-wide objectives. The data includes detailed programme-level allocations for each V4 country, alongside comparative EU-wide averages.

The study uses a mixed-quantitative approach to analyse:

1. Total and relative funding received by the V4 countries
2. Per capita funding levels compared to the EU average
3. Programme-specific allocations in the V4 countries
4. Shares of the V4 countries from each programme

<sup>15</sup> HUNTER 2023.

<sup>16</sup> European Commission 2024.



All data are without the Recovery and Resilience Facility (RRF) and funds which were allocated to EU institutions in Poland, Czechia, Slovakia and Hungary such as the European Union Agency for the Space Programme (EUSPA), the European Labour Authority (ELA), European Border and Coast Guard Agency (Frontex), European Union Agency for Law Enforcement Training (CEPOL) and the European Institute of Innovation & Technology (EIT). If we would include the EIT's Horizon Europe funding to the Hungarian amount, then we would be surprised to receive a €1.3 billion amount on Horizon Europe row. Unfortunately, without EIT's funding Hungary received only €164 million and EIT received almost €1.2 billion between 2021 and 2023. The EU data also contains those amounts, which were provided to non-EU members by certain direct EU funds (e.g. Horizon, LIFE, etc.).

I calculated separately the total amount of the direct EU funds and the total amount without the Cohesion Fund (CF) contribution to the CEF Transport programme. The latter one makes up one third of the total amount of the direct EU funds of the V4 countries and is transferred from the Cohesion Fund, however in this case the EU-wide competition does not prevail. Therefore, if we want to analyse the relationship between direct EU funding and cohesion, we shall focus on the total amount without the CF contribution to the CEF Transport programme, since that figure reflects the real shares of the V4 countries in an EU-wide competition.

The V4 countries have many similarities: all of them are located in Central Europe, they have similar historical experiences, including periods under the Habsburg Monarchy, significant roles in medieval Europe, and a shared experience of Soviet influence during the Cold War. After the fall of the Iron Curtain in 1989, all four countries underwent similar transitions from communist regimes to democratic governance. All V4 countries joined the European Union twenty years ago in 2004 and all of them are members of the North Atlantic Treaty Organization (NATO). They have similar levels of economic development and they share a commitment to regional integration and cooperation within the EU. The V4 countries leverage these similarities to enhance cooperation and advocate for common interests within the EU and on the global stage.

## Share of the V4 countries from direct EU funds

Despite the principles of subsidiarity and cohesion, the actual allocation and distribution of direct EU funds appear to contradict them. Rather than reducing disparities, these funds are exacerbating regional inequalities. The Visegrád Group (V4) – comprising Czechia, Hungary, Poland and Slovakia – offers a striking case study. The V4 countries collectively represent 62.6 million citizens in 2023, equivalent to 13.98% of the EU's total population,<sup>17</sup> and remain key players in the Union's economic and political structure. Yet, their access to direct EU funding, even after a 20-year-long membership, remains disproportionately low. Over the 2021–2023 period, the V4 countries received 4.86% of total direct EU funds, a striking disparity given that they constitute 13.98% of the EU's population. Moreover, per capita funding levels in the V4 are only one-third of the EU average.

<sup>17</sup> Eurostat s. a.



Table 3: Share of the V4 countries from direct EU funds between 2014 and 2016 and between 2021 and 2023

	Direct EU funds (2014–2016)	Direct EU funds without Cohesion Fund contribution to CEF Transport (2014–2016)	Direct EU funds (2021–2023)	Direct EU funds without Cohesion Fund contribution to CEF Transport (2021–2023)
Poland	€1,321,375,002	€618,655,425	€4,903,291,078	€3,486,516,491
PL/EU	2.47%	1.22%	3.81%	2.82%
PL per capita (€)	€36	€17	€133	€95
PL per capita (%)	30%	15%	46%	34%
Czechia	€420,039,574	€227,447,467	€2,080,972,830	€1,205,501,811
CZ/EU	0.79%	0.45%	1.62%	0.98%
CZ per capita	€39	€21	€192	€111
CZ per capita (%)	33%	19%	67%	40%
Slovakia	€287,682,520	€106,375,179	€997,209,914	€550,201,129
SK/EU	0.54%	0.21%	0.78%	0.45%
SK per capita (€)	€53	€20	€184	€101
SK per capita (%)	44%	17%	64%	37%
Hungary	€744,034,482	€220,963,727	€1,008,787,400	€756,597,422
HU/EU	1.39%	0.44%	0.78%	0.61%
HU per capita (€)	€78	€23	€105	€79
HU per capita (%)	65%	20%	37%	29%
V4 Countries	€2,773,131,578	€1,173,441,798	€8,990,261,222	€5,998,816,853
V4/EU	5.19%	2.32%	6.99%	4.86%
V4 per capita (€)	€44	€19	€144	€96
V4 per capita (%)	37%	17%	50%	35%
EU (€)	€53,410,919,352	€50,610,491,278	€128,654,120,000	€123,451,400,000
EU per capita (€)	€119	€113	€287	€276
EU per capita (%)	100%	100%	100%	100%

Source: compiled by the author based on the Financial Transparency System and DG BUDGET data (November 2024)

Each citizen of the EU received, on average, €276 from the direct EU funds (without the CF contribution to CEF Transport) between 2021 and 2023. It is sad that 20 years after the EU accession of the V4 countries a Hungarian citizen receives €79, a Polish €95, a Slovakian €101, a Czech €111, which is between 29 and 40% of the amount of an average EU citizen.

In the first three years of the previous MFF, between 2014 and 2016, the EU average per capita was €113, while the V4 average was €19, which was 17% of the EU average. The good news is that V4 countries receive now 35% of the EU average from the direct EU funds, but it is still only just one third after 20 years of EU accession.



During the same period, Poland, Czechia and Slovakia were able to double their share from the direct EU funds calculated on a per capita basis, while Hungary grew only with 45%: from 20% of the EU average to 29%.

The increase was even higher in absolute terms, with less than half the amount of the direct EU funds in the first three years of the previous MFF compared to 2021–2023. Then €50.6 billion was distributed, now €123.4 billion. Poland received more than six times, Czechia and Slovakia more than five times and Hungary more than 3.4 times more than they received between 2014 and 2016.

The V4 countries received almost €6 billion out of the total €123.4 billion of the EU between 2021 and 2023 without the Cohesion Fund (CF) contribution to the CEF Transport programme. With the CF to CEF Transport they received €9 billion out of the €128.6 billion. However, the total amount which contains the CF contribution to the CEF Transport column is a less objective figure since this amount was taken from the CF and there is no EU level competition in case of CF like in case of the direct EU funds. But it is worth noting that one-third of the total amount of the direct EU funds were received by the V4 countries from the CF contribution to CEF Transport, which highlights the importance of CF.

Table 4: Share of the Cohesion Fund contribution to CEF Transport in the direct EU funding of the V4 countries

	<b>Total (2021–2023) (€)</b>	<b>Cohesion Fund contribution to CEF Transport (€)</b>	<b>Total without Cohesion Fund contribution to CEF Transport (€)</b>	<b>Cohesion Fund contribution to CEF / Total (%)</b>
Poland	4,903,291,078	1,416,774,587	3,486,516,491	28.89
Czechia	2,080,972,830	875,471,019	1,205,501,811	42.07
Slovakia	997,209,914	447,008,785	550,201,129	44.83
Hungary	1,008,787,400	252,189,979	756,597,422	25.00
V4 Countries	8,990,261,222	2,991,444,370	5,998,816,853	33.27
<b>EU</b>	<b>128,654,120,000</b>	<b>5,202,720,000</b>	<b>123,451,400,000</b>	<b>4.04</b>

Source: compiled by the author based on Financial Transparency System and DG BUDGET data (November 2024)

The ratio of the CF contribution to CEF Transport is significantly different among the V4 countries. Hungary received the smallest amount between 2021 and 2023: less than a quarter billion of euro and it is less than 25% of its total amount. Slovakia with a 5.4 million population received more than twice as much CF contribution to CEF Transport as Hungary did with its 9.6 million citizens and it makes 45% of its total amount. Czechia (10.8 million inhabitants) has a similar ratio as Slovakia in respect of CF contribution to CEF Transport but on a per capita basis it received the most: €875 million. Poland (38.5 million inhabitants) received €1.4 billion almost half of the total €3 billion that the V4 countries received which is less than its population ratio compared to the V4 population.



## Share of the V4 countries from the largest direct EU programmes

There are 40 different direct EU programmes,<sup>18</sup> their number depends on how we define their independence. Out of the 40 programmes, I calculated the share of the V4 countries in case of the largest 25 programmes. The population share of the V4 countries of the EU is 13.98%, which ratio is only reached in the case of Military Mobility, CEF Energy, Asylum, Migration and Integration Fund, Integrated Border Management Fund programmes. This means that only in case of these four programmes the V4 countries receive subsidies more than the EU average (on a per capita basis).

Unfortunately, in case of the remaining 21 programmes the share of the V4 countries is below the EU average (on a per capita basis). They receive at least 50% of the EU average in the case of LIFE, European Instrument for International Nuclear Safety Cooperation, Erasmus+, Creative, Citizens, Equality, Rights and Values, EU Anti-Fraud Programme and the Single Market Programme. In case of 14 programmes, including by far the largest two: Horizon and Neighbourhood, Development and International Cooperation Instrument Global Europe the V4 receive less than 50% of the EU average (on per capita basis), and in many cases far less!

Table 5: Share of the V4 countries from the largest direct EU programmes between 2021 and 2023

No.	Code	Programme	V4 (€)	V4/EU (%)	EU (€)
1	1.0.11	<b>Horizon</b>	1,041,301,789	2.42	43,056,950,000
2	3.2.21	<b>LIFE</b>	199,471,652	9.36	2,131,230,000
3	1.0.23	<b>Digital Europe Programme (DEP)</b>	129,210,493	4.04	3,196,440,000
4	2.2.25	<b>EU4Health</b>	50,708,920	3.91	1,295,700,000
5	5.0.211 5.0.212	<b>European Defence Fund (EDF) (Research and Non-Research)</b>	57,064,261	2.53	2,255,400,000
6	1.0.12	<b>Euratom</b>	15,777,135	2.90	544,190,000
7	6.0.112	<b>European Instrument for International Nuclear Safety Cooperation (INSC)</b>	7,051,243	7.31	96,410,000
8	5.0.22	<b>Military Mobility</b>	109,745,693	18.64	588,780,000
9	1.0.221	<b>Connecting Europe Facility (CEF) Transport</b>	350,047,951	5.30	6,599,700,000
10	2.1.122	<b>Cohesion Fund (CF), contributing to the Connecting Europe Facility (CEF) Transport</b>	2,991,444,370	57.50	5,202,720,000
11	1.0.223	<b>Connecting Europe Facility (CEF) Digital</b>	20,622,559	3.36	613,530,000
12	1.0.222	<b>Connecting Europe Facility (CEF) Energy</b>	467,701,661	17.65	2,649,150,000
13	2.2.32	<b>Erasmus+</b>	1,262,070,712	12.18	10,365,570,000
14	2.2.34	<b>Creative</b>	75,752,046	7.65	990,580,000

<sup>18</sup> At the time of writing this study, the Funding and Tenders portal listed 40 programmes (<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes>).



No.	Code	Programme	V4 (€)	V4/EU (%)	EU (€)
15	2.2.352	<b>Citizens, Equality, Rights and Values (CERV)</b>	48,872,293	11.19	436,870,000
16	2.2.351	<b>Justice</b>	6,318,102	4.64	136,220,000
17	O.0.1	<b>Innovation Fund</b>	309,430,310	4.68	6,608,740,000
18	4.0.11	<b>Asylum, Migration and Integration Fund (AMIF)</b>	206,997,774	16.91	1,224,000,000
19	4.0.211 4.0.212	<b>Integrated Border Management Fund (IBMF)</b>	148,713,200	30.60	486,030,000
20	5.0.11	<b>Internal Security Fund (ISF)</b>	12 324 583	4.49	274,560,000
21	1.0.32	<b>EU Anti-Fraud Programme</b>	5,552,851	8.29	66,970,000
22	1.0.33	<b>Cooperation in the field of taxation (Fiscalis)</b>	904,430	0.83	108,800,000
23	1.0.34	<b>Cooperation in the field of customs (Customs)</b>	871,725	0.23	375,520,000
24	1.0.31	<b>Single Market Programme (incl. SMEs)</b>	214,784,252	11.86	1,811,030,000
25	6.0.111	<b>Neighbourhood, Development and International Cooperation Instrument – Global Europe (NDICI – Global Europe)</b>	215,702,401	0.86	25,168,700,000

Source: compiled by the author based on Financial Transparency System and DG BUDGET data (November 2024)

## Share of the V4 countries from Horizon 2020 and Horizon Europe programmes between 2014–2016 and 2021–2023

With the budget of €95.5 billion for the present 2021–2027 MFF, Horizon is by far the largest direct EU fund. It makes up one quarter of the amount of all the direct EU funds €388.9 billion, without the Recovery and Resilience Facility (RRF).

Between 2014 and 2016 the V4 countries received 2.12% of all Horizon 2020 funds. Unfortunately, this ratio only increased to 2.42% between 2021 and 2023. On per capita basis, the V4 received €7 per inhabitant in 2014–2016 and €16 per inhabitant in 2021–2023. Similarly to other direct funds, the size of Horizon Europe is also more than twice as much as the size of Horizon 2020, which is reflected in the per capita EU average figures: €43 in 2014–2016 and €96 in 2021–2023. Unfortunately, both in the periods of 2014–2016 and 2021–2023 the V4 countries received one-sixth of the EU average on per capita basis from the largest R&D programme of Europe. Therefore, the V4 countries could not increase their share on a per capita basis from the Horizon funds and they are still far from the 13.98% share of their population of the EU.

Unfortunately, Hungary is the only country out of the V4 countries, whose share decreased from 0.55% to 0.38% of the Horizon funds, which trend can be only partly explained with that fact that most of its universities and colleges were excluded from the direct EU funds by the Council's Implementing Decision 2022/2056 of 15 December 2022.



Table 6: Share of the V4 countries from Horizon 2020 and Horizon Europe programmes between 2014–2016 and 2021–2023

	Horizon 2020 (2014–2016) (€)	Horizon 2020 share from total (%)	Horizon 2020 per capita (€) (2014– 2016)	Horizon Europe (2021–2023) (€)	Horizon Europe share from total (%)	Horizon Europe per capita (€) (2021– 2023)
Poland	185,861,945	0.85	5	458,707,634	1.07	12
Czechia	120,345,103	0.55	11	331,775,686	0.77	31
Slovakia	38,359,252	0.18	7	86,814,395	0.20	16
Hungary	120,189,944	0.55	12	164,004,073	0.38	17
<b>V4</b>	<b>464,756,244</b>	<b>2.12</b>	<b>7</b>	<b>1,041,301,789</b>	<b>2.42</b>	<b>17</b>
<b>EU*</b>	<b>21,877,867 793</b>	<b>100.00</b>	<b>49</b>	<b>43,056,950,000</b>	<b>100.00</b>	<b>96</b>

\* EU data contains the total contracted Horizon grants including with non-EU members.

Source: compiled by the author based on Financial Transparency System and DG BUDGET data (November 2024)

The one-sixth per capita share from the Horizon funds cannot be reasoned with any scientific indicators such as the R&D intensity rate, researcher ratio, researcher ranking, patent applications rate, top cited publications rate, etc.<sup>19</sup> as it was examined by Pató et al. (2023) in “Cohesion or Widening Disparities: R&D Performance vs. EU Funding of the Regions”.

Table 7: R&D indices of the V4 countries and their rank in net EU contribution from Horizon Europe till 8 November 2024

Country	R&D intensity (%)	Researcher ratio	Researcher ranking	Rank in net EU contribution
Austria	3.20	6,538	5	9
Belgium	3.43	6,838	4	6
Bulgaria	0.77	2,713	22	23
Croatia	1.43	2,567	23	24
Cyprus	0.77	1,714	26	17
Czechia	1.96	4,532	16	15
Denmark	2.89	8,607	2	10
Estonia	1.78	4,549	15	19
Finland	2.95	7,993	3	11
France	2.18	5,053	11	2
Germany	3.13	5,810	7	1
Greece	1.48	4,805	12	7
Hungary	1.39	4,775	13	20
Ireland	0.96	5,213	10	13
Italy	1.33	2,725	21	5
Latvia	0.75	2,267	24	26

<sup>19</sup> PATÓ et al. 2023.



Country	R&D intensity (%)	Researcher ratio	Researcher ranking	Rank in net EU contribution
Lithuania	1.02	3,908	17	22
Luxembourg	0.98	4,687	14	21
Malta	0.69	2,242	25	27
Netherlands	2.30	6,404	6	4
Poland	1.46	3,857	18	14
Portugal	1.70	5,560	8	12
Romania	0.46	1,004	27	18
Slovakia	0.98	3,391	19	25
Slovenia	2.11	5,372	9	16
Spain	1.44	3,327	20	3
Sweden	3.40	9,836	1	8

Source: compiled by the author based on Horizon Dashboard and RTD Cordia BI Reporting data (8 November 2024)

There is a significant discrepancy between the R&D indicators and the direct EU funding received not just in case of the V4 countries but also among all Member States. However, the scope of this study does not allow for a full analysis of Horizon funds for all Member States. I just wanted to point out that the share of the V4 countries from the Horizon programme is even less than their share from other direct EU funds. From the Horizon Europe the V4 countries received only 2.42% contrary to all of the direct EU funds (without the CF to the CEF Transport), where their share is 4.86%. On a per capita basis, the V4 countries receive 35% of the EU average in case of the direct EU funds in general, while from Horizon they receive only 17%. Given the importance of R&D resources for economic growth and well-being, this situation and trend is very worrying for the V4 countries.

## Recommendations to policymakers of the V4 countries

The analysis of the distribution and absorption of direct EU funds reveals a persistent disparity in access and allocation among the Visegrád Group (V4) countries – Czechia, Hungary, Poland and Slovakia – despite their two-decade membership in the European Union. The per capita funding levels received by these countries remain significantly below the EU average, with particular deficiencies in high-impact programmes such as Horizon Europe. To address these discrepancies and align national strategies with the principles of cohesion and subsidiarity, a comprehensive policy response is required.

A first area of focus must be the strengthening of institutional and administrative capacities at both national and regional levels. Many entities in the V4 countries lack the operational expertise and bureaucratic agility to compete effectively for direct EU funds. Investing in capacity building through targeted training and resource allocation is therefore imperative. In parallel, simplifying internal administrative procedures would enhance efficiency in project preparation, approval and implementation. Establishing or



reinforcing centralised EU funding offices could provide technical guidance and support to public and private stakeholders throughout the entire funding lifecycle.

In the domain of research, development and innovation (RDI), a structural transformation is required to improve the competitiveness of V4 countries in research-intensive funding mechanisms such as Horizon Europe. National governments should significantly increase RDI expenditures in both the academic and private sectors, with the aim of improving research outputs and their alignment with EU priorities. Moreover, incentives for transnational collaboration, especially with institutions in higher-performing Member States, would promote knowledge transfer and increase visibility within European research networks.

Strategic alignment with EU policy priorities is a third essential pillar of reform. Funding applications should concentrate on sectors of strategic relevance to both the EU and the V4 region. In this context, the geographical positioning of the V4 – particularly their proximity to Ukraine and external EU borders – should be leveraged to secure funding in cross-border infrastructure, energy security and border management programmes.

Effective stakeholder engagement is another critical component of enhanced fund absorption. Awareness of funding opportunities remains low among eligible entities in the V4 countries, particularly small and medium-sized enterprises (SMEs), civil society organisations and subnational public institutions. Governments should invest in awareness campaigns and offer tailored technical assistance, including seed money for preparing grant applications, preferential loans to cover own contributions, additional national grants to increase grant intensity rate, workshops, application support, etc.

In addition to domestic reforms, V4 countries must collectively pursue advocacy at the EU level to address systemic inequities in the distribution of direct funding. Evidence-based policy dialogue with European institutions is necessary to highlight the persistent underrepresentation of the V4 in competitive EU funding. One possible avenue is to advocate for the introduction of national and/or regional envelopes or proportionality mechanisms within key programmes to ensure that structural disparities do not translate into persistent funding imbalances. In the absence of such adjustments, funding mechanisms based purely on open competition risk systematically disadvantaging less developed Member States and regions, which inherently possess fewer institutional, financial and knowledge-based resources to succeed in these programmes. This dynamic not only entrenches existing disparities but also undermines the functioning of the internal market by creating uneven levels of innovation, productivity and economic opportunity across the Union. As Kengyel (2019) highlights, the European Union's foremost economic task is to enhance both competitiveness and convergence.<sup>20</sup> To safeguard the EU's long-term unity and competitiveness, a more balanced approach must be institutionalised, wherein cohesion is recognised as a cross-cutting objective across all funding modalities.

<sup>20</sup> KENGYEL 2019.



## Conclusion

The implications are clear: the existing mechanisms for direct EU funding fail to uphold the principles of subsidiarity and cohesion. Instead of empowering Member States and addressing regional disparities, these funds disproportionately benefit more developed regions, widening the economic and social gaps within the Union. This failure to adhere to the principles set out in the Treaties threatens the EU's goal of fostering balanced and harmonious development.

It is clear that if for two decades the public and private sector institutions, companies, SMEs and universities of the V4 countries receive only one third or less of the EU average from the direct EU funds, it does not serve the cohesion objectives of the Treaties and will even have an opposite effect, which leads to widening disparity. The widening disparity undermines the EU's foundational objective of fostering cohesion across economic, social and territorial dimensions.

While the V4 countries have seen some progress in per capita funding levels compared to previous financial cycles, the increase remains insufficient to bridge the substantial gaps. Programmes like Horizon, the EU's flagship research and innovation initiative, further underscore these disparities, with the V4 receiving only one-sixth of the EU average per capita. This pattern is especially concerning given the growing emphasis on directly managed funds in the EU's financial architecture and the declining share of cohesion-focused funds such as the Cohesion Fund.

To ensure that EU policies genuinely support cohesion, it is essential to mainstream the principles of cohesion and subsidiarity in the programming and allocation of direct EU funds. Policymakers must address the structural and systemic barriers that hinder equitable access to funds for the V4 countries. Targeted measures to enhance participation, capacity building and institutional readiness in these countries are crucial for aligning funding allocations with EU cohesion goals.

The experience of the V4 with direct EU funding underscores the need for a recalibrated approach that prioritises equity and cohesion. As the EU moves forward in its financial cycles, ensuring a fair and balanced distribution of resources will be pivotal in achieving its overarching mission of reducing disparities and fostering a truly unified European Union.

## References

- BACHTLER, John – MENDEZ, Carlos (2020): Cohesion Policy: Doing More with Less. In WALLACE, Helen – POLLACK, Mark A. – ROEDERER-RYNNING, Christilla – YOUNG, Alasdair R. (eds.): *Policy-Making in the European Union*. Oxford: Oxford University Press, 232–253. Online: <https://doi.org/10.1093/hepl/9780198807605.003.0010>
- BACHTLER, John – MENDEZ, Carlos – COMAN, Ramona – CRESPIY, Amandine – SCHMIDT, Vivien A. (2020): Cohesion and the EU's Budget: Is Conditionality Undermining Solidarity? In COMAN, Ramona – CRESPIY, Amandine – SCHMIDT, Vivien A. (eds.): *Governance and Politics in the Post-crisis European Union*. Cambridge: Cambridge University Press, 121–139. Online: <https://doi.org/10.1017/9781108612609.009>



- BRIA, Francesca – TIMMERS, Paul – GERNONE, Fausto (2025): *EuroStack – A European Alternative for Digital Sovereignty*. Gütersloh: Bertelsmann Stiftung. Online: <https://doi.org/10.11586/2025006>
- DRAGHI, Mario (2024): *The Future of European Competitiveness. A Competitiveness Strategy for Europe*. Online: [https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead\\_en](https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en)
- European Commission (2024): *Financial Transparency System*. Online: <https://ec.europa.eu/budget/financial-transparency-system/analysis.html>
- European Commission (s. a.): *Funding by Management Mode*. Online: [https://commission.europa.eu/funding-tenders/find-funding/funding-management-mode\\_en](https://commission.europa.eu/funding-tenders/find-funding/funding-management-mode_en)
- Eurostat (s. a.): *Population of Europe*. Online: [https://doi.org/10.2908/demo\\_pjan](https://doi.org/10.2908/demo_pjan)
- Horizon Dashboard, RTD Cordia. Online: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-dashboard>
- HUNTER, Alison (2023): Addressing Cohesion Policy's Identity Crisis in a Changing European Union. *European Policy Centre*, 15 February 2023. Online: [https://www.epc.eu/content/PDF/2023/Cohesion\\_Policy\\_DP.pdf](https://www.epc.eu/content/PDF/2023/Cohesion_Policy_DP.pdf)
- JANČOVÁ, Lenka – KAMMERHOFER-SCHLEGEL, Christa – CENTRONE, Marco (2024): The Future of EU Cohesion: Scenarios and Their Impacts on Regional Inequalities. *European Parliamentary Research Service*, December 2024. Online: [https://www.europarl.europa.eu/thinktank/en/document/EPSR\\_STU\(2024\)762854](https://www.europarl.europa.eu/thinktank/en/document/EPSR_STU(2024)762854)
- KENGYEL, Ákos (2019): Az Európai Unió költségvetésének jövője a 2021–2027-es többéves pénzügyi keret tükrében [The Future of the EU Budget in Light of the 2021–2027 Multi-annual Financial Framework]. *Közgazdasági Szemle*, 66(5), 521–550. Online: <https://doi.org/10.18414/KSZ.2019.5.521>
- LEINO-SANDBERG, Päivi (2024): Cohesion Policy and the Principle of Subsidiarity: A Legal Analysis. *ZEW – Centre for European Economic Research Discussion Papers*, (24-042). Online: <http://dx.doi.org/10.2139/ssrn.4871722>
- PATÓ, Viktória Lilla – PETRI, Bernadett – MATUZ, János (2023): Cohesion or Widening Disparities: R&D Performance vs. EU Funding of the Regions. *Európai Tükör – European Mirror*, 25(4), 89–109. Online: <https://doi.org/10.32559/et.2023.4.6>

### *Legal sources*

- Consolidated version of the Treaty on European Union. OJ C 326, 26.10.2012, 13–390
- Consolidated version of the Treaty on the Functioning of the European Union. OJ C 326, 26.10.2012, 47–390
- Council Regulation (EU, Euratom) 2020/2093 of 17 December 2020 Laying Down the Multiannual Financial Framework for the Years 2021 to 2027, OJ L 433I, 22.12.2020, 11–22
- Council Regulation (EU, Euratom) No. 1311/2013 of 2 December 2013 Laying Down the Multiannual Financial Framework for the Years 2014–2020, OJ L 347, 20.12.2013, 884–891



Farkas Csamangó Erika<sup>1</sup> 

# Az EU ipari szén-dioxid-gazdálkodási stratégiájának jogi megközelítése

## The Legal Approach to the EU's Industrial Carbon Management Strategy

*Az Európai Unió vállalta, hogy 2050-re klímasemlegessé válik. Ehhez csökkenteni kell a légkörbe bocsátott üvegházhatású gázok mennyiségét, amit például megújuló energiaforrások bevezetésével, zöldebb technológiák kifejlesztésével érhet el. Emellett a légkörből kivonhatók az üvegházhatást okozó gázok, például természetes rendszerek (erdők megőrzésével és telepítésével) és szénmegkötő technológiák segítségével. Az emissziócsökkentés kiegészítéseként tehát szükség lesz a szén-dioxid légkörből való eltávolítására. A szén-dioxid leválasztását és tárolását biztosító technológiákat illetően az uniós politikában felgyorsultak a jogalkotási folyamatok. Az Európai Unió szén-dioxid-gazdálkodási stratégiája egy új, 2024-ben elfogadott szakpolitikai és jogalkotási keret, amely célul tűzi ki szén-dioxid-leválasztási, -szállítási, -hasznosítási és -tárolási infrastruktúra kiépítését. A Nettó zéró iparról szóló rendelet megalkotásának célja, hogy megerősítse az EU iparának versenyképességét a klímasemlegességi célokhoz szükséges technológiák ösztönzésével. A rendelet nettó zéró technológiaként ismeri el a szén-dioxid-leválasztást és -tárolást is. A technológiák gyors fejlődésével a szabályozási környezetnek lépést kell tartania, továbbá teret kell hagynia a további fejlesztéseknek is.*

*Az EU ipari szén-dioxid-gazdálkodási stratégiája az üvegházhatásúgáz-kibocsátás mérséklésének kiegészítője. A szén-dioxid-leválasztást és -tárolást széles körben kell alkalmazni az éghajlatváltozás mérséklésére irányuló egyéb intézkedések kiegészítéseként.*

**Kulcsszavak:** szén-dioxid, ipari szén-dioxid-kibocsátás, nettó zéró, tanúsítási rendszer, klímasemlegesség

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*The European Union has committed to becoming climate-neutral by 2050. To achieve this, it must reduce the amount of greenhouse gases emitted into the atmosphere, which can be accomplished, for example, by introducing renewable energy sources and developing greener technologies. In addition, greenhouse gases can be removed from the atmosphere through natural systems (such as forest conservation and afforestation) and carbon capture technologies. Therefore, in addition to reducing emissions, it will be necessary to remove carbon dioxide from the atmosphere. Regarding technologies for carbon capture and storage, legislative processes have accelerated in EU policy. The European Union's carbon management strategy is a new policy and legislative framework adopted in 2024 that aims to establish infrastructure for carbon capture, transport, utilisation, and storage. The Net-Zero Industry Regulation aims to strengthen the competitiveness of EU industry by promoting the technologies necessary to achieve climate neutrality goals. The regulation recognizes carbon capture and storage as a net-zero technology. As technologies evolve rapidly, the regulatory environment must keep pace and also leave room for further developments.*

**Keywords:** carbon dioxide, industrial carbon dioxide emissions, net zero, certification system, climate neutrality

## Bevezetés

Az éghajlatváltozással járó negatív környezeti hatások, a klímaváltozás napjainkban mindenhol a világon érzékelhetővé vált. A klímaváltozással járó kihívásokra a jognak is reagálnia kell. Az Európai Parlament és a Tanács 2021 júniusában elfogadta az európai klímarendeleetet, amely kulcsfontosságú mérföldkő az Európai zöld megállapodás (*Green Deal*)<sup>2</sup> végrehajtásában. A rendelet jogszabályban rögzíti az EU azon kötelezettségvállalását, hogy 2050-ig megvalósítja a klímasemlegességet, valamint azt a köztes célt, hogy 2030-ig legalább 55%-kal csökkenti a nettó üvegházhatásúgáz-kibocsátását az 1990-es szinthez képest. Az európai klímarendelettel az Európai Unió kötelezettséget vállalt arra, hogy Európa klímasemleges kontinenssé válik. Ennek egyik eszköze lehet a szén-dioxid-kibocsátás csökkentése, illetve légtérből való eltávolítása. A szén-dioxid leválasztását és tárolását biztosító technológiákat illetően az uniós politikában felgyorsultak a jogalkotási folyamatok. Jelen tanulmány azt kívánja bemutatni, hogy milyen jogalkotási folyamat eredményeként jött létre az EU ipari szén-dioxid-gazdálkodási stratégiája, továbbá rá kíván világítani szükségességére. Az ipari szén-dioxid-gazdálkodás jogi kereteinek elemzése során arra keresi a választ, hogy ezen a területen az Európai Unió milyen szabályozási rendszert alakított ki a klímasemlegességi cél elérése érdekében.

<sup>2</sup> Európai zöld megállapodás. Lásd European Commission 2019a.



## A klímaváltozás és az ipari szén-dioxid-kibocsátás összefüggése, ipari szén-dioxid-gazdálkodási stratégia

A klímavédelemre irányuló párizsi megállapodásban<sup>3</sup> vállalt cél elérése érdekében az uniós klímarendelet kötelező célként tűzte ki, hogy 2050-re a szén-dioxid-kibocsátás (emisszió) nettó nullára csökkenjen.<sup>4</sup> A csökkentés elérésének fő eszköze az üvegházhatású gázok kibocsátásának mérséklése. Az Irány az 55%! csomag<sup>5</sup> szerint 2030-ra az üvegházhatást okozó gázok kibocsátását legalább 55%-kal kell csökkenteni, míg 2050-re a klímarendeletben<sup>6</sup> meghatározottak szerint a kibocsátás nettó nullára csökkentése a cél. A karbonsemlegesség azt jelenti, hogy megvalósul az egyensúly a kibocsátott szén-dioxid, illetve a légkörből kivont és (szénelnyelőkből<sup>7</sup>) tárolt szén-dioxid mennyisége között. A karbonsemlegességet többféleképpen lehet elérni.<sup>8</sup> Drasztikusan csökkenthető a légkörbe kibocsátott üvegházhatású gázok mennyisége, vagyis alacsony szénkibocsátású gazdaságra kell átállni. Ezt például megújuló energiaforrások bevezetésével, zöldebb technológiák kifejlesztésével és alkalmazásával érhetjük el. Emellett a légkörből kivonhatjuk az üvegházhatást okozó gázokat például természetes rendszerek (erdők megőrzésével és telepítésével) és szénmegkötő technológiák segítségével. Környezetvédelmi megoldások közül ismert az úgynevezett „csövégi technológia” (*end-of-pipe technology*), amely nem a szennyezés forrásánál való fellépést, megelőzést tartja elsődlegesnek, hanem a szennyezés, károsítás utólagos csökkentését. A „csövégi technológiák” nem tarthatók fenn hosszú távon, a problémák nem oldhatók meg kizárólag általuk. A megelőzés környezetjogi alapelvével ellentétben ezek a technológiák a szennyezések keletkezését nem szüntetik meg, csak a szennyezéskibocsátást mérséklik. A szennyezés forrása megmarad, a kibocsátásokat a folyamat végén kezelik. Áthelyezik a problémát,

<sup>3</sup> Az ENSZ Éghajlatváltozási Keretegyezménye (UNFCCC) keretében létrejött és a 2016/1841 EU Tanácsi határozattal (2016. október 5.) jóváhagyott párizsi megállapodás értelmében a nemzetközi közösség megállapodott abban, hogy a globális átlaghőmérséklet emelkedését jóval az iparosodás előtti átlaghőmérsékletnél 2 °C-kal magasabb hőmérsékletszint alatt tartja, és törekszik arra, hogy a hőmérséklet-emelkedés az iparosodás előtti átlaghőmérséklet feletti 1,5 °C mértékre korlátozódjon. HL L 282., 2016. 10. 19., 1. Lásd European Council 2016. Lásd még bővebben FREESTONE–STRECK 2009.

<sup>4</sup> Az európai klímarendelettel az EU jogi kötelezettséget vállalt arra, hogy Európa – a világon elsőként – klímasemleges kontinenssé válik (OBERTHÜR–DUPONT 2021).

<sup>5</sup> Az „Irány az 55%!” csomag (Fit for 55 Package) az Európai Unió 2021-es jogalkotási kezdeményezés-csomagja, amelynek célja, hogy az EU 2030-ra legalább 55%-kal csökkentse az üvegházhatású gázok nettó kibocsátását az 1990-es szinthez képest. Ez a csomag a klímasemlegesség elérését célzó keret létrehozásáról és a 401/2009/ EK rendelet, valamint a 2018/1999 EU rendelet módosításáról szóló európai parlamenti és tanácsi 2021/1119 EU rendeletben (2021. június 30.) („európai klímarendelet”) (HL L 243., 2021. 07. 9., 1–17.) rögzített cél teljesítésének részletes szabályozási alapját adja.

<sup>6</sup> A 2021/1119 EU rendelet (európai klímarendelet kulcsfontosságú mérőföldkő az Európai zöld megállapodás végrehajtásában. A rendelet jogszabályban rögzíti az EU azon kötelezettségvállalását, hogy 2050-ig megvalósítja a klímasemlegességet, valamint azt a köztes célt, hogy 2030-ig legalább 55%-kal csökkenti a nettó üvegházhatásúgáz-kibocsátást az 1990-es szinthez képest. Lásd bővebben a klímarendeletet BÁNDI 2022: 537–538.

<sup>7</sup> Szénelnyelőnek nevezünk minden olyan rendszert, amely több szenet nyel el, mint amennyit kibocsát. A fő természetes szénelnyelők közé tartozik a talaj, az erdők és az óceánok.

<sup>8</sup> SCOTFORD 2017.



emellett hosszú távon költségesek is. Előnyükként megemlítendő, hogy gyorsan bevezethetők, ha sürgősen kell csökkenteni a szennyezéseket, kibocsátásokat.

A szén-dioxidok légkörből való eltávolításának, majd tárolásának folyamatát szénmegkötésnek nevezzük. Az emissziócsökkentés kiegészítéseként tehát szükség lesz a szén-dioxid légkörből való eltávolítására<sup>9</sup> is, mivel egyes ágazatokban, mint például a mezőgazdaságban, a nehéziparban (cement- és acélgyártásban) vagy a közlekedésben (főként a légi és tengeri közlekedésben) nehéz elérni a nulla kibocsátást.<sup>10</sup> A közlekedésben több okból is nagyon nehéz, egyszerre műszaki, gazdasági, infrastrukturális és társadalmi akadályokkal kell szembenézni. A mezőgazdaságban pedig azért bonyolult, mert az ágazat tevékenységei szorosan összefonódnak a biológiai folyamatokkal, és sok kibocsátás ezekből a természetes folyamatokból fakad. A mezőgazdaságban „zéró” helyett inkább a nettó zéró a cél: vagyis amennyit kibocsát, annyit kell szénmegkötéssel (például talajban, erdőkben, gyepekben) ellensúlyozni. Emellett javítani kell a hatékonyságot, csökkenteni a húsfogyasztást, fejleszteni a precíziós gazdálkodást és a talaj szénmegőrző technológiáit. A nehéziparban (például acél-, cement-, vegyipar, színesfém- és üvegyártás) a nulla CO<sub>2</sub>-kibocsátás elérése az egyik legnagyobb kihívás, nemcsak energiahatékonysági kérdés, hanem alapvető technológiai forradalmat igényel: új kémiai eljárásokat, tiszta energiaforrásokat, nagy léptékű szénmegkötést, és közben globális szabályozási és gazdasági feltételek megteremtését is.

A szén-dioxid-eltávolítás (*carbon dioxide removal*, CDR) olyan tevékenység, amelynek célja a többlet szén-dioxid eltávolítása a légkörből és annak tartós tárolása (*carbon capture, utilisation and storage*, CCUS) különféle formákban.<sup>11</sup> A szén-dioxid légkörből való eltávolításának egyik módja a már meglévő természetes szén-dioxid-elnyelő folyamatok fokozása, például a fák, a talaj vagy más „szénelnyelők” szén-dioxid-felvételének növelése révén. Az erdők döntő szerepet játszanak a légkörből származó szén-dioxid megkötésében, a fák jelentős mennyiségű szén-dioxidot képesek kivonni a levegőből, amelyet biomassájukban és a talajban tárolnak el. Az ideiglenes tárolás növeli a talajban és az erdőkben a szén-dioxid megkötését. Az emberi tevékenységek miatt kibocsátott szén-dioxid közel 30%-át az erdők ily módon nyelik el. Emellett a természetes gyepek és cserjések is kiváló alternatívát kínálnak erre. Az erdőtelepítés, a talajmegújító mezőgazdaság és a természetes élőhelyek helyreállítása mind hozzájárulnak a szén-dioxid csökkentéséhez, miközben erősítik a biodiverzitást, ezért az EU a szén-dioxid-elnyelés növelését célzó szabályokon is dolgozik. Ez a jogszabály főként erdőterületekre és mezőgazdasági területekre terjed ki, valamint azokra a földekre, amelyeknek megváltozott

9 A szén-dioxid-eltávolítás: a szén-dioxid légkörből történő, antropogén eltávolítása és tárolása geológiai, szárazföldi vagy óceáni tározókban, illetve tartós termékekben. Az Európai Parlament és a Tanács 2024/3012 EU rendelete (2024. november 27.) a tartós szén-dioxid-eltávolítás, a karbonszállítás és a termékekben való szén-dioxid-tárolás uniós tanúsítási keretrendszerének létrehozásáról 2. cikk 1. pontja meghatározásában. A rendeletben a szén-dioxid-eltávolítás fogalom meghatározásaként az ENSZ Éghajlatváltozási Kormányközi Testülete (IPCC) szerinti definíció áll, amely csak a légköri vagy biogén szén eltávolítását fedi le.

<sup>10</sup> SCHUETT 2024: 87–110.

<sup>11</sup> IEA 2022: 72–80.



a hasznosítása.<sup>12</sup> Az „Irány az 55%!” intézkedéscsomag keretében az EU olyan jogszabályt fogadott el, amely előírja a tagállamok számára, hogy 2030-ra 310 millió tonna CO<sub>2</sub>-egyenértéket kell eltávolítani a földhasználati, földhasználat-változtatási és erdőgazdálkodási ágazatban. Az ágazat magában foglalja a természetes szén-dioxid-elnyelő és -megkötő földterületek és erdők használatához és a velük való gazdálkodáshoz kapcsolódó tevékenységeket. A klímavédelem eszközei közé tartozik a kémiai eljárások alkalmazása is, mint a szén-dioxid leválasztása és föld alatti (geológiai) tárolása (*Carbon Capture and Storage, CCS*).<sup>13</sup> Erre az összetett technológiára az EU önálló irányelvet is alkotott.<sup>14</sup> A tagállamok az irányelv alapján kötelesek a CCS szabályozására, például az engedélyeztetésről, hatósági felügyeletről, nyilvántartásról, biztosítékadási kötelezettségről, a létesítményekhez (a szállítóhálózathoz) való hozzáférésről és a kapcsolódó jogviták rendezéséről szóló előírások meghatározására. Szabad mozgásterük van annak eldöntésében, hogy területükön megengedik-e a szén-dioxid föld alatti tárolását és kutatását. A környezetvédelem, energiajog területén, így a CCS szabályozására előnyösek lehetnek a kötelező jogszabályokkal (*hard law*) szemben a *soft law* (puha jog) jellegű eszközök is, azaz az olyan nem kötelező erejű szabályozási formák, mint például ajánlások, iránymutatások, magatartási kódexek, nyilatkozatok vagy keretelvek. Gyors, rugalmas és konszenzusos módon ösztönzik az együttműködést és az innovációt, miközben előkészítik a későbbi, kötelező szabályozást.<sup>15</sup>

A szén-dioxid-emisszió csökkentéséről nagyon sok tanulmány, kutatás jelent meg.<sup>16</sup> Azonban ennek ellentétével is foglalkozni kell, vagyis azon eljárásokkal, amelyek képesek szén-dioxidot kivonni az atmoszférából, és visszajuttatni a geológiai tárolókba, szárazföldi ökoszisztemekbe. Ezeket negatív emissziós technológiáknak (NET) nevezzük,<sup>17</sup> a szén-dioxid-eltávolítási tevékenységek révén megtakarított kibocsátásokat

<sup>12</sup> A LULUCF rendelet az Európai Parlament és a Tanács 2018/841/EU rendelete (2018. május 30.) a földhasználat, a földhasználat-változtatáshoz és az erdőgazdálkodáshoz kapcsolódó üvegházhatásúgáz-kibocsátásnak és -elnyelésnek a 2030-ig tartó időszakra vonatkozó éghajlat- és energiapolitikai keretbe történő beillesztéséről, valamint az 525/2013/EU rendelet és az 529/2013/EU határozat módosításáról (HL L 156., 2018. 6. 19., 1.). Az Európai Parlament és a Tanács 2024/3012 EU rendelete (2024. november 27.) a tartós szén-dioxid-eltávolítás, a karbonszén-dioxid-eltávolítás és a termékekben való szén-dioxid-tárolás uniós tanúsítási keretrendszerének létrehozásáról. Az átdolgozott rendelkezések a természetes szén-elnyelés mértékének növelését irányozzák elő, hogy az EU 2050-re elsőként válhasson klímasegélyes kontinenssé, és az Európai zöld megállapodással összhangban javítani tudja biológiai sokféleségét. Az „Irány az 55%!” intézkedéscsomag keretében az EU olyan jogszabályt fogadott el, amely előírja a tagállamok számára, hogy 2030-ra 310 millió tonna CO<sub>2</sub>-egyenértéket kell eltávolítani a földhasználati, földhasználat-változtatási és erdőgazdálkodási ágazatban. Az ágazat magában foglalja a természetes szén-dioxid-elnyelő és -megkötő földterületek és erdők használatához és a velük való gazdálkodáshoz kapcsolódó tevékenységeket.

<sup>13</sup> Lásd bővebben FODOR 2014: 148–162. A geológiai szén-dioxid-tárolók közül a legkiterjedtebb a Parti Siklás régiója, amely Texas és Georgia között húzódik.

<sup>14</sup> Az Európai Parlament és a Tanács 2009/31/EK irányelve (2009. április 23.) a szén-dioxid geológiai tárolásáról, valamint a 85/337/EGK tanácsi irányelv, a 2000/60/EK, a 2001/80/EK, a 2004/35/EK, a 2006/12/EK és a 2008/1/EK európai parlamenti és tanácsi irányelv, valamint az 1013/2006/EK rendelet módosításáról. HL L 140/114–135. 2009. 6. 5. Lásd bővebben FRATTINI–BECATTINI–MAZZOTTI 2024.

<sup>15</sup> Lásd erről bővebben LÁNCOS 2018.

<sup>16</sup> Két elemzés pl. KOPPÁNY 2021: 322–331, illetve KOPPÁNY–HANULA 2021: 307–321.

<sup>17</sup> Research Agenda 2019.



pedig negatív kibocsátásnak.<sup>18</sup> Rövid távon nem lesznek elegendők a szén-dioxid légköri koncentrációjának jelentős csökkentésére,<sup>19</sup> azonban nem lehet őket figyelmen kívül hagyni. A negatív emissziós technológiákat a szakirodalom<sup>20</sup> az alábbi módon csoportosítja:

- biológiai metódusok felhasználása a talaj, erdők és vizes élőhelyek, mocsaras területek szénkészletének növelésére;
- geológiai technikák, amelyek képesek szén-dioxidot leválasztani a légkörből és megkötni a kőzetekben;<sup>21</sup>
- energia termelése biomasszával, miközben a képződő szén-dioxidot visszanyerjük és tároljuk;
- kémiai eljárások alkalmazása a szén-dioxid leválasztására közvetlenül a légkörből és elhelyezésére geológiai tárolókban.

Az ipar a légszennyező anyagok és üvegházhatású gázok teljes kibocsátásának több mint feléért felelős. Egyes szennyezési források – például a gépkocsik, a mezőgazdaság és az épületek – szétszórtan helyezkednek el, mások azonban egyedi kibocsátási pontként értékelhetők. E pontforrások között sok a nagy létesítmény, például gyárak és erőművek. A környezetvédelmi szabályozás hosszú évek óta korlátozza az ipari tevékenységek emberi egészségre és környezetre gyakorolt káros hatásait. Az ipari kibocsátásokra irányuló legfontosabb uniós intézkedések közé tartozik az ipari kibocsátásokról szóló irányelv,<sup>22</sup> valamint a közepes tüzelőberendezésekről szóló irányelv.<sup>23</sup>

## A szén-dioxid-gazdálkodás európai jogi keretei

A szén-dioxid leválasztását és tárolását biztosító technológiákat illetően az uniós politikában felgyorsultak a jogalkotási folyamatok. A 2003/87/EK irányelv az üvegházhatást okozó gázok kibocsátási egységeinek Közösségen belüli kereskedelmi rendszerének létrehozásáról szól, azaz az Európai Unió emissziókereskedelmi rendszerről (European Union

<sup>18</sup> Negatív kibocsátás (*negative emissions*) alatt azokat az antropogén tevékenységeket értjük, amelyek több szén-dioxidot távolítanak el a légkörből, mint amennyit kibocsátanak.

<sup>19</sup> KRAMER 2020: 44–51.

<sup>20</sup> NEMESTÓTHY – BAKONYI – BÉLAFINÉ BAKÓ 2022: 653–663.

<sup>21</sup> Aszén-dioxid felszín alatti elhelyezéséről 2011-ben jelentek meg tanulmányok, amelyek szerint Magyarországot földtani adottságai alkalmassá teszik a szén-dioxid tárolására, mivel a Pannon-medencében (üledékes medence) nagy kiterjedésű sós vizes rezervoárok találhatóak. PL. BERTA–FALUS–KIRÁLY 2011: 27–28.

<sup>22</sup> Az Európai Parlament és a Tanács ipari kibocsátásokról szóló 2010/75/EU irányelve (Industrial Emissions Directive, IED), amely 2011. január 6. óta hatályos, a környezetszennyezés integrált megelőzéséről és csökkentéséről szóló 96/61/EK irányelv mellett további hat, a környezetre jelentős hatást gyakorló ipari tevékenységet szabályozó ágazati irányelvet foglal egyetlen irányelvbe.

<sup>23</sup> 2015/2193/EU irányelv a közepes tüzelőberendezésekből származó egyes szennyező anyagok levegőbe történő kibocsátásának korlátozásáról. Az irányelv a közepes tüzelőberendezésekből származó kén-dioxid (SO<sub>2</sub>), nitrogén-oxidok (NO<sub>x</sub>) és por (részecskék) levegőbe bocsátására, valamint az e berendezésekből származó szénmonoxid-kibocsátások nyomon követésére vonatkozó szabályokat határoz meg.



Emissions Trading System, EU ETS). Az ETS<sup>24</sup> 2005 óta korlátozza az üvegházhatásúgáz-kibocsátást, hatálya alá tartozik az EU üvegházhatásúgáz-kibocsátásának majdnem fele. Az elnevezésben az ETS arra utal, hogy olyan szén-dioxid-kvótarendszer jött létre, ahol létesítmények kereskedhetnek egymással, árveréseken megszerezhető kibocsátási egységekkel.<sup>25</sup> Az EU ETS 2005 óta az iparból és az energiaágazatból, valamint 2012 óta az Európai Gazdasági Térség területén belüli polgári légi közlekedési ágazatból származó üvegházhatású gázok kibocsátásának csökkentését célozza meg. Az EU ETS által lefedett ágazatokat a 2003/87/EK irányelv I. melléklete sorolja fel.<sup>26</sup> A jelenlegi EU ETS nem ismeri el a fent említett negatív kibocsátásokat. Az EU ETS legújabb reformja (ETS2)<sup>27</sup> következtében az ipari kibocsátásoknak gyorsított ütemben kell csökkenniük már az átmeneti, 2030-ra kitűzött cél eléréséhez is. Amíg az áramtermelésben és több ipari szektorban folyamatosan csökken a szén-dioxid-kibocsátás, addig a közlekedés és a háztartások egyre több fosszilis energiaforrás elégetését igénylik.<sup>28</sup> Ezért az (új) ETS2 kiterjed majd az épületekben, a közúti közlekedésben és más ágazatokban (EU ETS hatálya alá nem tartozó) tüzelőanyagok elégetéséből származó szén-dioxid-kibocsátásokra is. Az Irány az 55%! csomag részeként 2003-ban létrehozták a Szociális Klímaalapot (Social Climate Fund, SCF), amelynek célja, hogy hozzájáruljon a kelet-közép-európai térségben is jelentős energiaszegénység mérsékléséhez, különös tekintettel azokra az alacsony jövedelmű és rászoruló háztartásokra, amelyek fűtésükben szilárd tüzelőanyagokra támaszkodnak. Felhasználható a közúti közlekedési és az építőipari ágazatban a kibocsátások csökkentésére irányuló intézkedések és beruházások támogatására, ezzel is csökkentve a kiszolgáltatott háztartások, mikrovállalkozások és a közlekedési felhasználók költségeit. Az Alapból a kiszolgáltatott háztartások, közlekedési felhasználók közvetlen jövedelemtámogatáshoz juthatnak.

Az ipari szén-dioxid-eltávolítási tevékenység jelenleg nem tartozik az uniós kibocsátáskereskedelmi rendszer (ETS) hatálya alá, továbbá a LULUCF rendelet hatálya alá sem. Az ETS jelenlegi rendszere azonban 2013 óta ösztönzi a szén-dioxid leválasztását állandó tárolás céljából.

<sup>24</sup> Az EU Emissions Trading System (EU ETS) jogszabályi keretét az ETS irányelv, az Európai Parlament és a Tanács 2003/87/EK irányelve (2003. október 13.) az üvegházhatást okozó gázok kibocsátási egységei Unión belüli kereskedelmi rendszerének létrehozásáról és a 96/61/EK tanácsi irányelv határozza meg.

<sup>25</sup> Lásd bővebben az emissziókereskedelmi rendszer szabályozását. BÁNDI 2022: 535–537.

<sup>26</sup> Például a hatálya alá tartoznak a tüzelőanyag-égető berendezések 20 MW-ot meghaladó teljes bemenő hőteljesítménnyel (kivéve a veszélyeshulladék-égető és településhulladék-égető létesítményeket), erőművek, távfűtőművek, ásványolaj-feldolgozás, vas- és acélgyártás és kapcsolódó iparágai, alumíniumgyártás, cement- és mészgégyártás, üvegyártás, tégl-, cserép- és kerámiagyártás, számos vegyipari alapanyag előállítása, papírgyártás stb.

<sup>27</sup> Az ETS irányelv 2023. évi felülvizsgálatának részeként a meglévő EU ETS-től elkülönülő új kibocsátáskereskedelmi rendszert hoztak létre ETS2 néven 2027-től. Jogi alapja: Az Európai Parlament és a Tanács 2023/959 EU irányelve (2023. május 10.) az üvegházhatást okozó gázok kibocsátási egységei Unión belüli kereskedelmi rendszerének létrehozásáról szóló 2003/87/EK irányelv és az üvegházhatást okozó gázok uniós kibocsátáskereskedelmi rendszeréhez piaci stabilizációs tartalék létrehozásáról és működtetéséről szóló 2015/1814 EU határozat módosításáról.

<sup>28</sup> FARKAS CSAMANGÓ et al. 2023: 26–27.



A klímaváltozás hatásainak enyhítéséhez való hozzájárulás céljából a CLT-irányelv<sup>29</sup> jogi keretet hozott létre a szén-dioxid környezetvédelmi szempontból biztonságos geológiai tárolására. 2009 óta a szén-dioxid geológiai tárolását ez az irányelv szabályozza. A CLT-irányelv célja, hogy ne legyen jelentős a szén-dioxid-szivárgás, illetve az egészség- vagy környezetkárosodás kockázata, valamint, hogy megelőzze a szállítóhálózat, illetve a tárolóhelyek biztonságára gyakorolt kedvezőtlen hatásokat. Engedélyezési szabályokat tartalmaz a szén-dioxid-tárolás biztonságának és környezeti integritásának biztosítása érdekében, valamint előírja, hogy az infrastruktúrához átlátható és megkülönböztetés-mentes hozzáférést kell biztosítani. A CLT irányelv 33. cikke előírja, hogy engedély iránti kérelem benyújtásakor az üzemeltetőknek fel kell mérniük a szén-dioxid-leválasztás, -szállítás és -tárolás műszaki és gazdasági megvalósíthatóságát. Kedvező értékelés esetén a telephelyen megfelelő helyet kell elkülöníteni a szén-dioxid leválasztásához és sűrítéséhez szükséges berendezések számára. A CLT irányelv végrehajtásáról szóló harmadik jelentés<sup>30</sup> megállapította 2019-ben, hogy a szén-dioxid-leválasztáshoz és -tároláshoz szükséges átalakítás műszaki és gazdasági megvalósíthatóságára vonatkozó értékelések továbbra is kedvezőtlenek, az erőművek elkülönítik a szükséges területet arra az esetre, ha a feltételek a jövőben megváltoznának.

Az EU szén-dioxid-gazdálkodásának témaköréhez szorosan kapcsolódik, hogy a Bizottság ambiciózus célokat tűzött ki 2030-ra a vegyiparban is, miszerint az alapanyagként felhasznált szén legalább 20%-át fenntartható szén-dioxidból kell biztosítani, és legalább 5 millió tonna szén-dioxidot kell eltávolítani és tartósan tárolni.<sup>31</sup> A 2022/869 EU rendelet a transzeurópai energiaipari infrastruktúrára (TEN-E) vonatkozó iránymutatásokról szól, amely támogatja a szén-dioxid-szállítási projekteket.<sup>32</sup>

2023-ban a Bizottság az Európai zöld megállapodáshoz kapcsolódóan ipari tervet terjesztett elő a célból, hogy növelje az európai ipar versenyképességét, fellendítse a tiszta technológiák gyártását, zöld munkahelyeket hozzon létre, és biztosítsa a gyorsabb átállást a zöld energiára.

2024 februárjában a Bizottság ipari szén-dioxid-gazdálkodási stratégiát fogadott el az olyan beruházások ösztönzésére és támogatására, amelyek szén-dioxid leválasztására, tárolására és újrafelhasználására alkalmas technológiákat részesítenek előnyben. A stratégia meghatározza, hogyan lehet uniós és nemzeti szinten növelni a szén-dioxid-leválasztási technológiák használatát, és kiépíteni a szükséges infrastruktúrát egy egységes európai szén-dioxid-piac számára. Az Unió szén-dioxid-leválasztási,

<sup>29</sup> Az Európai Parlament és a Tanács 2009/31/EK irányelve (2009. április 23.) a szén-dioxid geológiai tárolásáról, valamint a 85/337/EKG tanácsi irányelv, a 2000/60/EK, a 2001/80/EK, a 2004/35/EK, a 2006/12/EK és a 2008/1/EK európai parlamenti és tanácsi irányelv, valamint az 1013/2006/EK rendelet módosításáról.

<sup>30</sup> A Bizottság jelentése az Európai Parlamentnek és a Tanácsnak a szén-dioxid geológiai tárolásáról szóló 2009/31/EK irányelv végrehajtásáról. Brüsszel, 2019. 10. 31. COM(2019) 566 final.

<sup>31</sup> A vegyi anyagokra vonatkozó uniós stratégia egy fenntarthatóbb és toxikus anyagoktól mentes környezetért. Brüsszel, 2020. 10. 14., COM(2020) 667 final és COM(2021) 800.

<sup>32</sup> Lásd még European Economic and Social Committee 2024. A Bizottság közleménye az Európai Parlamentnek, a Tanácsnak, az Európai Gazdasági és Szociális Bizottságnak és a Régiók Bizottságának: Az ambiciózus uniós ipari szén-dioxid-gazdálkodás felé vezető lépések. Strasbourg, 2024. 2. 6. COM(2024) 62 final.



-szállítási és -tárolási kapacitásának növelése érdekében – az Európai zöld megállapodás részeként – 2024. június 28-án hatályba lépett a nettó nulla kibocsátási célt szolgáló iparról szóló rendelet (Net-Zero Industry Act, NZIA).<sup>33</sup>

### *A nettó zéró iparról szóló rendelet*

A nettó zéró iparról szóló rendelet (NZIA) célja, hogy megerősítse az EU iparának versenyképességét a klímaseglegességi célokhoz szükséges technológiák ösztönzésével,<sup>34</sup> tehát a nettó zéró ipari technológiák<sup>35</sup> támogatása. Az intézkedések célja, hogy 2030-ra az energiaszektor zöldítéséhez szükséges eszközök 40%-át az Európai Unió képes legyen saját maga előállítani. A rendelet nettó zéró technológiaként ismeri el a szén-dioxid-leválasztást és -tárolást is. Hatálya alá tartoznak a szén-dioxid-eltávolítási és -kibocsátáscsökkentési tevékenységek, nem terjed ki azonban a hatálya azokra a tevékenységekre, amelyek nem járnak sem szén-dioxid-eltávolítással, sem talajművelésből származó kibocsátáscsökkentéssel. A jogszabály olyan technológiákra irányul tehát, amelyek jelentős mértékben hozzájárulnak a dekarbonizációhoz. Nyolc technológiát támogat: 1. a napenergia technológia, 2. a szárazföldi és tengeri szélenergia és más tengeri megújulóenergia-technológia, 3. az akkumulátor tárolási technológiák, 4. a fenntartható biogáz-/biometán-technológia, 5. a hőszivattyúk és geotermikusenergia-technológia, 6. az elektrolizátorok és az üzemanyagcellák, 7. a szén-dioxid-leválasztási és -tárolási technológiák és 8. villamosenergia-hálózati technológiák. Ezek mellett támogatottságot élvez a nukleáris energia is mint tiszta energiaforrás. Megjegyzendő, hogy a nukleáris energia felhasználása és a nukleáris energetikai technológiák alkalmazása célszerű választás, az energiatakarékosság és a megújuló energiaforrások fokozott ütemű bevonása mellett az atomenergia felhasználása lehet a fenntartható gazdasági fejlődés megvalósításának egyik eszköze. Az EU szerint az atomenergia és a földgáz technológiái bizonyos feltételek mellett hozzájárulhatnak a klímaváltozás mérsékléséhez és az alkalmazkodáshoz.<sup>36</sup> A nukleáris energia folyamatos elérhetősége illeszkedik a nagyvállalatok elvárásaihoz, amelyek megbízható és karbonsemleges energiaforrásokat keresnek.

A rendelet mellékletében meghatározott nettó nulla kibocsátású technológiák kiemelt támogatásban részesülnek, továbbá szabályozási intézkedésekkel, többek között egyszerűsített és gyorsított engedélyezési eljárásokkal támogatja e projektek

<sup>33</sup> Az Európai Parlament és a Tanács 2024/1735 EU rendelete (2024. június 13.) a „nettó zéró” technológiák európai gyártási ökoszisztémájának megerősítését célzó intézkedési keret létrehozásáról és a 2018/1724 EU rendelet módosításáról. HL L, 2024/1735, 2024. 6. 28. A nulla nettó kibocsátási célt szolgáló iparról szóló jogszabály a tiszta technológiák gyártásának és a zöld munkahelyeknek ad otthont az EU-ban.

<sup>34</sup> NZIA rendelet.

<sup>35</sup> NZIA 3. cikk 1. pontja szerint nettó zéró technológiák: a 4. cikkben felsorolt technológiák, amennyiben azok végtermékek, elsődlegesen az említett termékek előállításához használt specifikus alkotóelemek vagy specifikus gépek.

<sup>36</sup> Az EU 2020-ban elfogadott taxonómiai rendeletének részeként született meg az a kiegészítő rendelet, amely a megújuló energia mellett a földgázt és az atomenergiát is a környezetileg fenntartható gazdasági tevékenységek közé sorolta.



megvalósítását. A nettó zéró kibocsátási technológiákba történő beruházások ösztönzése érdekében a rendelet előírnyozza e célt szolgáló uniós ipar megerősítéséhez fontos projektek azonosítását, az adminisztratív terhek csökkentését, továbbá fenntarthatósági kritériumok megalkotását a közbeszerzési eljárásokban. A megújuló energiaforrások iránti kereslet fellendítése érdekében előírja a hatóságok számára, hogy a közbeszerzési eljárások során vegyék figyelembe a nettó nulla kibocsátású technológiák fenntarthatósági kritériumait, és intézkedéseket vezet be annak biztosítására, hogy képzett munkaerő álljon rendelkezésre. Végül, de nem utolsósorban lehetővé teszi a tagállamok számára, hogy szabályozói tesztkörnyezeteket hozzanak létre az ilyen technológiák tesztelésére és az innováció ösztönzése érdekében. A NZIA szorosan kapcsolódik az EU ETS rendszerhez, az EU szén-dioxid-gazdálkodási stratégiájához és a szén-dioxid-eltávolítás (*carbon dioxide removal*, CDR) tanúsítási rendszeréhez.

## Az Európai Unió szén-dioxid-gazdálkodási stratégiája

Az Európai Unió szén-dioxid-gazdálkodási stratégiája egy új, 2024-ben elfogadott szakpolitikai és jogalkotási keret, amely célul tűzi ki szén-dioxid-leválasztási, -szállítási, -hasznosítási és -tárolási infrastruktúra kiépítését. A stratégia fő célkitűzései közé tartozik a szén-dioxid-leválasztási technológiák ösztönzése (CCS, CCU,<sup>37</sup> DACCS<sup>38</sup>), az infrastruktúra-fejlesztés (szállítási és tárolási hálózat kiépítése), legalább 50 millió tonna éves szén-dioxid-tárolási kapacitás létrehozása 2030-ra.<sup>39</sup> Az ipari szén-dioxid-eltávolítás keretében a szén-dioxidot közvetlenül a légkörből (DACCS) vagy erőművekből, ipari folyamatokból biogén forrásból (BioCCS<sup>40</sup>) választják le. A 2040-re kitűzött cél szerint az évente leválasztott szén-dioxid mennyisége legalább 50%-ának biogén eredetű (BioCCS) forrásból vagy közvetlen légköri leválasztásból kell származnia. Ez a cél az Európai Unió szén-dioxid-gazdálkodási stratégiájának<sup>41</sup> kulcseleme, amely elősegíti a negatív kibocsátások elszámolását. Az ipari szén-dioxid-eltávolítás hátránya és egyben nehézsége, hogy magas költségekkel és nagy energiaigényekkel jár, amelyek aggályokat vethetnek fel a fenntarthatósággal kapcsolatban.

A negatív kibocsátások elszámolásához az EU szigorú kritériumrendszert hozott létre. A Parlament az egész EU-ra kiterjedően szén-dioxid-kivonási (Carbon Removal Certification, CRD) tanúsítási rendszer (EU Carbon Removal Certification Framework,

<sup>37</sup> CCU: *carbon capture and utilisation*, ami szén-dioxid-leválasztást és -hasznosítást jelent.

<sup>38</sup> DACCS: *direct air capture and storage*, amely a közvetlenül a levegőből történő szén-dioxid-leválasztást és tárolását jelenti.

<sup>39</sup> Net Zero Industry Act.

<sup>40</sup> BioCCS: *bioenergy with carbon capture and storage*. Ötvözi a megújuló biológiai források (pl. biomassza) felhasználását a szén-dioxid-leválasztással és geológiai tárolással, aminek eredményeként nettó szén-dioxid-eltávolítás jön létre.

<sup>41</sup> European Economic and Social Committee 2024.



CRCF)<sup>42</sup> bevezetését hagyta jóvá 2024 áprilisában, amelyet a tartós szén-dioxid-eltávolítás, a karbon-gazdálkodás és a termékekben való szén-dioxid-tárolás első uniós szintű tanúsítási keretrendszerének létrehozásáról szóló 2024/3012/EU rendelet vezetett be. Ez az önkéntes keretrendszer a tartós kibocsátáscsökkentést kiegészítve elő fogja segíteni és ösztönözni fogja a magas színvonalú szén-dioxid-eltávolítást és a talajból származó kibocsátás csökkentését célzó tevékenységeket az EU-ban. A rendelet hatálya kiterjed olyan karbon-gazdálkodási tevékenységekre, amelyek fokozzák a szénmegkötést és a szén-dioxid-tárolást az erdőkben és a talajban, vagy amelyek csökkentik a talajból származó üvegházhatásúgáz-kibocsátást legalább öt éven keresztül (például újraerdősítés, tőzeglápok vagy vizes élőhelyek helyreállítása, a műtrágya jobb felhasználása). Kiterjed továbbá olyan szén-dioxid-tárolási tevékenységekre is, amelyek leválasztják, és legalább 35 éven át tartós termékekben (például faalapú építőipari termékekben) tárolják a szén-dioxidot.<sup>43</sup>

Ahhoz, hogy egy uniós tevékenység (például projekt) által végrehajtott szén-dioxid-eltávolítás és a talajból származó kibocsátás csökkentése alkalmas legyen a tanúsításra, négy minőségi kritériumnak kell megfelelnie, továbbá a tanúsításra jogosult tevékenységeknek független ellenőrzés tárgyát kell képezniük, azaz független ellenőrzésnek kell alávetni. A 2024/3012/EU rendelet négy fő tanúsítási kritériumot határoz meg: számszerűsíthetőség, addicionalitás, hosszú távú tárolás és fenntarthatóság.<sup>44</sup>

- A szén-dioxid-eltávolításból eredő, számszerűsített nettó haszonnal vagy a talajból származó kibocsátás csökkentéséből eredő, számszerűsített nettó haszonnal kell járniuk.
- Kiegészítő jellegűeknek kell lenniük, ami azt jelenti, hogy a tanúsítás ösztönző hatása szükséges ahhoz, hogy pénzügyileg életképesse váljon.
- A szén-dioxid hosszú távú tárolásának biztosítására kell irányulniuk, eközben pedig minimálisra kell csökkenteniük a szén-dioxid-fel szabadulás kockázatát.
- Nem gyakorolhatnak jelentős mértékű káros hatást a környezetre, és képeseknek kell lenniük arra, hogy a fenntarthatósági célkitűzések közül egy vagy több vonatkozásában járulékos előnyöket eredményezzenek.

## Szabályozási kihívások, következtetések

Az ipari szén-dioxid-gazdálkodás jogi kereteinek elemzése alapján megállapítható, hogy az Európai Unió átfogó és ambiciózus szabályozási rendszert alakított ki a klímasemlegesség elérése érdekében. Az EU ETS az EU egyik fő eszköze a klímacélok elérésére. A rendszer reformja során (ETS2) kibővítik az ágazatok körét, és fokozatosan csökkentik

<sup>42</sup> A szén-dioxid-kivonási tanúsítvány (*carbon removal certificate*) az Európai Unió új jogi és szabályozási eszköze, amelyet a 2024/3012/EU rendelet vezetett be azzal a céllal, hogy biztosítsa a negatív kibocsátásokat eredményező tevékenységek hitelesítését, nyomon követését és elismerését. Ez a tanúsítvány kulcsfontosságú szerepet játszik a szén-dioxid-eltávolítás jogi és piaci integrációjában. Az Európai Parlament és a Tanács 2024/3012 EU rendelete a tartós szén-dioxid-eltávolítás, karbon-gazdálkodás és termékekben történő tárolás uniós tanúsítási keretrendszeréről (2024. november 27.).

<sup>43</sup> HONEGGER–BURNS–MORROW 2021: 327–335.

<sup>44</sup> Tárgyalja a CRD szerepét az 1,5 °C cél elérésében az IPCC Report 2. fejezete. Lásd IPCC 2022.



az ingyenesen kiosztható kvótákat, ezzel együtt szükségessé válik mind az uniós, mind a tagállami szabályozások felülvizsgálata, pontosítása, különösen az átláthatóság, az engedélyezés és a szankciók tekintetében.

Jogi kihívást jelent továbbá a negatív kibocsátások elszámolása. Az emisziókereskedelmi rendszer átláthatósága, a negatív kibocsátások ETS-be való integrálása hosszabb távon elengedhetetlen. A szén-dioxid-kibocsátás, negatív emissziók számítási módszertanának egységesítésével, fogalmának meghatározásával a jogszabályok jelenleg nem foglalkoznak részletesen, ezért egyértelműen meg kell határozni, hogy ezekre milyen szabályozók szükségesek. A meghatározásoknak valamennyi új jogi eszközben kellően rugalmasnak kell lennie ahhoz, hogy alkalmazkodjon a műszaki fejlődéshez, ugyanakkor elég pontosnak is, hogy biztosítsa a szükséges jogbiztonságot. A jogbiztonság növelése érdekében az új szabályozásokhoz kapcsolódó végrehajtási útmutatók és *soft law* eszközök megalkotása javasolt. Igény mutatkozik iparspecifikus ajánlások és műszaki szabványok, biztonsági elvárások, valamint egységes útmutatók kidolgozására. Ezek a szabványok elősegíthetik a technológiák szélesebb körű elterjedését is.

A nettó zéró kibocsátás célkitűzésének elérése érdekében az EU támogatáspolitikája meghatározó. Az NZIA rendelet meghatározott technológiákat (például CCS, zöld hidrogén) stratégiai fontosságúnak nevesít, ami előnyhöz juttathatja ezeket más, potenciálisan hatékony megoldásokkal szemben. Ez azonban versenyjogi problémákat is felvet. A preferált technológiák gyorsabb engedélyezése és finanszírozása sértheti az egyenlő bánásmód elvét is, különösen, ha nem világos, milyen objektív kritériumok alapján történik a kiválasztásuk. A támogatási rendszernek versenysemlegesnek, objektív és átlátható szempontok alapján működnök kell lennie, hogy ne torzítsa a technológiai innovációs versenyt. A mérési és ellenőrzési bizonytalanságokra egyértelmű szabályozási keretet kell kidolgozni. A jogalkotónak tehát biztosítania kell, hogy a támogatásokat átlátható módon, versenysemlegesen és jogszerűen ítéljék oda, miközben ösztönözik a fenntartható innovációt is.

A technológiasemlegesség azt jelenti, hogy egy adott technológiát nem részesítenek előnyben másokkal szemben, így biztosítva a versenyhelyzetet minden technológia számára. A technológiasemlegesség elvének érvényesítése jogi szempontból is megoldandó kérdés. A szabályozás kialakításakor kívánatos a technológiasemleges beruházásokra helyezni a hangsúlyt, olyan módon, hogy ne jelentsen előnyt a többivel szemben. Ehhez azonban az is szükséges, hogy a karbonszegény technológiával előállított termékeket egyértelműen meg lehessen különböztetni a hagyományosan előállított termékektől.

A CRD tanúsítási rendszer bevezetése jelentős előrelépést jelent a negatív kibocsátások jogi elismerésében, ugyanakkor ennek végrehajtása során – különösen a számszerűsítés, addicionalitás és hosszú távú tárolás követelményei miatt – jelentős kihívásokkal kell szembenézni. A CRD tanúsítási rendszer jogi kereteinek tagállami szintű harmonizációjára van szükség.

A fenti intézkedések elősegíthetik a fenntartható ipari szén-dioxid-gazdálkodást, továbbá az EU 2050-es klímasemlegességi célkitűzésének elérését. Összefoglalva megállapítható, hogy a szén-dioxid-kibocsátás csökkentésére irányuló törekvések egyedül nem lesznek képesek megállítani a légkörben a szén-dioxid-szint emelkedését, ehhez kivonási technológiákra is szükség van. A leválasztott szén-dioxid pedig értékes árucikket jelent.



Tekintettel a technológia gyors fejlődésére, a szabályozási keretnek teret kell hagynia a további fejlesztéseknek is.

## Felhasznált irodalom

- BÁNDI Gyula szerk. (2022): *Környezetjog*. Budapest: Szent István Társulat.
- BERTA Márton – FALUS György – KIRÁLY Csilla (2011): A szén-dioxid felszín alatti elhelyezése. CCS – új eszköz a klímaváltozás elleni küzdelemben. *Természet Világa*, 142(1), 27–28.
- European Commission (2019a): *The European Green Deal*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52019DC0640>
- European Commission (2019b): *Report from the Commission to the European Parliament and the Council. On Implementation of Directive 2009/31/EC on the Geological Storage of Carbon Dioxide*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52019DC0566>
- European Commission (2020): *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Chemicals Strategy for Sustainability. Towards a Toxic-Free Environment*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020DC0667>
- European Commission (2021): *Communication from the Commission to the European Parliament and the Council. Sustainable Carbon Cycles*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021DC0800>
- European Commission (2024): *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Towards an ambitious Industrial Carbon Management for the EU*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52024DC0062>
- European Council (2016): *On the Conclusion, on Behalf of the European Union, of the Paris Agreement Adopted Under the United Nations Framework Convention on Climate Change*. Online: <https://eur-lex.europa.eu/legal-content/HU/ALL/?uri=CELEX:32016D1841&locale=hu>
- European Economic and Social Committee (2024): *Opinion on the 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Towards an Ambitious Industrial Carbon Management for the EU'*. Online: [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:C\\_202404666](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:C_202404666)
- European Parliament (2003): *Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community and Amending Council Directive 96/61/EC*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32003L0087>



- European Parliament (2009): *Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the Geological Storage of Carbon Dioxide and Amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32009L0031>
- European Parliament (2010): *Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on Industrial Emissions (Integrated Pollution Prevention and Control)*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32010L0075>
- European Parliament (2013): *Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the Annual Financial Statements, Consolidated Financial Statements and Related Reports of Certain Types of Undertakings, Amending Directive 2006/43/EC of the European Parliament and of the Council and Repealing Council Directives 78/660/EEC and 83/349/EEC*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32013L0034>
- European Parliament (2015): *Directive 2015/2193/EU of the European Parliament and of the Council of 25 November 2015 on the Limitation of Emissions of Certain Pollutants into the Air from Medium Combustion Plants*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32015L2193>
- European Parliament (2018): *Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the Inclusion of Greenhouse Gas Emissions and Removals from Land Use, Land Use Change and Forestry in the 2030 Climate and Energy Framework, and Amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32018R0841>
- European Parliament (2021a): *Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 Establishing the Framework for Achieving Climate Neutrality and Amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32021R1119>
- European Parliament (2021b): *Regulation (EU) 2021/2178 of the European Parliament and of the Council of 6 July 2021 Supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by Specifying the Content and Presentation of Information to be Disclosed by Undertakings Subject to Articles 19a or 29a of Directive 2013/34/EU Concerning Environmentally Sustainable Economic Activities, and Specifying the Methodology to Comply with that Disclosure Obligation*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02021R2178-20240101>
- European Parliament (2023a): *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*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32023R0955>



- European Parliament (2023b): *Directive 2023/959/EU of the European Parliament and of the Council of 10 May 2023 Amending Directive 2003/87/EC Establishing a System for Greenhouse Gas Emission Allowance Trading within the Union and Decision (EU) 2015/1814 Concerning the Establishment and Operation of a Market Stability Reserve for the Union Greenhouse Gas Emission Trading System*. Online: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32023L0959>
- European Parliament (2024a): *Regulation (EU) 2024/1735 of the European Parliament and of the Council of 13 June 2024 on Establishing a Framework of Measures for Strengthening Europe's Net-zero Technology Manufacturing Ecosystem and Amending Regulation (EU) 2018/1724*. Online: [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L\\_202401735](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401735)
- European Parliament (2024b): *Regulation (EU) 2024/3012 of the European Parliament and of the Council of 27 November 2024 Establishing a Union Certification Framework for Permanent Carbon Removals, Carbon Farming and Carbon Storage in Products*. Online: [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L\\_202403012](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202403012)
- European Parliament (2024c): *Proposal for a Regulation of the European Parliament and of the Council on Establishing a Framework of Measures for Strengthening Europe's Net-Zero Technology Products Manufacturing Ecosystem (Net Zero Industry Act)*. Online: [https://single-market-economy.ec.europa.eu/publications/net-zero-industry-act\\_en](https://single-market-economy.ec.europa.eu/publications/net-zero-industry-act_en)
- FARKAS CSAMANGÓ Erika et al. (2023): *Szén-dioxid-tárolási és -hasznosítási (CCS/CCU) lehetőségek Magyarországon. Fehér Könyv*. Szeged: SZTE Greenovation Center.
- FODOR László (2014): *Klímavédelem az energiaiparban – szabályozási modellek Németországból*. Budapest: Wolters Kluwer – CompLex.
- FRATTINI, Linda – BECATTINI, Viola – MAZZOTTI, Marco (2024): Main Current Legal and Regulatory Frameworks for Carbon Dioxide Capture, Transport, and Storage in the European Economic Area. *International Journal of Greenhouse Gas Control*, 136. Online: <https://doi.org/10.1016/j.ijggc.2024.104172>
- FREESTONE, David – STRECK, Charlotte szerk. (2009): *Legal Aspects of Carbon Trading: Kyoto, Copenhagen, and Beyond*. Oxford: Oxford University Press. Online: <https://doi.org/10.1093/acprof:oso/9780199565931.001.0001>
- HONEGGER, Matthias – BURNS, Wil – MORROW, David R. (2021): Is Carbon Dioxide Removal 'Mitigation of Climate Change'? *Review of European, Comparative & International Environmental Law*, 30(3), 327–335. Online: <https://doi.org/10.1111/reel.12401>
- IEA (2022): *Legal and Regulatory Frameworks for CCUS*. IEA Publications, 72–80. Online: <https://iea.blob.core.windows.net/assets/bda8c2b2-2b9c-4010-ab56-b941dc8d0635/LegalandRegulatoryFrameworksforCCUS-AnIEACCUSHandbook.pdf>
- IPCC (2022): *Mitigation Pathways Compatible with 1.5 °C in the Context of Sustainable Development*. In *Global Warming of 1.5 °C. IPCC Special Report on Impacts of Global Warming of 1.5 °C above Pre-Industrial Levels in Context of Strengthening Response to Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*. Cambridge: Cambridge University Press, 93–174. Online: <https://doi.org/10.1017/9781009157940.004>



- KOPPÁNY Krisztián (2021): A Pareto-hatékony klímavédelem és a szén-dioxid-kibocsátás csökkentési lehetőségeinek határa. *Magyar Tudomány*, 182(3), 322–331. Online: <https://doi.org/10.1556/2065.182.2021.3.4>
- KOPPÁNY Krisztián – HANULA Barna (2021): Mennyi szén-dioxid van egy euróban? A sikeres emissziócsökkentéshez globális gondolkodás, elemzés és tervezés szükséges. *Magyar Tudomány*, 182(3), 307–321. Online: <https://doi.org/10.1556/2065.182.2021.3.3>
- KRAMER, David (2020): Negative Carbon Dioxide Emissions. *Physics Today*, 73(1), 44–51. Online: <https://doi.org/10.1063/PT.3.4389>
- LÁNCOS Petra Lea (2018): Az uniós soft law kutatásának főbb eredményei és aktuális kihívásai. *Iustum Aequum Salutare*, 14(4), 55–68. Online: [https://ias.jak.ppke.hu/2018asz/05\\_LancosPL\\_IAS\\_2018\\_4.pdf](https://ias.jak.ppke.hu/2018asz/05_LancosPL_IAS_2018_4.pdf)
- NEMESTÓTHY Nándor – BAKONYI Péter – BÉLAFINÉ BAKÓ Katalin (2022): Negatív szén-dioxid-emisszió?! *Magyar Tudomány*, 183(5), 653–663. Online: <https://doi.org/10.1556/2065.183.2022.5.11>
- OBERTHÜR, Sebastian – DUPONT, Claire (2021): The European Union's International Climate Leadership: Towards a Grand Climate Strategy? *Journal of European Public Policy*, 28(7), 1095–1114. Online: <https://doi.org/10.1080/13501763.2021.1918218>
- Research Agenda (2019): *Negative Emission Technologies and Reliable Sequestration*. Washington, D.C.: The National Academies Press. Online: <https://doi.org/10.17226/25259>
- SCHUETT, Lukas (2024): Permanence and Liability: Legal Considerations on the Integration of Carbon Dioxide Removal into the EU Emissions Trading System. *Transnational Environmental Law*, 13(1), 87–110. Online: <https://doi.org/10.1017/S2047102524000013>
- SCOTFORD, Eloise (2017): *Environmental Principles and the Evolution of Environmental Law*. Oxford: Hart Publishing. Online: <https://doi.org/10.5040/9781474201230>



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