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**Dogmatic interpretation of sustainability as a legal principle in the regulation of the circular economy<sup>2</sup>**

*Abstract*

This paper examines the doctrinal status of sustainability as a legal principle and explores how its normative content is concretised through the regulation of the circular economy. Drawing upon legal doctrine and legal theory, the study analyses the concept of legal principles, competing monist and pluralist approaches to the normative structure of sustainability, and the conditions under which sustainability may acquire genuine legal force. It argues that the legal status of sustainability cannot be determined in the abstract level but depends on the institutional and regulatory framework within which it operates. The paper identifies European Union circular economy regulation as the most developed example of the life-cycle-based normative concretisation of sustainability. Rather than treating the circular economy as a distinct legal principle, the study demonstrates that it transforms the abstract requirements of sustainability into a coherent system of legally enforceable obligations governing the entire life cycle of products, from design and production to use, repair, reuse, and recycling.

*Keywords:* sustainability, legal principles, circular economy, life-cycle regulation, environmental law, European Union law

*I. Introduction*

The concept of sustainability has, over the past decades, become one of the most frequently used categories in legal scholarship, yet dogmatically it has also become the least clearly defined. Although it appears both as a constitutional objective and a principle of EU legal integration, and is reflected across a wide range of sectoral regulations, the assessment of its legal nature remains far from uniform. This issue arises particularly sharply in the regulation of the circular economy, which translates sustainability's abstract requirements into specific legal norms through obligations that span the product's entire life cycle.<sup>3</sup> This study proceeds from the hypothesis that this conceptual diffusion is not only the consequence of the diversity of the regulatory environment, but may also partly stem from sustainability's specific normative structure: sustainability simultaneously embodies a political objective and a body of legally binding normative content.<sup>4</sup> These two layers do not become clearly separated from one another. The same reference to sustainability may be treated as merely a declaratory objective in one

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<sup>3</sup> Voigt, Christina: Sustainable Development as a Principle of International Law. Resolving Conflicts Between Climate Measures and WTO Law. Martinus Nijhoff Publishers, Leiden–Boston, 2009, p. 1–28.; Schrijver, Nico: The Evolution of Sustainable Development in International Law. Inception, Meaning and Status. Martinus Nijhoff Publishers, Leiden–Boston, 2008, p. 1–25.

<sup>4</sup> Boros, Anita – Hegedüs, Viktor – Iván, Dániel: A fenntarthatóság társadalompolitikai indikátorai és azok hazai teljesülése. In Pro Publico Bono: Magyar Közigazgatás, 2020, 8. évf., 2. szám, p. 162–193.

legal area, while in another it may qualify as a substantive legal standard; and the boundary between these two roles varies not only by legal field, but even by legal culture.<sup>5</sup>

The study addresses two interrelated questions. First, can sustainability be regarded, from a doctrinal perspective, as a legal principle, and if so, what is its normative structure? Second, how is this principle concretised through the regulation of the circular economy, particularly by means of obligations governing the product's entire life cycle?

The research applies dogmatic and legal-theoretical methods. It examines the nature of sustainability as a legal principle in light of leading contemporary theories of law, as well as the international, EU, and Hungarian constitutional frameworks for environmental protection. In the study, the regulation of the circular economy does not appear as an independent object of research; rather, it serves as a case study to examine the dogmatic content of sustainability.

The study argues that the regulation of the circular economy is not merely one area of application of sustainability, but its most advanced normative interpretation – one that, through obligations covering the product's entire life cycle, turns sustainability into a directly enforceable legal requirement.

## *II. Sustainability as a legal principle: dogmatic foundations and normative structure*

### *II.1. The concept of a legal principle and the classification of sustainability as a legal principle*

The classical starting point of the dogmatic distinction between a legal principle and a statute (legal rule) is that rules are applied in an 'all-or-nothing' manner, whereas principles are subject to balancing and may be realized to different degrees in any given case. However, this distinction alone does not answer the question whether a particular normative content – here, sustainability – belongs to the legal system at all, or whether it continues to exist merely as a moral-political objective without being identifiable as a legal norm.

In contemporary legal theory, two complementary dogmatic models of the principle-rule distinction have become decisive. According to one of them, principles follow a logic of weighting rather than application. When they conflict, the balancing in a specific case ends not with one principle becoming invalid, but with the principle that carries greater weight in that particular instance taking precedence.<sup>6</sup> The other, related model describes principles as optimization commands (*Optimierungsgebote*): they seek to realize their content to the greatest extent possible, as determined by the factual and legal possibilities. This contrasts with rules, which are either satisfied or not.<sup>7</sup> In domestic legal-theoretical literature, this distinction is embedded in a system of forms of abstraction in law, in which rules, maxims, legal principles, legal-dogmatic concepts, and fundamental rights occupy different levels of abstraction relative to one another.<sup>8</sup> Using the threefold dogmatic framework of Dworkin, Alexy, and Pokol, the

<sup>5</sup> The question of how sustainability manifests itself as a legal principle has been raised previously in the pages of the *Jogelméleti Szemle* as well, although in a different legal context. See: Halmosné Siket Zsuzsanna: A büntetőeljárás jog alkotmányos keretei különös tekintettel a fenntarthatóság elvének megjelenésére, p. 49. In *Jogelméleti Szemle*, 2016/2. szám, [https://epa.oszk.hu/05200/05288/00066/pdf/EPA05288\\_jogelmeleti\\_szemle\\_2016\\_2\\_049-057.pdf](https://epa.oszk.hu/05200/05288/00066/pdf/EPA05288_jogelmeleti_szemle_2016_2_049-057.pdf) (2026.06.23.) Compared to this, the present study does not concern a specific area of procedural law; rather, it examines the issue in the dogmatic relationship between the qualification of sustainability as a general legal principle and the regulation of the circular economy.

<sup>6</sup> Dworkin, Ronald: *Taking Rights Seriously*. Harvard University Press, Cambridge (Massachusetts), 1977, p. 500.

<sup>7</sup> Alexy, Robert: *A Theory of Constitutional Rights*. Oxford University Press, Oxford, 2002, p. 389.

<sup>8</sup> Pokol Béla: A jog absztrahálódási formái. Regulák, maximák, jogelvek, jogdogmatikai fogalmak és alapjogok. In *Jogelméleti Szemle*, 2008/3. szám, <https://ojs.elte.hu/jesz/issue/view/546/400> (2026.06.20.)

question of whether sustainability can be classified as a legal principle can be formulated more precisely. It is not necessary to examine whether sustainability can be applied “as a rule,” but rather whether there exists a legal mechanism – judicial discretion, a duty of the legislator, interpretive constraints, etc. – that treats the content of sustainability in a specific case as a consideration to be optimized.<sup>9</sup>

In the international legal-theoretical literature, an increasingly broad consensus has emerged that sustainability has moved beyond being merely a political objective. Bosselmann describes sustainability as a fundamental principle that orients the legal system, whose normative core consists of the requirement of ecological integrity. In contrast, Voigt interprets sustainable development primarily as an integration principle that ensures coherence among different fields of law.

Although the two approaches place different emphases, they share the view that sustainability should be understood as a legal benchmark that goes beyond political programs and can guide lawmaking, legal interpretation, and legal application.<sup>10</sup>

Applying this dogmatic filter leads to different outcomes in classifying sustainability as a legal principle, depending on the legal system. In EU law, as discussed in detail in the following chapter, the principle of sustainable development has acquired binding force under Article 11 TFEU and, due to its structural embedding, can be convincingly characterized as a general legal principle.

At the same time, it is worth noting that, in international public law, the classification of sustainability as a legal principle is much more uncertain. In this respect, the International Court of Justice’s judgment in the *Gabčíkovo–Nagymaros* case is of particular significance for Hungarian legal scholarship,<sup>11</sup> in which the Court urged the parties to reconsider their earlier arrangements regarding water resource management to reconcile economic development with environmental protection. However, it did not recognize this requirement as an independent, legally binding substantive rule, but instead treated it as an interpretative consideration. This solution clearly illustrates that, at the level of international public law, sustainability, even there is a dispute around it, serves more of an interpretive than an autonomously applicable normative function. This suggests that the concept – initially a doctrinal construction recorded in 1987 in the Brundtland Report – has not yet reached the level of maturity evidenced by the EU’s integration clause. At the same time, it implies that the classification of sustainability as a legal principle cannot be determined in general, but must always be assessed in light of the institutional framework and the characteristics of the legal sources of the legal system in question. This also justifies the separate analysis of the structure of the normative content.

For this study, this dogmatic conclusion is particularly important because the regulation of the circular economy is an area of law in which sustainability’s character as a legal principle no longer appears merely in a declaratory manner but takes concrete form as obligations that cover the product’s entire life cycle.

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<sup>9</sup> Vértessy, László: Jurisprudential and Meta-jurisprudential Concepts Related to Environmental Sustainability. In *Jogelméleti Szemle*, 2025/4. szám, <https://ojs.elte.hu/jesz/issue/view/900> (2026.06.20.); Bosselmann, Klaus: *The Principle of Sustainability. Transforming Law and Governance*. Ashgate Publishing, Farnham, 2008, p. 1–22.

<sup>10</sup> Barral, Virginie: Sustainable Development in International Law: Nature and Operation of an Evolutive Legal Norm, p. 377. In *European Journal of International Law*, 2012/2. szám, p. 377–399. Lásd ehhez még: Bosselmann: i.m. p. 51–74.; Voigt: i.m. p. 147–175.; Cordonier Segger, Marie-Claire – Khalfan, Ashfaq: *Sustainable Development Law. Principles, Practices and Prospects*. Oxford University Press, Oxford, 2004.; French: i.m. p. 53–84.

<sup>11</sup> *Gabčíkovo–Nagymaros Project (Hungary/Slovakia)*, Judgment, I.C.J. Reports 1997, p. 7–88. In Judge Weeramantry’s dissenting opinion, he expressly treats sustainable development as a developing principle of international law.

## II.2. *The normative structure of sustainability*

If we accept that sustainability acquires legal-principal status in certain legal systems, the question remains whether this principle has a uniform normative content. In contemporary interpretation, two fundamentally competing approaches can be identified. The first, pluralist approach understands sustainability not as a single principle but as a bundle (or set) of principles. According to this, the legal content of sustainability can be broken down into at least eight separable components: the polluter-pays principle, the requirement to apply the best available scientific knowledge, the precautionary principle, the principle of intergenerational justice, the principle of transnational sustainability, the requirement to take ecosystem services into account, the principle of integrated decision-making, and the principle of adaptive management.<sup>12</sup> The dogmatic implication of this view is that, under the term “sustainability,” we must actually understand not a single legal principle but an overarching framework of principles,<sup>13</sup> whose individual elements acquire binding normative content to varying degrees and across different fields of law.<sup>14</sup>

By contrast, the second, monist approach regards ecological sustainability as the indispensable cornerstone for the legal system, in relation to which the other dimensions of sustainability – economic and social – are secondary, derivative in nature.<sup>15</sup> According to this, the legal normativity of sustainability can be preserved only if we narrow the core of the principle to a single, ecologically framed requirement, because the dilution of the principle’s content – entailing the unlimited inclusion of economic and social considerations – ultimately empties it of its normative force.<sup>16</sup> The idea of the primacy of ecological integrity also plays a decisive role in the contemporary literature on environmental constitutionalism, which understands sustainability not as a balance among multiple competing objectives but as the minimum requirements for the survival and maintenance of natural systems.<sup>17</sup>

Regarding the domestic reception of the monist approach, it is noteworthy that the interpretation of Hungarian environmental law has reached a similar conclusion.<sup>18</sup> It pointed out that although the concept of sustainability is used by many, relatively few employ it uniformly. Further, since it is hardly feasible to secure the simultaneous priority of all its dimensions, it is necessary to bring the environmentally and ecologically embedded dimension of sustainable development to the forefront as the aspect that most urgently requires enhanced legal protection.<sup>19</sup> The structure of this finding is essentially identical to Bosselmann’s monist thesis, although it emerged within Hungarian environmental law dogmatics as a result of

<sup>12</sup> Craig, Robin Kundis – Ruhl, J. B.: *Governing for Sustainable Coasts: Complexity, Climate Change, and Coastal Ecosystem Protection*, p. 1361. In *Sustainability*, 2010/2/5. szám.

<sup>13</sup> French i.m. p. 27–53.

<sup>14</sup> Bosselmann, Klaus – Prue, Taylor: *Ecological Approaches to Environmental Law*. Routledge, London–New York, 2017, p. 21–48.; Cordonier Segger – Ashfaq i.m. p. 15–61.

<sup>15</sup> Bosselmann, Klaus: *The Principle of Sustainability: Transforming Law and Governance*. Ashgate, Aldershot, 2008. The author describes ecological sustainability as a foundational principle permeating the legal system as a whole, and not merely as a sub-area of environmental law.

<sup>16</sup> Westra, Laura: *Environmental Justice and the Rights of Ecological Refugees*. Earthscan, London, 2009, p. 44–67.; Kotzé, Louis J. – Duncan, French: *The Anthropocentric Ontology of International Environmental Law and the Sustainable Development Goals*. In *International Environmental Agreements*, 2018/18. szám, p. 5–21.

<sup>17</sup> Kotzé, Louis J.: *Global Environmental Constitutionalism in the Anthropocene*. Hart Publishing, Oxford–Portland, 2016, p. 85–109.

<sup>18</sup> Bándi, Gyula: *Környezetjog*. Szent István Társulat, Budapest, 2022, 37–55. o.; Fodor, László: *Az Alaptörvény esete a szennyező hulladékokkal és az európai jog*. In *Magyar Jog*, 2012/11. szám, p. 641–652.; Szilágyi, János Ede: *Környezetjog*. Miskolci Egyetemi Kiadó, Miskolc, 2018, p. 41–59.

<sup>19</sup> Bándi, Gyula: *A környezetjog elveiről*. In *Jogtudományi Közöny*, 2005/11. szám, p. 453–462.; see also for this: Bándi, Gyula: *Környezeti értékek, valamint a visszalépés tilalmának értelmezése*. In *Iustum Aequum Salutare*, 2017/2. szám, p. 159–181.

internal developments. This suggests that the conceptual dilution of sustainability and the monist response to it are not the peculiarities of a single legal culture, but rather a dogmatic problem that follows from sustainability's normative structure and arises across legal systems.

The phenomenon of conceptual dilution is not unique to sustainability, either. In Hungarian legal-theoretical literature, a similar observation has been made regarding the concept of the rule of law: the term is continually “inflated,” i.e., it acquires new meanings while relinquishing earlier ones. As a result, an accurate and objective determination of its content becomes just as impossible as it is with sustainability.<sup>20</sup> This comparison is instructive because it shows that sustainability is not unique in undergoing conceptual pluralisation,<sup>21</sup> this parallelism is dogmatically instructive because it shows that sustainability is not affected by conceptual pluralisation as an isolated phenomenon; rather, it is a manifestation of a more general pattern in legal theory: broad, value-based concepts that often migrate from political discourse into law – whether it is the rule of law or sustainability – routinely follow a similar dogmatic fate. In such cases, the scope of the term keeps expanding, while its precisely defined normative content, which can be understood uniformly by everyone, becomes increasingly difficult to capture. In my view, the unlimited extension of the concept of sustainability ultimately risks weakening its normative force, because a notion that simultaneously stands for all positive social goals may, in the end, lose its capacity to orient legal decision-making. This observation supports the study's starting point that the legal classification of sustainability cannot be treated as a one-off, closed, dogmatic act, but must be continuously reassessed in light of the relevant field of law and its context.

The choice between the two approaches is not merely of theoretical importance; it has direct dogmatic consequences for how circular economy regulation is interpreted. If we adopt the pluralist view, circular economy regulation – which operates primarily through technical instruments such as resource efficiency, the waste hierarchy, and extended producer responsibility – can be understood as a legal concretisation of the integrated decision-making and adaptive management components of sustainability. If, by contrast, we follow the monist, ecological approach, circular economy regulation can be regarded as a legal manifestation of sustainability only insofar as it contributes to maintaining ecological integrity, and not merely as it repackages economic efficiency goals in “green” terminology.

From this study's perspective, the significance of the debate lies in the fact that circular economy regulation offers a suitable framework for examining how different components of sustainability are concretized within a system of legal obligations that spans the entire product life cycle. For the remainder of this work, the central question will therefore not be how many components sustainability can be broken down into, but rather how these components take on concrete normative form in circular economy regulation.<sup>22</sup>

### *II.3. Normative specification of sustainability as a dogmatic issue*

The debate concerning the legal qualification of sustainability and its normative structure does not yet answer how this principle becomes a norm regarding legislation and judicial application.<sup>23</sup> For a dogmatic analysis, it is therefore not sufficient to examine whether sustainability can be regarded as an independent legal principle or as a system of interrelated

<sup>20</sup> Tóth, J. Zoltán: A jogállamiság tartalma. In Jogtudományi Közlöny, 2019/5. szám, p. 197–212.

<sup>21</sup> Tamanaha, Brian Z.: On the Rule of Law. History, Politics, Theory. Cambridge University Press, Cambridge, 2004, p. 91–114.; Waldron, Jeremy: Is the Rule of Law an Essentially Contested Concept? In Law and Philosophy, 2002/21. szám, p. 137–164. <https://www.jstor.org/stable/3505128> (2026.06.17.)

<sup>22</sup> Schrijver: i.m. p. 249–276.

<sup>23</sup> Krämer, Ludwig: EU Environmental Law. Sweet & Maxwell, London, 2016, p. 87–112.

sub-principles; it is also necessary to analyse the regulatory mechanisms through which this normative content is interpreted.<sup>24</sup> In this respect, the development of EU environmental law is of particular significance. The integration principle laid down in Article 11 of the Treaty on the Functioning of the European Union,<sup>25</sup> and the EU codification of environmental principles, has created a normative framework that makes it possible for the requirement of sustainability not to appear only as a political objective or an interpretative aid, but also to serve as a basis for specific legislative obligations.<sup>26</sup> A similar developmental trend can also be observed in Hungarian constitutional environmental protection, where Article P of the Fundamental Law and the doctrine of the prohibition of backsliding have jointly shaped a constitutional value order.<sup>27</sup> It makes the long-term preservation of natural resources a mandatory consideration for both legislation and judicial application.<sup>28</sup>

The real significance of the normativity of sustainability, however, cannot be captured merely by analysing these provisions in themselves, but rather by examining how they materialize in practical regulation. In this study, the most advanced example of this process is the regulation of the circular economy. The circular economy no longer regulates a single sub-area of environmental law; instead, it establishes a unified normative system covering the entire life cycle of a product – from design and production, through placing on the market, consumption, and repair, all the way to reuse, remanufacturing, and recycling. Precisely for this reason, the regulation of the circular economy is well-suited to demonstrate how sustainability shifts from an abstract legal principle into a system of legally binding obligations that can be applied directly and enforced.

### *III. The circular economy as a life-cycle-based specification of sustainability*

#### *III.1. The concept of the circular economy and its juris-theoretical significance*

For a long time, the regulation of the circular economy was interpreted in the academic literature primarily as a reform of waste management. Early approaches indeed focused mainly on improving the efficiency of waste management systems; however, contemporary scholarship

<sup>24</sup> Article 11 TFEU. See also Article 4 TFEU, which treats environmental protection as a shared competence, and Article 191(2) TFEU, which codifies the precautionary principle and the principle that the polluter pays.

<sup>25</sup> Bándi, Gyula: A jövő nemzedék védelmének egyes jogi eszközei. In *Iustum Aequum Salutare*, 2024/1. szám, p. 33–50. <https://szakcikkkadatbazis.hu/doc/5656289> (2026.06.21.); see also for this: Fodor 2015: i.m. p. 641–648.; Kotzé: i.m. p. 85–109.; Brown Weiss, Edith: *In Fairness to Future Generations. International Law, Common Patrimony, and Intergenerational Equity*. United Nations University – Transnational Publishers, Tokyo–New York, 1989, p. 24–49.

<sup>26</sup> de Sadeleer, Nicolas: *EU Environmental Law and the Internal Market*. Oxford University Press, Oxford, 2014, p. 103–142.; Lee, Maria: *EU Environmental Law, Governance and Decision-Making*. Hart Publishing, Oxford, 2014, p. 57–89.; Sjäffjell, Beate: The Legal Significance of Article 11 TFEU for EU Institutions and Member States. In Wiesbrock, Anja – Sjäffjell, Beate (szerk.): *The Greening of European Business under EU Law: Taking Article 11 TFEU Seriously*. Routledge, Abingdon, 2015, p. 51–72.

<sup>27</sup> See also for this: Bándi 2024: p. 42.; Majtényi: i.m. p. 22.; May, James R.–Daly, Erin: *Global Environmental Constitutionalism*. Cambridge University Press, Cambridge, 2015, p. 1–28.; Kotzé 2016: p. 1–34.

<sup>28</sup> Szilágyi, János Ede: Észrevételek a jövő nemzedékek érdekeinek alkotmányjogi védelme kapcsán. In Kruzslicz, Péter – Sulyok, Márton – Szalai, András (szerk.): *Liber Amicorum László Trócsányi*. SZTE ÁJK, Szeged, 2021, p. 223–233. <https://publicatio.bibl.u-szeged.hu/23615/1/TrocsanyiLaszlo-LiberAmicorumx1a.pdf> (2026.06.19.); Alexy, Robert: *A Theory of Constitutional Rights*. Oxford University Press, Oxford, 2002, p. 47–71.; See also for this Majtényi, Balázs: A jövő nemzedékek és a természeti tárgyak köztársasága? In *Fundamentum*, 2008/1. szám, p. 17–28.; Fodor, László: A környezethez való jog dogmatikája napjaink kihívásai tükrében. In *Miskolci Jogi Szemle*, 2007/1. szám, p. 5–19.; Bándi 2022: p. 146–153.; Prieur, Michel: Non-Regression Principle in Environmental Law. S.A. *Droit de l'Environnement*, Bruxelles, 2012, p. 17–39.; Prieur, Michel – Sozzo, Gonzalo (szerk.): *La Non Régression en Droit de l'Environnement*. Bruylant, Bruxelles, 2012, p. 480–490.

increasingly emphasizes the system-level nature of the circular economy. In this understanding, circularity is not a single economic policy instrument or an environmental technology measure, but rather an economic and regulatory paradigm aimed at reorganizing the entire life cycle of products, materials, and resources.<sup>29</sup>

The EU's new-generation circular economy policies no longer aim at the subsequent management of waste, but at regulating the entire life-cycle of products. Circularity is thus gradually transforming into an overarching regulatory logic that treats, within a unified system, all life-cycle stages from product design, through production, placing on the market, consumption, and repair, to reuse and remanufacturing, and finally to the point at which it becomes waste.

This represents a fundamental paradigm shift that reshapes the rights and obligations of all participants in the value chain. From a dogmatic perspective, this shift is particularly significant. It is also worth emphasizing that “the circular economy” and “sustainability” are not synonymous concepts, and their legal content and character are not the same. Sustainability has traditionally been understood either as a normative objective, which may lack full legal force, or as a legal principle. By contrast, the circular economy should be understood as an instrument for achieving sustainability. To put it differently, sustainability sets out the normative targets (including, in this sense, soft-law at a level below strict normativity), whereas the circular economy provides the regulatory framework through which those objectives are implemented.

It is also important to note that the circular product life-cycle and its regulation cannot cover the entire spectrum of sustainability issues; however, they support the achievement of all SDGs, directly or indirectly. From this perspective, the circular economy can be understood not as an independent legal principle, but as the life-cycle-based legal integration of sustainability (its goal system).<sup>30</sup>

### *III.2. The entire product life cycle as a subject of regulation*

A distinctive feature of circular economy regulation is that it does not focus on a single economic activity or environmental problem, but takes the entire product life-cycle as the regulatory unit. As mentioned above, the life-cycle-based approach treats all stages in an integrated system.<sup>31</sup> An approach that views the circular economy not merely as a waste-management issue, but as a new regulatory paradigm for managing natural resources, is also becoming increasingly prominent in domestic scholarship.<sup>32</sup>

In the first stage of the product life-cycle, the circularity requirement is directed at product design. The new ecodesign regulation (Ecodesign for Sustainable Products Regulation – ESPR) no longer sets only energy-efficiency requirements; it also makes aspects such as durability, repairability, reusability, and recyclability mandatory.<sup>33</sup> Here, sustainability becomes legally relevant as soon as the product is created.<sup>34</sup>

<sup>29</sup> Kirchherr, Julian – Reike, Denise – Hekkert, Marko: Conceptualizing the Circular Economy: An Analysis of 114 Definitions. In Resources, Conservation and Recycling, 2017/127. szám, p. 221–232.; Stahel, Walter R.: The Circular Economy. A User's Guide. Routledge, London–New York, 2019, p. 15–39.

<sup>30</sup> Geissdoerfer, Martin – Savaget, Paulo – Bocken, Nancy M. P. – Hultink, Erik Jan: The Circular Economy – A New Sustainability Paradigm? In Journal of Cleaner Production, 2017/143.szám, p. 757–768.

<sup>31</sup> Stahel: i.m. p. 40–82.

<sup>32</sup> Bándi 2022: p. 45–67.

<sup>33</sup> European Parliament and Council: Regulation (EU) 2024/1781 establishing a framework for the setting of ecodesign requirements for sustainable products.; Reisch, Lucia A. – Throne-Holst, Harald (eds.): Handbook of Research on Sustainable Consumption. Edward Elgar Publishing, Cheltenham, 2015, p. 185–204.

<sup>34</sup> Stahel: i.m. p. 40–58.

The second key stage of the product life cycle is manufacturing. At this stage, numerous resources used as inputs (raw materials) are integrated; it is here that it is determined how much of these inputs is consumed, how much becomes final waste, and how much remains as reusable material. Depending on the industry, different manufacturing technologies have different impacts on energy, water, and land use, as well as environmental burdens, and also consider the additional resource needs associated with the transport and logistics of raw materials and manufacturing technology systems.

The Digital Product Passport system aims to ensure transparency regarding the product's material composition, repairability, and environmental performance. The rationale underlying the regulation is to establish the informational conditions necessary for sustainable decision-making.<sup>35</sup>

In the consumption stage, the right to repair and measures to curb planned obsolescence come into play. These rules effectively reinterpret sustainability through a traditional consumer-protection lens because, by extending the product's service life, they reduce demand for new resources.<sup>36</sup>

In the post-use stage, reuse, refurbishment, and remanufacturing come to the forefront.<sup>37</sup> At this point, the circular economy most visibly breaks with the logic of the linear economy, since the product does not lose its economic and legal relevance when consumer use ends; instead, it can move into new life cycles.<sup>38</sup>

Finally, at the stage where the product becomes waste and is recycled, the classic environmental law institutions appear, such as the waste hierarchy, extended producer responsibility, and the regulation of secondary raw material markets, which previously constituted almost the exclusive substance of the circular economy.<sup>39</sup>

Based on a full life-cycle assessment, it can be concluded that the circular economy is not merely one application area of sustainability, but one of its most advanced legal concretizations. The abstract legal requirement of sustainability becomes, through circular-economy regulation, a complex normative structure manifested as a system of obligations extending across the product's entire life path. Therefore, circularity is not a special chapter of waste law; rather, it should be understood as a life-cycle-based regulatory paradigm of sustainability.

### *III.3. The circular economy as the normative concretization of sustainability*

The life-cycle-based regulatory logic of the circular economy has taken a normative form in EU law. The Waste Framework Directive, circular economy action plans, ecodesign regulation, and the new-generation product policy instruments together create a regulatory architecture in which the overarching requirement of sustainability is transformed into technical, measurable, and enforceable obligations.

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<sup>35</sup> Chawla, Kartig et.al.: Methodology for defining data requirements for the Digital Product Passport under the ESPR framework. Publications Office of European Union, Luxembourg, 2026.; Zhang, Abraham – Seuring, Stefan: Digital product passport for sustainable and circular supply chain management: a structured review of use cases. In International Journal of Logistics Research and Applications, 2024/27/12. szám, p. 2513–2540.

<sup>36</sup> Perzanowski, Aaron: The Right to Repair. Reclaiming the Things We Own. Cambridge University Press, Cambridge, 2022, p. 17–52.

<sup>37</sup> Braungart, Michael – McDonough, William: Cradle to Cradle. Remaking the Way We Make Things. North Point Press, New York, 2002, p. 92–117.

<sup>38</sup> Uo.

<sup>39</sup> Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives. HL L 312., 2008.11.22., p. 3–30.

EU regulation of the circular economy offers a field for showing how the codification of sustainability at the level of general principle is concretized into technical, quantified duties. The Waste Framework Directive and the circular economy package associated with it were adopted under Article 192 TFEU, and, where internal market aspects are concerned, under Article 114 TFEU. At the same time, they can be regarded as a concretization of the integration principle enshrined in Article 11 TFEU: institutions such as the waste hierarchy, recycling targets, and extended producer responsibility are legal instruments that genuinely integrate the goal of sustainable development into law and practice.<sup>40</sup>

From a dogmatic point of view, the ongoing, unresolved policy debate over the legal basis for the planned EU Circular Economy Act is particularly instructive. Certain interest groups argue that, to provide a solid legal basis for the legal act, a dual legal basis is needed, combining Article 114 TFEU, as the internal market legal basis, with an appropriate environmental legal basis, typically Article 192 TFEU,<sup>41</sup> since they take the view that Article 11 TFEU requires environmental considerations not to be included merely as a secondary element, but structurally built into the objectives of the legal act. This debate, regardless of its outcome, demonstrates that the principle of integration in practical law-making is not merely a symbolic reference point but an argument that can be mobilized in discussions of legislative technique and the selection of the legal basis.

Recent developments in circular economy regulation also demonstrate that a pluralistic understanding of the normative content of sustainability is organised into a single coherent regulatory logic. The principle of integrated decision-making is evident in the mandatory nature of waste management planning; the principle of adaptive management is realized through review and target-value modification mechanisms; and the principle of intergenerational justice is embodied in provisions aimed at ensuring the long-term availability of natural resources. This observation suggests that a pluralistic understanding of sustainability does not necessarily undermine normative coherence: the individual components may be functionally integrated into a coherent regulatory architecture within specific regulatory areas – such as the circular economy – even if, at the abstract level, they cannot be reduced to a single, unified legal principle.<sup>42</sup>

From the perspective of Hungarian environmental law, it is worth highlighting that, around the time of the political transition, domestic environmental regulation still struggled with numerous gaps and low enforcement effectiveness.<sup>43</sup> Over the past three decades, however, the body of environmental legal rules has multiplied to such an extent that it would now be difficult to provide, dogmatically, a coherent and easily comprehensible picture of it.<sup>44</sup> In my view, the domestic reception of circular economy regulation fits into this trend: the transposition of EU circular economy legal acts should be understood not as an isolated, purely technical harmonisation measure, but as part of the Hungarian environmental law's gradual, dogmatic

<sup>40</sup> de Sadeleer: i.m. p. 103–112.; Lee: i.m. p. 80–89.

<sup>41</sup> Dual legal basis for the Circular Economy Act. In *Municipal Waste Europe*, policy position statement, 2025. <https://www.municipalwasteurope.eu/publications/dual-legal-basis-the-circular-economy-act> (2026.06.21.). According to the position that Article 11 TFEU integration obligation requires that the Circular Economy Act must also incorporate environmental objectives under Article 192 TFEU into its legal basis and not rely solely on internal market considerations. It is important to emphasise that this is the position of one side in an ongoing legislative debate that has not yet been concluded. In contrast, several industry interest associations (including EUROPEN) explicitly reject the involvement of Article 192 and advocate regulation based exclusively on Article 114 TFEU, arguing that a dual legal basis would create legal uncertainty and fragmentation. At the time the study was finalised, the final wording of the legislation and its legal basis were still unknown.

<sup>42</sup> Boros, Anita: A körforgásos és fenntartható gazdaság – lehetőségek és értékek. In Kovács, Éva Margit (szerk.): *Ünnepi kötet a 65 éves Imre Miklós tiszteletére*. Ludovika Egyetemi Kiadó, Budapest, 2020, p. 97–104.

<sup>43</sup> Fodor, László: *Környezetjog*. Debreceni Egyetemi Kiadó, Debrecen, 2015, p. 50–52.

<sup>44</sup> Fodor, László: A magyar környezetjog három évtizede (unorthodox review). In *Iustum Aequum Salutare*, 2022/2. szám, p. 5–25. <https://szakcikkadatbazis.hu/doc/3417804> (2026.06.19.)

consolidation over decades, in which the overarching policy objective of sustainability gradually acquires concrete legal expression across successive regulatory sectors.<sup>45</sup>

In my opinion, the legal significance of the circular economy is not limited to the creation of new environmental instruments. Its true dogmatic innovation lies in turning sustainability – traditionally an abstract legal requirement – into a system of directly applicable and enforceable obligations that extends across the entire product life cycle.<sup>46</sup>

The circular economy is therefore not simply a new environmental policy programme, but rather a life-cycle-based regulatory model of the legal principle of sustainability, in which abstract legal requirements take shape in the form of enforceable obligations covering the product's entire life span.

#### *IV. Conclusions*

The study concludes that the legal characterisation of sustainability cannot be determined in the abstract level; it must always be assessed in light of the specific legal system and regulatory context. In EU law, the integration principle enshrined in Article 11 TFEU, together with the codification of environmental principles, has created a normative framework that enables sustainability to be interpreted as a legal principle. By contrast, in other legal contexts, sustainability continues to serve a guiding or interpretative role.

At the same time, the analysis also showed that sustainability is not a legal principle with a uniform normative content. Under the pluralist approach, it is constructed from a system of interrelated sub-principles. In contrast, the monist view regards these sub-principles as concrete manifestations of a deeper ecologically grounded normative core. However, this difference is partly mitigated in the regulation of the circular economy, because in this regulatory field, the sub-principles are integrated into a mutually reinforcing and coherent regulatory system.

The most important finding of the study is that the circular economy should not be understood as an independent legal principle, but rather as a legal concretisation of sustainability based on the product life-cycle. The regulation of the circular economy transforms sustainability's abstract requirements into specific legal obligations covering the product's entire life-cycle. The rules governing product design, manufacturing, placing on the market, consumption, repairability, reuse, remanufacturing, and recycling collectively form a normative structure. In this, sustainability is no longer merely a political objective or an interpretative aid, but rather takes the form of a coherent system of directly applicable legal obligations.

Accordingly, the regulation of the circular economy is not simply one area of application of sustainability, but its most advanced form of legal realisation. Its dogmatic significance lies precisely in making visible the transition by which sustainability, as a general legal requirement, becomes a system of enforceable legal obligations spanning the entire product life cycle.

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<sup>45</sup> Bándi 2022: i.m. p. 50.

<sup>46</sup> Schröder, Patrick – Anggraeni, Kartika – Weber, Uwe: The Relevance of Circular Economy Practices to the Sustainable Development Goals. In *Journal of Industrial Ecology*, 2019/23/1. szám, p. 77–95.

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