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**"Towards an EU Circular Economy Act:
Governed resource stewardship
as foundation of European raw-materials independence and
environmentally sound resource use
through a new steering act"**

**Legal Opinion
commissioned by
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submitted by

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A. Background to the opinion, question and structure

The handling of finite resources has, through wars and major international conflicts, acquired an economic dimension which – under the heading of raw-materials security for Europe – has come to stand alongside the ecological questions posed by the high resource consumption of modern societies¹. Whereas in the previous European legislative term the European Commission, with the EU Green Deal, had initially addressed questions of transformation towards a climate- and biodiversity-compatible ordering of society and the economy², in the current term, with the EU Clean Industrial Deal, the enhancement of the resilience and environmental compatibility of industrial production and disposal has become the new focus³. Consistently, the European Commission has therefore announced, for the second half of 2026, the submission of a fundamental legislative act to recast the European circular economy: the EU Circular Economy Act (EU CEA)⁴.

The intended design remains open. On this point the European Commission has so far indicated that the aim will be to *“foster demand for, and supply of, circular products and to reduce dependence on critical resources”*⁵. The European Commission further intends to ensure *“that scarce raw materials are used and reused effectively, in order to reduce our global dependencies and create high-quality jobs. The aim is to achieve **24% circular material by***

¹ Cf. the study by the Boston Consulting Group commissioned by the Bundesverband der Deutschen Industrie: „Wachstum, Wettbewerbsfähigkeit und Resilienz – Chancen der Circular Economy für die deutsche Industrie“, 2026, pp. 7 et seq., https://assets.foleon.com/eu-central-1/de-uploads-7e3kk3/50809/07-05-28-circular_economy_bcg_de_langversion_studie.9ec30296894a.pdf?utm_description=organic&utm_geo=de, last accessed 1 July 2026.

² On the EU Green Deal: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_de, last accessed 1 July 2026.

³ On the EU Clean Industrial Deal; https://commission.europa.eu/topics/competitiveness/clean-industrial-deal_de, last accessed 1 July 2026, as well as the Communication from the Commission „The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation“, COM(2025) 85 final of 26 February 2025, <https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:52025DC0085>, last accessed 1 July 2026. – translation from the German by the author.

⁴ „Arbeitsprogramm der Kommission 2026“, COM(2025) 870 final of 21 October 2025, p. 3, <https://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=CELEX:52025DC0870>, last accessed 1 July 2026; on the timing (third quarter of 2026) see further the Briefing of the European Parliamentary Research Service: „Briefing Commission initiative in preparation – Circular Economy Act“, p. 2, [https://www.europarl.europa.eu/RegData/etudes/BRIE/2026/782628/EPRS_BRI\(2026\)782628_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2026/782628/EPRS_BRI(2026)782628_EN.pdf), last accessed 1 July 2026. – translation from the German by the author.

⁵ „Arbeitsprogramm der Kommission 2026“, COM(2025), op. cit.

2030.⁶ More concrete contours are traced by a briefing of the European Parliamentary Research Service: according to it, the European Commission has held out the prospect of a three-pillar model comprising an amendment of the EU Waste Framework and Landfill Directives, an amendment of the Directive on waste electrical and electronic equipment (EU WEEE Directive) and additional measures – such as a harmonisation of environmental levies and requirements for the management of extractive waste⁷. This points to a selective intervention into individual acts of the existing law, even though the declared headline objective alone – doubling the circular material use rate from a most recent 12.2% (2024) to 24% by 2030⁸ – calls for a more fundamental steering ambition. From a transformation perspective, the legislative procedure opens an opportunity not only to strengthen Europe’s resilience and economic independence and to secure environmentally compatible resource consumption, but also to act in a consolidating manner, from an overarching level, upon the historically grown and fragmented European product and circular-economy law, and thereby to create a new resource-cycle law for managed resource use⁹. The precondition is that one succeeds in not stopping at the three-pillar model currently announced, but rather in orienting the project on a larger scale towards governing legislation for managed resource use, and in introducing steering objectives for future resource use as well as governance mechanisms for effective implementation.

The opinion approaches these questions by first addressing, under **section D.I** the state of development of a European resource-cycle law and, proceeding from this, measuring the European Commission’s announcements for the EU CEA against the existing challenges. Under **section D.II** there follows an examination of the need for development and consolidation as regards the objectives of securing raw materials, reducing resource consumption and strengthening the circular economy. In this, important material streams are considered. Building on this, proposals are developed as to how the EU CEA might contribute to making the existing law effective and to consolidating it. **section B.** provides a summary and **section C.** formulates, from the findings, recommendations for policy.

⁶ From the objectives of the EU Clean Industrial Deal, op. cit.

⁷ Briefing of the European Parliamentary Research Service, op. cit.

⁸ Briefing of the European Parliamentary Research Service, op. cit.

⁹ On the need for a managed resource use and a strengthening of the circular economy cf., for instance, the study by Öko-Institut and Freie Universität Berlin: „Modell Deutschland: Circular Economy – Political Blueprint“, 2023, <https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Unternehmen/WWF-Modell-Deutschland-Circular-Economy-Politik-Blueprint.pdf>, last accessed 1 July 2026.

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B. Executive Summary

I. State of development of the existing EU acquis: from waste law, through circular-economy law, to resource-cycle law

A European resource-cycle law is still in the making. The EU itself grew only gradually after the end of the Second World War and had first to develop what are now well-established institutions, such as the common internal market and its far-reaching environmental competences. Accordingly, internal-market-oriented product law and environmentally oriented waste-disposal and circular-economy law have to this day remained juxtaposed rather than interlocked. Product law originally served above all uniform market conditions and consumer safety, as well as environmental protection. Waste-disposal law evolved, through the successive versions of the EU Waste Framework Directive, into a body of circular-economy law. This juxtaposition no longer adequately meets the modern need for a body of law that secures both security of raw-materials supply and the protection of resources. Managed resource use requires clear limits on consumption and an interlocking of product law and circular-economy law. The objective is a compact resource-cycle law.

II. Insufficient steering capacity of the EU Critical Raw Materials Act, the EU Ecodesign for Sustainable Products Regulation and the EU Waste Framework Directive, and of specific legislation

The existing law displays weaknesses at several levels. For want, hitherto, of an overarching policy-planning approach pursuing the clear objective of managed resource use – on the model of the European climate and biodiversity legislation (European Climate Law, EU Governance Regulation, EU Nature Restoration Regulation) – there are no overarching objectives and instruments that would bear both on the framework provisions of the existing law (such as the EU Critical Raw Materials Act and the EU Waste Framework Directive) and on the individually regulated material streams (such as construction materials, electronic waste, etc.). Moreover, the framework provisions presently appear barely interlocked with the material-stream provisions. Rather, scattered and largely unconnected – partly in framework law, partly only in the material-stream provisions – a motley mix of differing steering techniques stands side by side: product-law requirements, recycled-content quotas, collection quotas, recovery quotas, end-of-waste criteria or extended producer responsibility. The effectiveness of the existing law is already curtailed by this want of interlocking and coherence. This is also shown in the outcomes: whereas the EU Critical Raw Materials Act prescribes, for strategic raw materials, a recycling rate of 25% of annual consumption, the actual recycling rates for lithium and rare earths, for instance, so far remain below 1%. At the same time, 27

divergent national end-of-waste regimes obstruct the internal market for secondary raw materials.¹⁰

III. On the project of an EU Circular Economy Act: an opportunity for a modern, policy-planning legislative act with steering capacity

Policy-planning law denotes a legislative technique that sets a long-term framework for steering a development towards a defined objective attainable only through a multiplicity of coordinated, successive individual steps.¹¹ Well-known examples are the European Climate Law in conjunction with the EU Governance Regulation, for the setting and attainment of climate objectives, and the EU Nature Restoration Regulation, for the attainment of biodiversity objectives. Both operate with time horizons for incremental targets up to 2030, 2040 and 2050. Designed as policy-planning law, the EU CEA could make an important contribution to the further development and consolidation of the existing law along the analogous horizons of 2030, 2040 and 2050. Measured against precisely this, the three-pillar model presently pursued by the European Commission falls short: it seeks to steer not at an overarching level but through the amendment of individual directives (the EU Waste Framework, EU Landfill and EU WEEE Directives).

IV. Concrete steering needs: efficient resource use with a binding cap on consumption and a strengthening of the circular economy

The legislative project builds upon the self-commitment formulated by the Council of the European Union to anchor reduction targets within planetary boundaries, together with a long-term EU objective for sustainable resource use.¹² With a view to securing European raw-materials independence and to an ecologically oriented reduction in resource consumption, target provisions decoupling the economy from primary-raw-material requirements appear called for. Such a cap on consumption does not thereby stand in tension with competitiveness: reducing per-capita consumption of primary raw materials

¹⁰ Cf., on the figures, the Briefing of the European Parliamentary Research Service, op. cit., p. 1.

¹¹ Fundamentally Reese: „Das Politikplanungsrecht der EU zur Implementierung des Green Deal“, in ZUR 2025, pp. 451 et seq.

¹² Cf. Conclusions of the Council of the EU of June 2024 as well as the 8th Environment Action Programme, as evidenced in the Briefing of the European Parliamentary Research Service, op. cit., p. 4.

substitutes domestically retained secondary raw materials for imported virgin materials and thereby reduces import dependence.

V. The potential of the EU Circular Economy Act: what it must contain!

If the EU Circular Economy Act is to become the governing law of a managed resource use, **it must, as a parent statute of policy-planning structure, provide for requirements on resource-use objectives and on instruments for attaining them along defined time horizons.** These may comprise: at the level of objectives, in order to enhance raw-materials independence, **requirements to reduce primary raw-material consumption (above all limitation targets for per-capita consumption (Raw Material Consumption))** as well as **target values for the circular material use rate**, at the level of instruments binding quotas for the use of secondary raw materials, the strengthening of product longevity, an interlocking of product and waste law in the end-of-waste sphere, resource-efficient public procurement, and fiscal instruments. **Of overriding importance, further, is that new target requirements at the umbrella level contain specifications as to what contribution the differentiating framework law (EU Critical Raw Materials Act, EU Ecodesign for Sustainable Products Regulation and EU Waste Framework Directive) as well as the respective material-stream-specific law are to make.** For the rest, a governance system is needed for planning, implementation, control and corrective adjustment along the time horizons 2030, 2040 and 2050.

From this, the following recommendations for policy follow:

C. Recommendations for policy

I. The EU CEA as an overarching umbrella tier (as a new parent statute)

- The starting draft of the EU CEA is to be designed in technical terms such that it does justice to long-term steering and consolidation needs. **A new umbrella statute with a policy-planning approach would be more effective than the three-pillar model announced so far.**
- As a suitable legal form there appears, by analogy with the European Climate Law, the EU Governance Regulation and the EU Nature Restoration Regulation, **the regulation in preference to the directive**, because it takes direct effect and, having regard to the institution of the common internal market with its more binding requirements, is better suited to securing a European level playing field.
- In legislative-technical terms, the European Climate Law, the EU Governance Regulation and the EU Nature Restoration Regulation have set policy-planning models which prescribe binding objectives and instruments and grant the European legislature and the national legislatures fixed time horizons across the years 2030, 2040 and 2050 in which to attain the objectives and to readjust the corresponding instruments in the existing law.
- To secure a policy-planning governance approach, clear rules are needed on **the monitoring and control of the attainment of objectives and of the setting of instruments, as well as on corrective adjustment**. This concerns in particular the introduction of digital systems for the capture of material streams, as well as reports by the Member States to the EU.

II. Binding incorporation of objectives and a consolidation mandate (in a new parent statute as a legal umbrella, or in the existing framework law)

- Proceeding from this, the EU CEA can lay down the objectives and instruments it pursues with sufficient precision, yet in a manner open to design as regards concrete implementation, in particular:
 - At the **level of objectives** determinations are needed on resource management / the reduction of primary raw-material consumption. Of priority for raw-materials security appear **binding objectives for the absolute reduction of primary raw-material consumption** – in particular as a limitation of per-capita consumption (Raw Material Consumption) – by 2040 and 2050, because a mere increase in recycling efficiency and the use of secondary raw materials does not suffice to attain the

objective.¹³ As orientation for the target level, the current per-capita level of 14.1 t (2024) can serve, which lies above the global average and planetary boundaries. Concrete target corridors – **for instance a per-capita raw-material consumption in the order of 7 t per year** – are already being discussed in research.¹⁴ In so far as it is a matter of strengthening the circular economy, the objective set in the announcements concerning the EU CEA – doubling the circular material use rate from a most recent 12.2% (2024) to 24% by 2030 – may only be the entry point. For the attainment of objectives it is important to specify the overarching targets across the tiers: what shares are to be borne by the EU Critical Raw Materials Act, the EU Ecodesign for Sustainable Products Regulation and the EU Waste Framework Directive? And how are these shares further transferred into the material-stream-specific law? Only the distribution of target values across bodies of law and material streams makes the attainment of objectives operationalisable.

- At the **level of consolidation** a mandate is needed for the European legislature and the national legislatures to standardise framework law and material-stream-specific law (construction materials, electrical equipment, batteries, metals, packaging, textiles, fertilisers, etc.) with regard to the existing mix of instruments (durability, repairability, quotas, end-of-waste rules, public procurement, fiscal rules, etc.). In doing so, connection can be made to the fields of harmonisation prioritised by the European Commission – recycled-content quotas, end-of-waste criteria, public procurement and extended producer responsibility.¹⁵

¹³ Cf., on the circular material use rate of 12.2% (2024), the Briefing of the European Parliamentary Research Service, op. cit., p. 2.

¹⁴ On the baseline level of 14.1 t per capita (2024), the Briefing of the European Parliamentary Research Service, op. cit., p. 2; on the target value discussed in research for Germany of a raw-material consumption of around 7 t per capita, or an absolute raw-material consumption in the order of 500 million t by 2045, the study by Öko-Institut and Freie Universität Berlin, 2023, op. cit., pp. 6, 44.

¹⁵ Cf., on the fields of harmonisation prioritised by the Commission, the Briefing of the European Parliamentary Research Service, op. cit., p. 3.

III. Concrete requirements for framework and material-stream law (independent of the creation of an umbrella statute or a mere adjustment of the existing law)

- At the **level of instruments** there is a need for **binding and material-stream-specific quotas for the use of secondary raw materials**,
- requirements as to extended life cycles through tightening as regards product design, repairability and support,
- a better connection of product and waste law in the end-of-waste sphere through product-/material-stream-specific enrichment of product law with end-of-waste rules (following the model of Article 19 of the EU Fertilising Products Regulation), in order to counteract the idling of the existing waste-framework end-of-waste rules in the absence of product-specific rules,
- a strengthening and targeted deployment of resource-efficient public procurement and, finally,
- a deployment of fiscal instruments, from levy solutions on resource-intensive uses analogous to the levy system for single-use plastics, as well as a strengthened extended producer responsibility, through taxation up to market incentives via improvements in the EU Taxonomy system.
- By analogy with the EU Carbon Border Adjustment Mechanism, it must be ensured that EU imports satisfy requirements as to product design and are manufactured at least to a minimum extent from secondary raw materials, in order to avoid competitive disadvantages. This could be dovetailed with the export side – a priority for the intra-Union recovery of critical raw-material waste over its export.¹⁶

¹⁶ Cf. the position of Zero Waste Europe reported in the Briefing of the European Parliamentary Research Service, op. cit., p. 5.

D. Legal assessment

I. Resource-cycle law within the existing EU acquis

1. State of European law: challenges on the way from waste-environmental law, through circular-economy law, to resource-cycle law

Society's and the law's handling of resources and waste has changed in Europe according to the circumstances of the time. Resources were long regarded as available. Waste appeared at first above all as a health and environmental problem¹⁷. In the post-war order, the creation of a common market stood in the foreground, and accordingly, at an early stage, the approximation of market-related provisions¹⁸. The European Economic Community (EEC) did not initially possess an autonomous environmental competence. Environment-related rules were therefore based on the internal-market and residual competences of Articles 100 and 235 of the EEC Treaty. Only the accretion of competence from the Single European Act of 1987 (Articles 130r et seq. of the EEC Treaty) gave rise to a broad environmental-law framework¹⁹.

Waste was regulated Community-wide for the first time by Directive 75/442/EEC of 15 July 1975 (EU Waste Framework Directive, old version). This was still based on the internal-market competence (Articles 100, 235 of the EEC Treaty). The express emphasis on the prevention and reduction of the generation of waste and of its harmfulness was given to it only by amending Directive 91/156/EEC, now based on the environmental competence (Article 130s of the EEC Treaty). Yet the original 1975 version already contained beginnings of recovery and of the conservation of natural raw-material sources²⁰.

The breakthrough to circular handling was brought by Directive 2008/98/EC of 19 November 2008 (EU Waste Framework Directive),

¹⁷ Cf. the chronological outline on the website of RWTH Aachen within the project „Anthropogene Stoffkreisläufe“: https://circulated.rwth-aachen.de/index.php?title=Geschichte_der_Abfallwirtschaft, last accessed 1 July 2026.

¹⁸ On the history of the internal market and the harmonisation connected with it cf. Schröder, in Streinz: EUV/AEUV, 3rd ed. 2018, Art. 26, marginal nos. 1 et seq.

¹⁹ On the history of European environmental law cf. Appel, in Koch et al. (eds.): Handbuch Umweltrecht, 6th ed. 2024, § 2 marginal nos. 10 et seq.

²⁰ Cf., on the respective competence bases in Case C-324/99, the Opinion of the Advocate General, point 4.

which – with amendments – remains in force today. With Article 4(1) it introduced the five-step waste hierarchy as the core idea, namely prevention, preparing for re-use, recycling, other recovery and disposal. With the rules on by-products (Article 5) and on end-of-waste status (Article 6) it at the same time sharpened the delimitation of product and waste. Article 6 created, for the first time, a regulated route back to product status. Article 5 removes certain production residues from the waste regime from the outset. Product and waste law thus interlocked directly.

In view of major international conflicts and globally high resource consumption, raw-materials security and the conservation of resource deposits are today linked even more strongly with circular handling²¹. Circular-economy law thus develops further into a resource-cycle law that seeks to secure raw-materials security and the protection of resources through limited resource use and deliberate circular handling. At European level this is shown by recent legal acts, such as Regulation (EU) 2024/1252 (EU Critical Raw Materials Act) for securing critical raw materials, Regulation (EU) 2024/1781 (EU Ecodesign for Sustainable Products Regulation) with requirements for product design, the advance of extended producer responsibility in the Waste Framework Directive (Article 8a, inserted into the EU Waste Framework Directive by Directive (EU) 2018/851), as well as ever denser material-stream-specific rules. In them, products and waste appear as a material stream within a cycle.

Politically and academically, this is accompanied by increasing calls to develop and consolidate the grown body of law through a framework act²² anchoring resource-management rules, in order to improve raw-materials security and the protection of resources. In this sense, the project of an EU Circular Economy Act, for which the Commission has

²¹ Cf. „Politische Leitlinien für die nächste Europäische Kommission 2024-2029“, p. 11, also Weiß: „Die neue EU-Politik zu kritischen Rohstoffen im Zeichen der strategischen Autonomie“, EuZW 2025, pp. 413 et seq.

²² Cf., for instance, the expert event of the Umweltbundesamt „Verankerung des Ressourcenschutzes im Recht“ of 21 June 2016, with the publication produced in this context Roßnagel/Hentschel: „Rechtliche Instrumente des allgemeinen Ressourcenschutzes“, UBA-Texte 23/2017, https://www.umweltbundesamt.de/system/files/meldien/1410/publikationen/2017-03-23_texte_23-2017_ressourcenschutzinstrumente.pdf, last accessed 1 July 2026, and the drafting of a model resource-protection statute by Heß/Hörtzsch: „Kurzgutachten zu den wesentlichen Inhalten eines Ressourcenschutzgesetzes des Bundes“ of 11 October 2023, https://www.bund.net/fileadmin/user_upload_bund/publikationen/ressourcen_und_technik/kurzgutachten-ressourcenschutzgesetz-bund-2023.pdf, last accessed 1 July 2026, and from more recent times the opinions by Hentschel: „Rechtliche Verankerung von Ressourcenkonsumzielen“, 2026, as well as by Dittrich/Dierk/Wilts: „Sektorziele im Ressourcenschutz“, 2025, https://epub.wupperinst.org/frontdoor/deliver/index/docId/9018/file/9018_Sektorziele.pdf, last accessed 1 July 2026.

announced a proposal for the second half of 2026²³, appears as an important opportunity for setting impulses²⁴.

2. Resource management within the existing EU acquis

Corresponding to the absence, hitherto, of a European framework act on managed resource use, the existing law so far contains only traces of resource-use-steering legislation. The existing norms must be placed in context in order to work out from them the present state of a resource-steering governance. What above all requires interlocking are the three existing framework acts together with the shaping special material-stream law.

- a) Resource management in the EU Critical Raw Materials Act, the EU Ecodesign for Sustainable Products Regulation and the EU Waste Framework Directive

The **EU Critical Raw Materials Act** of 2024 aims to enhance the EU's raw-materials independence. Pursuant to its Article 5(1), this is to be achieved through benchmarks for own supply of certain raw materials, through diversification of supplying states, and through a recycling capacity that makes it possible *"to produce at least 25% of the Union's annual consumption of strategic raw materials and to recycle substantially increasing amounts of each strategic raw material from waste."*

The **EU Ecodesign for Sustainable Products Regulation** of 2024 pursues, under its Article 5, the objective of regulating product design from the outset such that products are manufactured sparingly of primary raw materials and with the use of recyclates, are durable, repairable and readily recyclable, and can be remanufactured. For better governance it introduces in Article 9 the Digital

²³ Briefing of the European Parliamentary Research Service, op. cit., p. 2.

²⁴ Similar regulatory techniques are also being tried in other European countries, for example: Scotland (United Kingdom) with a framework act obliging the government to set binding circular-economy targets and to a five-year strategy and monitoring cycle – Circular Economy (Scotland) Act 2024; France with a measures act for the circular economy (inter alia the expansion of extended producer responsibility, a reparability index, staged reduction targets for single-use plastics) – Loi n° 2020-105 du 10 février 2020 relative à la lutte contre le gaspillage et à l'économie circulaire (loi AGEC); and Spain with a waste and circular-economy act providing for binding absolute waste-reduction targets (a reduction of 13% by 2025 and 15% by 2030 relative to 2010) as well as fiscal steering instruments – Ley 7/2022, de 8 de abril, de residuos y suelos contaminados para una economía circular.

Product Passport, which creates transparency for each product and secures the control of the requirements.

The **EU Waste Framework Directive** commits itself, in its currently applicable version, in the recitals to reducing resource use; see recital 6, second sentence: *“Waste policy should also aim at reducing the use of resources, and favour the practical application of the waste hierarchy.”* Above all it contains rules which, at the product–waste interface, aim at durability and recyclability (the waste hierarchy under Article 4, extended producer responsibility under Articles 8, 8a) as well as at retaining production residues within production, or returning waste to the production cycle (Articles 5, 6).

b) Resource management in European special legislation

Alongside these overarching framework acts, Union law regulates resource management predominantly on a material-stream- and product-related basis in a series of special acts, which are reproduced here by way of illustration:

For construction materials, Regulation (EU) 2024/3110 (EU Construction Products Regulation), which progressively replaces Regulation (EU) No 305/2011, constitutes the central product-related act. For the first time it provides for binding environmental and sustainability requirements as well as a digital product passport for construction products. Construction and demolition waste, as the largest waste stream by volume, is in addition subject to the EU Waste Framework Directive.

For electronic waste and batteries, Directive 2012/19/EU on waste electrical and electronic equipment (EU WEEE Directive) applies – flanked by the substance-related Directive 2011/65/EU (EU RoHS Directive) – and, for batteries, Regulation (EU) 2023/1542 (EU Batteries Regulation), which replaced Directive 2006/66/EC and, for the first time, comprehensively regulated the life cycle of batteries, including recycled-content quotas.

For metals, an autonomous material-stream act is lacking. Decisive above all is Directive 2000/53/EC (EU End-of-Life Vehicles Directive) as the regulation of the largest scrap-metal stream, supplemented by the metal-related requirements of the EU Critical Raw Materials Act. The EU End-of-Life Vehicles Directive is – together with Directive 2005/64/EC (EU 3R Type-Approval Directive) – to be replaced by the End-of-Life Vehicles Regulation (EU End-of-Life Vehicles Regulation), which is shortly to be adopted.

For packaging, the new Regulation (EU) 2025/40 (EU Packaging and Packaging Waste Regulation) is decisive; it replaces Directive 94/62/EC with effect from 12 August 2026 and contains binding requirements on, among other things, recycle shares, recyclability, reuse and extended producer responsibility.

For textiles, no autonomous act yet exists. Relevant in particular are, on the product side, the EU Ecodesign for Sustainable Products Regulation, for which product-specific delegated acts for textiles are in preparation, and, on the waste side, the most recent amendment of the EU Waste Framework Directive by Directive (EU) 2025/1892 (mandatory extended producer responsibility for textiles; separate collection).

For fertilisers, Regulation (EU) 2019/1009 (EU Fertilising Products Regulation) applies, which for processed materials also provides a mechanism for the end of waste status (Article 19).

Finally, for food and bio-waste, the EU Waste Framework Directive contains the decisive requirements, namely the separate collection of bio-waste (Article 22) and the binding food-waste reduction targets introduced by Directive (EU) 2025/1892 (Article 9a).

- c) Resource management in European strategies and programmes and in the planned EU Circular Economy Act

Against this body of existing law and the increasing calls from politics and academia for legislation deliberately steering resource use, the question arises as to what answers the European Commission gives in current strategies and programmes and in the announcements concerning the EU CEA.

Under **section A**, the objectives of the EU Clean Industrial Deal have already been presented. Recalled here, above all, is the objective of ensuring *“that scarce raw materials are used and reused effectively, in order to reduce our global dependencies and create high-quality jobs. The aim is to achieve **24% circular material by 2030**.”*²⁵ The emphasis here is less on an overall improved steering of resource use, including a reduction in consumption, and more on an enhanced raw-materials independence.

This corresponds to the design of the EU CEA as so far known. According to the briefing of the European Parliamentary Research

²⁵ From the objectives of the EU Clean Industrial Deal, op. cit.

Service, the Commission is planning a three-pillar model comprising an amendment of the Waste Framework and Landfill Directives, an amendment of the EU WEEE Directive and additional measures – such as a harmonisation of environmental levies and requirements for the management of extractive waste²⁶.

II. The EU Circular Economy Act: the danger of a truncated correction and the chance for legislation effective in the long term

1. The three-pillar model announced by the European Commission and the possibility of a modern policy-planning law

The three-pillar model could amount to a mere fine-tuning within the existing body of law, without the establishment of an overarching and consolidating new framework act. This raises the question of the correct legislative technique for attaining the objectives pursued with the EU CEA.

The legislature has at its disposal different forms of planned law-making. With a parent statute it can order a regulatory subject-matter compactly; with an amending act it can fine-tune a pre-existing legal situation at particular points. It can choose a static approach, under which a given set of facts is treated according to a fixed rule (such as compliance with a noise limit value), or a dynamic, steering approach, under which a regulatory field is reshaped over time (for instance through noise limit values that tighten in stages). For major challenges that cannot be effectively met by a one-off intervention, the policy-planning legislative technique has developed²⁷. Over the respective existing law an additional, overarching legal tier is drawn, which overlays it with objectives along multi-year time horizons and obliges legislature and administration continuously to fine-tune within the existing law the individual measures required to attain them.

Characteristic is a triad of

- binding target-setting,
- planning and programming instruments that translate the

²⁶ Briefing of the European Parliamentary Research Service, op. cit., p. 2.

²⁷ Fundamentally Reese: „Das Politikplanungsrecht der EU zur Implementierung des Green Deal“, op. cit., also Neubauer: „Pläne als Verbünde räumlich und zeitlich differenzierender Normen – Überlegungen zu Begriff und Steuerungseffekten eines besonderen Regelungstyps“, in: Feldkamp/Schmitz/Schneider/Zurbrügg (eds.): *Lenkung durch Recht?*, 2025, pp. 63 et seq.

- attainment of objectives into verifiable intermediate steps, and a monitoring, reporting and corrective-adjustment cycle that renders deviations from targets visible and keeps them correctable²⁸.

In this way, an existing, often complex body of law is, by means of a new parent statute with a steering approach, gradually consolidated, oriented towards the attainment of objectives, and rendered measurable in its effect²⁹.

Well-known examples at European level are the European Climate Law in conjunction with the EU Governance Regulation, for the climate objectives of the Paris Agreement, and the EU Nature Restoration Regulation, for the biodiversity objectives of the Kunming/Montreal Agreement³⁰. Both translate their target horizons (2030, 2040, 2050) into concrete planning instruments, namely the integrated national energy and climate plans in the case of the EU Governance Regulation and the national restoration plans in the case of the EU Nature Restoration Regulation, and combine them with regular reporting and corrective adjustment. Both pursue objectives that require a decades-long reshaping of society and the economy and intervene deeply in the existing law. This technique, tried and tested in the EU Green Deal, could likewise be drawn upon within the EU Clean Industrial Deal, in so far as here too long-term objectives are to be attained through adjustments in the existing law.

That the EU CEA is concerned with such target values is suggested by the objectives so far made known. According to the briefing of the European Parliamentary Research Service, the effectiveness of the existing law is to be enhanced precisely with regard to certain target values. In detail, the paper names, from the European Commission's ideas and from the feedback of the Expert Group on Circular Economy and

²⁸ Cf. Reese, op. cit.

²⁹ The same legislative technique – a parent statute that pulls objectives and principles out „vor die Klammer“ (out in front), without rewriting the sectoral statutes, with the Federal Climate Protection Act (Bundes-Klimaschutzgesetz) as the blueprint – has long been called for in German resource-protection law; cf. Heß/Hörtzsch, 2023, op. cit., p. 7 f.; further Hentschel, 2026, op. cit., p. 19 f. In resource terms, for a governance structure analogous to the Climate Protection Act, also the study by Öko-Institut and Freie Universität Berlin, op. cit., there at pp. 6 f.

³⁰ On the European Climate Law in conjunction with the EU Governance Regulation cf. Reese, op. cit.; on the EU Nature Restoration Regulation cf. Ionis: „Zum Rollout der EU-Wiederherstellungsverordnung: Mitgliedstaatliche Umsetzungs-Governance und Zusammenspiel von Rechtspflicht und Gestaltungsoffenheit“, 2026, https://www.nabu.de/imperia/md/content/nabude/wald/260319_rechtsgutachten_fuer_den_nabu_zum_rollout_der_eu-wvo.pdf, last accessed 1 July 2026.

Sustainable Production and Consumption involved by the Commission:

- the necessity of a decision as to whether the EU CEA should initiate a fundamental reduction of European resource consumption or merely improve the efficiency of circular handling³¹. This with the observation that per-capita consumption, at 14 t/year, exceeds both the global average and planetary boundaries.
- the objective of doubling the circular material use rate from a most recent 12.2% (2024) to 24% by 2030³², in this context with the finding that the EU Critical Raw Materials Act's requirement of recovering 25% of strategic raw materials from recycling by 2030 is currently being missed and stands, for lithium and rare earths for instance, below 1%.
- the objective of higher quotas for the source-segregated collection of waste³³.
- the objective of creating a genuine internal market for secondary raw materials and for waste, in particular with a view to critical raw materials³⁴, also through a further harmonisation of end-of-waste law.
- the objective of using public procurement for the deployment of secondary raw materials, as well as fiscal instruments³⁵, including a further harmonisation of extended producer responsibility and, in principle, of waste prevention³⁶.
- the objective of better implementation through digitalisation³⁷.

For the existing law of resource management it has already been shown that it possesses several framework-setting bodies of norms, the EU Critical Raw Materials Act for enhancing the Union's own raw-materials supply and the recovery from waste, the EU Ecodesign for Sustainable Products Regulation with requirements for circular product design, and the EU Waste Framework Directive with the principles of the circular economy, supplemented by the material-stream-specific bodies of rules. New objectives thus meet a grown body of existing law, scattered across

³¹ Briefing of the European Parliamentary Research Service, op. cit., p. 1.

³² Briefing of the European Parliamentary Research Service, op. cit., pp. 2 f.

³³ Briefing of the European Parliamentary Research Service, op. cit., p. 3.

³⁴ Briefing of the European Parliamentary Research Service, op. cit., p. 3.

³⁵ Briefing of the European Parliamentary Research Service, op. cit., pp. 2 f.

³⁶ Briefing of the European Parliamentary Research Service, op. cit., p. 3.

³⁷ Briefing of the European Parliamentary Research Service, op. cit., p. 3.

numerous bodies of rules. A policy-planning legislative technique with a new framework act would be the suitable means for its long-term consolidation, effectuation and controllability, should it prove deficient in steering, namely where, for instance,

- a clear governing code is lacking,
- the existing framework instruments appear unaligned with one another,
- the relationship between framework law and specifying special law is confused, and
- within the special law the steering and control instruments employed are handled inconsistently, so that material-stream-specific differences in regulatory density exist.

The three-pillar model can therefore be the right opening only if a selective improvement of the target values and a low-invasiveness fine-tuning of the steering and control instruments suffice. This is to be doubted. An intervention confined to individual directives (the EU Waste Framework, EU Landfill, EU WEEE Directives) without a framework-act design remains at the level of the existing law to be consolidated and cannot, of itself, establish in conceptual terms the overarching tier that interlocks all framework and material-stream bodies of rules – the very tier that matters.

2. **Steering limits of the existing law: the EU Critical Raw Materials Act, the EU Ecodesign for Sustainable Products Regulation and the EU Waste Framework Directive**

As shown in **section D.I** the existing European law has developed on two tracks, from internal-market-oriented product law and from disposal-/recovery-oriented waste/circular-economy law. Under the impression of increasing raw-materials insecurity for the economy and of the ecological limits of raw-materials extraction, the need to develop the existing law further into a resource-cycle law has lately become ever clearer. With the EU Critical Raw Materials Act (2024) and the EU Ecodesign for Sustainable Products Regulation (2024), the European legislature has placed additional framework law alongside the longer-established EU Waste Framework Directive (1975, 2008), specifically from the standpoints of raw-materials security and enhanced circular handling. It also follows from the respective recitals that all these bodies of norms are intended to bear on resource management, albeit each under its own banner; see in this regard

in the **EU Critical Raw Materials Act** Article 1(1):

“The general objective of this Regulation is to improve the functioning of the internal market by establishing a framework to ensure the Union’s access to a secure, resilient and sustainable supply of critical raw materials, including by fostering efficiency and circularity throughout the value chain.”,

in the **EU Ecodesign for Sustainable Products Regulation** recital 6:

“This Regulation will support production and consumption patterns that are aligned with the Union’s overall sustainability targets, including climate, environmental, energy, resource-use and biodiversity targets, while staying within planetary boundaries, by establishing a legislative framework which contributes to enabling products fit for a climate-neutral, resource-efficient and circular economy, reducing waste and ensuring that the performance of frontrunners in sustainability progressively becomes the norm.” and

in the **EU Waste Framework Directive** recital 6, second sentence:

“Waste policy should also aim at reducing the use of resources, and favour the practical application of the waste hierarchy.”

At least conceptually, the essential framework bodies of law are connected by the objective of managed resource use. Steering limits arise less from absent existing law than from the absent legal interlocking of the existing law under a clear governing concept of resource management, with a coherent alignment of the objectives and instruments respectively pursued. Thus no compact resource-cycle law arises; rather, there remains a juxtaposition of raw-materials law, product-design law and waste/circular-economy law. Common to all three bodies of rules is that managed resource use is not thought through as consumption limitation as a whole, but only as independence in extraction and circularity.

In detail:

The **EU Critical Raw Materials Act** combines, in its Article 5(1), while leaving aside the fundamental limitation of consumption, two lines of effect: by 2030, the reduction of raw-materials dependence on third countries and the increase of the Union’s recycling capacity to at least 25% of the annual consumption of strategic raw materials. The objectives are weak, because they are designed merely as “*benchmarks*” for the European Commission and the Member States, and not as binding targets. In addition, the 2030 benchmark is not followed by benchmarks for 2040 and 2050. That a fundamental limitation of consumption is not in view is shown by the Regulation itself. In so far as it addresses raw-materials

consumption, it aims under Article 1(2)(a) only “*to moderate the expected increase in the Union consumption of critical raw materials*”, that is, at a slowing of the increase, not at an absolute reduction. The steering effect is accordingly slight.

The **EU Ecodesign for Sustainable Products Regulation** likewise lacks a clear objective of fundamentally reducing resource consumption. It remains unregulated to what extent it is to serve the objectives of Article 5(1) of the EU Critical Raw Materials Act. It operates product-group by product-group through delegated acts, but does not tie these to overarching, temporally staged reduction targets. It does, however, introduce with the Digital Product Passport a strong, extendable monitoring instrument.

The **EU Waste Framework Directive** likewise pursues no objective of steering resource consumption itself. In 1975 it aimed above all at safe waste disposal; since the 2008 recast, with extended producer responsibility (Article 8; minimum requirements in Article 8a since 2018), the waste hierarchy (Article 4) and the by-product/end-of-waste rules (Articles 5, 6), it aims at the protection of resources through circular handling. Striking is the absence of a connecting provision that would link, for instance, the benchmarks of Article 5(1) of the Critical Raw Materials Act with the EU Waste Framework Directive through aligned targets or targeted use of instruments. The EU Waste Framework Directive does contain, with the staged recycling quotas of Article 11(2) (55% by 2025, 60% by 2030, 65% by 2035), binding, temporally staged targets. These, however, steer solely the recovery of waste already arising. A binding objective for limiting resource consumption is lacking. Outside the recycling quotas, sharp instruments for extended producer responsibility and waste prevention (Article 9) are also lacking; an exception is the new Article 9a on food waste. For the rest, it is above all the end-of-waste rules, without feedback to product-law requirements, that vividly show the idling of this legal regime (**section D.II.3.f**).

On the framework level, this consolidates the impression of an absent binding governing code, the insufficient alignment of the framework bodies of rules, and the lack of clarity as between framework law and shaping special law. The unequal use of instruments is added at the material-stream level (on which see immediately **section D.II.3**).

3. Steering limits illustrated by important material streams

The inconsistency of objectives and instruments shows itself even more starkly in the material-stream-specific existing law. From an overall view there emerges a tool-box – in principle functional, but not systematically

played – composed of six non-exhaustive but typically recurring steering techniques:

- **Collection quotas** (input side – capture of the material).
- **Recycling and recovery quotas** (treatment of the collected material).
- **Recycled-content quotas** (demand side – mandatory use of secondary raw materials).
- **End-of-waste criteria** (change of status from waste to product).
- **Extended producer responsibility** (organisational and financing responsibility of producers).
- **Product-law requirements** (ecodesign – durability, repairability, recyclability).

Remarkable in this is less the multitude of special acts (which is only to a limited extent capable of being summarised on a material-stream-specific basis) than the unequal and methodologically inconsistent distribution of these six techniques across the material streams. Packaging and batteries possess almost all of them, scrap metals above all end-of-waste criteria, textiles extended producer responsibility without quotas, fertilisers a product-law gateway. Even the calculation methods diverge. Along the six recurring instruments, the material streams presented in **section D.I.2.b)** are here once again illuminated from the standpoint of the objectives and instruments respectively employed.

In detail:

a) Construction materials

For construction materials, the EU Construction Products Regulation applies on the product side, with binding environmental and sustainability requirements for the first time and a digital product passport. On the waste side, the recovery quota of 70% under Article 11(2) of the EU Waste Framework Directive applies to construction and demolition waste. A Union-wide end-of-waste rule for mineral construction and demolition waste is so far lacking and is undertaken at national level. Collection quotas, recycled-content quotas and an extended producer responsibility are not developed.

b) Electronic waste and batteries

Electrical and electronic equipment is subject, under the EU WEEE Directive, to collection, recovery and recycling quotas as well as to extended producer responsibility, flanked in substance terms by the EU RoHS Directive. For batteries, the EU Batteries Regulation

bundles almost the entire set of instruments, namely collection quotas, recycling-efficiency and material-recovery targets, binding recycled-content quotas (inter alia for cobalt, lead, lithium, nickel), extended producer responsibility and product-related requirements. This stream is the most comprehensively regulated.

c) Metals

For metals, an autonomous material-stream act is lacking. The largest scrap-metal stream is captured via the EU End-of-Life Vehicles Directive, with reuse and recovery quotas (85% and 95% respectively) and producer responsibility, supplemented by the EU 3R Type-Approval Directive. Both are to be replaced by the End-of-Life Vehicles Regulation (EU End-of-Life Vehicles Regulation), which is shortly to be adopted. The distinctive feature of metals lies in the Union-wide end-of-waste regulations, Regulation (EU) No 333/2011 (iron, steel and aluminium scrap) and Regulation (EU) No 715/2013 (copper scrap), while recycled-content quotas are lacking.

d) Packaging

Packaging is almost fully instrumented by the EU Packaging and Packaging Waste Regulation, which replaces Directive 94/62/EC with effect from 12 August 2026, namely collection via extended producer responsibility and deposit systems, recycling quotas, binding recycled-content quotas for plastic packaging, as well as product-related requirements on recyclability, reuse and minimisation. Alongside batteries, this is the most densely regulated stream.

e) Textiles

For textiles, no autonomous act yet exists. With Directive (EU) 2025/1892 (the textile and food amendment of the EU Waste Framework Directive), and building on the separate-collection obligation in force since 1 January 2025, a mandatory extended producer responsibility for textiles is introduced for the first time, which the Member States are to establish by 17 April 2028. Collection, recycling and recycled-content quotas are so far deliberately lacking. On the product side, delegated acts under the EU Ecodesign for Sustainable Products Regulation for textiles are in preparation.

f) Fertilisers

Fertilisers are captured by Regulation (EU) 2019/1009 (EU Fertilising Products Regulation). Their distinctive feature is that the end of waste status is anchored not in waste law but in product law. The waste-law requirements are deemed satisfied where a processed material complies with the product-law requirements and has passed through the conformity procedure (Article 19 of the EU Fertilising Products Regulation). This approach can serve as a model for a resource-cycle-oriented end-of-waste, on which see immediately **section D.II.4.c).**

g) Food and bio-waste

For food and bio-waste, the EU Waste Framework Directive contains the separate collection of bio-waste (Article 22, mandatory since 31 December 2023) as well as, introduced by Directive (EU) 2025/1892, for the first time binding reduction targets for food waste (Article 9a), namely by 2030 a reduction of 10% in processing and manufacturing and of 30% per capita in retail, food service and households, measured against the average of the years 2021 to 2023. Tellingly, this stream is the only one to know a binding reduction target on the consumption side – an instrument that is precisely lacking in the six-part tool-box.

The following overview shows how unequally the six typical steering techniques are distributed across the material streams considered:

	Collec- tion quo- tas	Recycling / recovery quotas	Recyc- led-con- tent quo- tas	End-of- waste cri- teria	Extended producer responsi- bility	Product- law requi- rements
Construc- tion ma- terials	–	+	–	–	–	+
Electro- nic waste & batte- ries	+	+	+	–	+	+
Metals	(+)	+	–	+	(+)	(+)
Packa- ging	+	+	+	–	+	+
Textiles	(+)	–	–	–	+	(+)
Fertilisers	–	–	–	+	–	+
Food & bio-waste	(+)	–	–	–	–	–

+ = present or designed as binding; (+) = only rudimentary, without a quota or regulated merely nationally; – = lacking.

4. The potential of the EU Circular Economy Act to make the existing body of European law effective and to consolidate it

Proceeding from this, the potential of the EU CEA as an overarching, interlocking legal framework becomes apparent. The existing law offers, in framework law and in material-stream law, broad groundwork in raw-materials, product and circular-economy law. What is lacking is a clear governing code with a connecting guiding idea of managed resource use.

The need for the setting of a guiding model and for interlocking appears equally pressing in the announcements of the European Commission and in the demands of industry and of the environmental associations. However different the motives – relief here, ambition there – there is agreement in the call for a coherent framework; see in this regard

the remarks on the need for a guiding model for the EU CEA in the **briefing of the European Parliamentary Research Service**³⁸:

³⁸ Briefing of the European Parliamentary Research Service, op. cit., pp. 3 f.

“The strategic significance of the CEA lies in its potential to address a triple challenge: economic security, environmental crisis, and industrial competitiveness. Firstly, it could act as a geopolitical shield; by mandating the recovery of materials, especially critical, from waste streams – such as permanent magnets from electric vehicles and rare earths from e-waste – the EU could reduce its reliance on volatile foreign supply chains, thereby supporting the objectives of the Critical Raw Materials Act. Secondly, the economy faces growing vulnerabilities as material supplies tighten, while health and the environment are increasingly threatened by the impacts of unsustainable resource use. With the United Nations calculating resource extraction and processing responsible for around 50 % of global greenhouse gas emissions and 90 % of biodiversity loss, and a product’s design responsible for around 80 % of its environmental impact, the CEA is a crucial initiative to address these intertwined environmental and societal pressures. Finally, transitioning to circularity is projected to increase EU GDP by up to 0.5 % and create approximately 700 000 new jobs, particularly in the labour-intensive repair and recycling sectors.”

Further, the study by the **Boston Consulting Group** commissioned by the **Bundesverband der Deutschen Industrie (BDI)**³⁹, on the necessary long-term, consolidating and harmonising approach:

“Entrepreneurial action is of central importance, yet the transformation of German industry also requires a reliable regulatory framework. Undertakings need consistent and long-term framework conditions in order to be able to plan investments in technologies, plant and infrastructure with certainty. At present, however, the regulatory framework is in part inhibiting. It is applied inconsistently across the EU, is often complex in design and delays processes. In addition, consistent implementation is lacking in many places, so that, despite existing rules, insufficient investment certainty arises. Therefore, in the context of the circular economy, central requirements – for example on decarbonisation at EU level – must be harmonised, a simplification of complex or unnecessarily burdensome regulation is required, and existing requirements must be enforced more consistently, so that market actors obtain planning certainty and circular solutions can be scaled reliably.”

³⁹ Study by the Boston Consulting Group commissioned by the Bundesverband der Deutschen Industrie (BDI), op. cit., pp. 134, 136. – translation from the German by the author.

Likewise the **consultancy PricewaterhouseCoopers (PwC)**, equally on the need for a guiding model and for coherence, in an analysis of the EU CEA plans to date⁴⁰:

“The CEA is in this respect not an isolated project, but part of the overarching Green Deal as well as the EU’s Clean Industrial Deal. It is intended to bring together strategically existing initiatives such as the Ecodesign for Sustainable Products Regulation (ESPR), the Waste Framework Directive and the Critical Raw Materials Act. The aim is to bundle fragmented individual measures into a coherent legal framework – with the ambition of promoting ecological sustainability, economic competitiveness and Europe’s strategic autonomy in equal measure. [...] Despite the EU’s promise of a unified internal market, the reality in the field of the circular economy remains fragmented. Precisely in trade in secondary materials it becomes apparent how great the gap is between aspiration and implementation: divergent national requirements prevent an efficient exchange of secondary raw materials, although these would be of central importance for circular business models. Instead of an integrated market, a regulatory patchwork dominates. The result? Much potential, little practice.”

Likewise the **Deutscher Naturschutzring (DNR)**, with the framework-act idea, in a position paper⁴¹:

“This is where the Circular Economy Act (CEA) announced by the European Commission can step in if, as a framework law, it closes gaps in existing legislation, improves the implementation of measures and removes obstacles to circular economy business models.”

Against this background, the European Commission’s previous announcement, to design the EU CEA as a three-pillar model with the amendment of individual directives (the EU Waste Framework, EU Land-fill and EU WEEE Directives) and selective adjustments in the more specific existing law, appears to fall short. Building on the very aspiration

⁴⁰ PwC: „Einblicke in den Circular Economy Act: Ein bestimmendes Rahmenwerk für Europas ab 2026?“, 2025, <https://blogs.pwc.de/de/sustainability/article/250893/einblicke-in-den-circular-economy-act-ein-bestimmendes-rahmenwerk-fuer-europas-ab-2026/>, last accessed 1 July 2026. – translation from the German by the author.

⁴¹ DNR: „The European Circular Economy Act: Paving the way for a resilient and sustainable economy in the EU“, 2025, https://www.dnr.de/sites/default/files/2025-12/DNR%20position_Circular%20Economy%20Act_EN.pdf, last accessed 1 July 2026.

that the European Commission has itself formulated for the EU CEA, only an overarching parent statute with a policy-planning approach can do functional justice to the existing steering need⁴²:

As to the **need for a guiding model and for overarching objectives with dynamic steering along the time horizons 2030, 2040 and 2050**: the existing law lacks a connecting governing code, as a framework act, that brings together the scattered individual rules under the guiding idea of a managed resource use and gives them a common, absolute objective of reducing consumption. Such a guiding model – together with overarching objectives, dynamically adjusted along the time horizons 2030, 2040 and 2050 – is the precondition for the existing framework and material-stream bodies of law to be capable of being aligned towards a uniform objective at all.⁴³

As to the **need for coordination and interlocking**: for an overarching objective – for instance on per-capita consumption or on the share of circular materials – to take effect, it must be translated into coordinated contribution quotas of the framework bodies of rules: the EU Critical Raw Materials Act, the EU Ecodesign for Sustainable Products Regulation and the EU Waste Framework Directive would each have to contribute a quantified share to the attainment of the objective. Such an interlocking through aligned targets and contribution quotas is so far lacking.

As to the **need to connect framework law and special law**: the framework objectives thus distributed must bear on the material-stream-specific special law. Required are adjustment obligations that translate the contribution quotas of the framework bodies of rules into material-stream-specific requirements – collection, recovery and recycled-content quotas as well as end-of-waste criteria – so that framework and special law follow the same objectives.

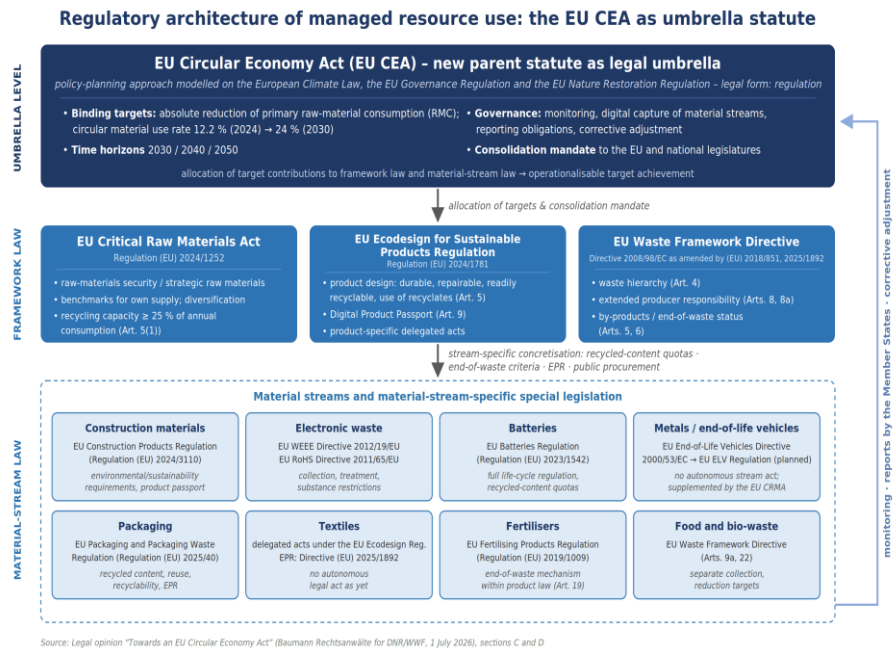
As to the **need to standardise the special law**: finally, the use of instruments within the special law is to be standardised. The six recurring steering techniques are – so far as expedient – to be aligned across material streams, harmonised methodologically (for instance through uni-

⁴² Likewise Hentschel, 2026, op. cit.: a comprehensive European resource-protection regime should – in parallel with the European Climate Law – be enacted as a regulation, there at p. 59; the circular-economy regulation planned so far focuses, by contrast, too strongly on promoting the circular economy and on a single material stream, without a broad approach with binding reduction targets for resource consumption in line with planetary boundaries, there at p. 65.

⁴³ Cf. Heß/Hörtzsch, 2023, op. cit., there at p. 7 f., also Hentschel, 2026, op. cit., there at p. 19 f., as well as Dittrich/Dierk/Wilts, 2025, op. cit., there at pp. 3 et seq.

form calculation methods) and consolidated where they are so far employed only selectively.

Graphically, the following picture emerges:



As a new parent statute with a policy-planning approach, the EU CEA can take the step into a resource-cycle law that brings together the objective of a managed resource use for securing economic raw-materials independence and limiting consumption, links it with climate objectives and decarbonisation, and builds upon established existing law⁴⁴.

In its function as an umbrella statute, it can confine itself to mere target requirements and obligations to use instruments, which are moreover in part already laid down in the existing framework and material-stream law and in part can be supplemented there. As policy-planning law with binding time horizons for the attainment of objectives, it acts not disruptively but in a long-term consolidating and corrective manner within the existing law along the time horizons 2030, 2040 and 2050. At the same time it enables planning, implementation, monitoring/control and corrective adjustment.

Legally, such a framework act can be based on the existing Union competences. In so far as the EU CEA – as the Commission intends – completes the internal market for secondary raw materials and standardises

⁴⁴ On Germany's raw-materials dependence cf. the study by the Boston Consulting Group commissioned by the BDI, op. cit., pp. 2, 8: Germany is the most material-intensive economy in the EU; for metal ores the import quota is over 99%, for rare earths 66%.

product-related requirements, it is supported by the internal-market competence of Article 114 TFEU, on which the EU Critical Raw Materials Act and the EU Ecodesign for Sustainable Products Regulation are already based. In so far as it makes environmental objectives – in particular on reducing primary raw-material consumption – binding, the environmental competence of Article 192(1) TFEU is applicable, which also supports the European Climate Law and the EU Nature Restoration Regulation; a dual legal basis is possible. The only point to observe is that measures primarily of a fiscal nature are subject, under Article 192(2)(a) TFEU, to unanimity in the Council; fiscal steering should therefore be opened up as a possibility, not designed as a mandatory obligation, while the remaining instruments can be adopted under the ordinary legislative procedure. The principle of subsidiarity (Article 5(3) TEU) is satisfied: a functioning internal market for secondary raw materials, a Union-wide level playing field and reduction targets effective across borders cannot be sufficiently attained at Member-State level and justify precisely the action of the Union legislature.

Turning now, in detail, to the concrete regulatory needs as regards objectives and instruments, by which the European legislature would first define its own further law-making and implementation programme and, by means of European-law adjustment obligations, set the Member States in motion:

- a) Binding quotas to reduce the use of primary raw materials and to use secondary raw materials

On the theme of binding guiding objectives and quotas to reduce the use of primary raw materials, the briefing of the European Parliamentary Research Service states⁴⁵:

“A choice must be made between efficiency measures or targets to reduce absolute resource consumption to achieve the EU’s objectives for strategic autonomy, a smaller material footprint, and decoupled economic growth and material consumption.”

“The State of the Environment 2025 report warns EU waste generation and material consumption is unsustainable, at approximately 14 tonnes per capita per year in 2024, significantly above the global average and planetary boundaries. While the EU has improved waste management through increased recy-

⁴⁵ Briefing of the European Parliamentary Research Service, op. cit., p. 1.

cling, substantial resource use reductions and related environmental impact cannot be achieved by recycling alone”

That even the objective pursued by the Commission of doubling the circular material use rate to 24% by 2030 cannot be attained through an increase in recycling alone⁴⁶ is expressly confirmed by the European Environment Agency.⁴⁷ The EU CEA can deliver on this aspiration by laying down a binding, temporally staged objective for the absolute reduction of per-capita primary raw-material consumption (Raw Material Consumption) as well as a binding objective for the share of circular materials, and by letting these objectives bear upon the existing law – in particular by converting the so far non-binding benchmarks of Article 5(1) of the EU Critical Raw Materials Act into binding contribution requirements. Such an objective is directed at primary (virgin) raw-material consumption, not at economic output: it decouples growth from primary raw-material input and remains, through enhanced circular handling, compatible with economic growth⁴⁸. What is more, such an objective

⁴⁶ On the unattainability of substantial reductions in resource consumption through recycling alone cf. the study by Fraunhofer ISI/Öko-Institut and Freie Universität: „Modell Deutschland Circular Economy – Modellierung und Folgenabschätzung einer Circular Economy in 9 Sektoren in Deutschland“, 2023, p. 7, <https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Unternehmen/WWF-Modell-Deutschland-Circular-Economy-Modellierung.pdf>, last accessed 1 July 2026: the reduction of raw-material consumption (RMC) shown there for the ambitious scenario of 179 Mt, or 27%, by 2045 is achieved decisively through consumption-side measures with a focus on prevention and reduction (the higher R-strategies), not through recycling alone.

⁴⁷ Cf. European Environment Agency (EEA), „Circular material use rate in Europe (indicator)“, <https://www.eea.europa.eu/en/analysis/indicators/circular-material-use-rate-in-europe>, last accessed 1 July 2026: accordingly, the objective of doubling the circular material use rate to 24% by 2030 is not attainable through a mere increase in recycling, and additionally a reduction in material consumption is required.

⁴⁸ On the compatibility of reducing primary raw-material consumption with economic growth cf. the study by the Boston Consulting Group commissioned by the BDI, op. cit., there at p. 17: circularity decouples prosperity from resource requirements and enables „mehr Wertschöpfung mit weniger Ressourcen“ (more value creation with fewer resources), that is, growth without an increase in resource requirements; further p. 30, according to which the additional gross value added shown of over EUR 65 billion by 2045 is achieved precisely with increased material efficiency and raw-materials independence, the reduction of primary-material production already being taken into account. – translation from the German by the author.

coincides with the industrial-policy interest in resilience⁴⁹: reducing per-capita consumption of primary raw materials simultaneously reduces the need for imported virgin materials and thereby strategic import dependence. Consumption limitation and competitiveness therefore do not stand in tension with one another. The objective also bindingly activates the highest tier of the waste hierarchy (Article 4(1) of the EU Waste Framework Directive): an absolute limitation of consumption, as well as requirements as to durability and reuse, are waste prevention in the legal sense. They convert the waste prevention of current law, hitherto held largely only at a programmatic level, into binding steering⁵⁰.

b) Requirements as to service life for the protection of resources

On the theme of a longer service life for the protection of resources, the briefing of the European Parliamentary Research Service states, here referring to the exchange between the European Commission and the Expert Group on Circular Economy and Sustainable Production and Consumption⁵¹:

“Many stressed the importance of waste prevention, reuse and repair.”

The EU CEA can deliver on this aspiration by setting binding requirements as to the longevity, repairability and reusability of products, which are to be translated into specifying delegated acts under the EU Ecodesign for Sustainable Products Regulation – for instance on minimum durability, the availability of spare parts and software, and a repairability index. Economically, this design approach is flanked by fee-modulated extended producer responsibility (on which see immediately **section D.II.4.d**).

⁴⁹ With expanded domestic processing, import dependence could decrease by 2045 in the mobility, energy and mechanical-engineering segments by 20 to 40% for rare earths and by 10 to 15% for strategic battery materials; study by the Boston Consulting Group commissioned by the BDI, op. cit., there at p. 32. On the competition-policy framing of the circular economy – the linking of decarbonisation, resilience and competitiveness – fundamentally the reports Draghi, „The future of European competitiveness“, 2024, and Letta, „Much more than a market“, 2024, to which the Briefing of the European Parliamentary Research Service, op. cit., p. 3, also refers.

⁵⁰ On waste prevention – including low-waste product design, reuse and the extension of service life – as a so far largely programmatic resource-protection strategy, Hentschel, 2026, op. cit., pp. 71 et seq.

⁵¹ Briefing of the European Parliamentary Research Service, op. cit., p. 3.

- c) Reorganising end-of-waste: resource-cycle-oriented product law that conceives of waste as a resource, not as a disposal problem

On the theme of the reorganisation of end-of-waste law, the briefing of the European Parliamentary Research Service states⁵²:

“The lack of harmonised criteria to determine when waste ceases to be waste and becomes a product is identified as a primary barrier to competitiveness. Currently, 27 divergent national regimes create legal uncertainty and hinder the cross-border flow of secondary raw materials.”

The objective of harmonising the end-of-waste rules the EU CEA can best attain through binding requirements for a progressive harmonisation of end-of-waste law, in particular through the successive supplementation of the Union-wide end-of-waste regulations, but preferably through the increasing anchoring of the end-of-waste criteria directly in product law, which conceives of processed substances from the outset as a secondary resource and not as a disposal problem.

A model in this respect can be Article 19 of the EU Fertilising Products Regulation: it provides that a processed material which satisfies the product-law requirements and has passed through the conformity procedure loses its waste status. The change of status is thus effected in terms of product law and not of waste law. In this way, responsibility for assessing the end-of-waste status is shifted from the waste manager to the producer, and thus to the body best able to assess the raw-material capability of a waste⁵³. This model could be transferred, stream by stream, to further secondary raw materials.

- d) Requirements as to public procurement and fiscal instruments

On the theme of public procurement and fiscal instruments, the briefing of the European Parliamentary Research Service states, in part referring to the exchange between the European Commission

⁵² Briefing of the European Parliamentary Research Service, op. cit., p. 1.

⁵³ Cf., fundamentally on this, Kopp-Assenmacher/Ionis: „Rechtsgutachten zur Frage des Endes der Abfalleigenschaft von Phosphorrezyklaten“, 2025, https://www.bmbf-rephor.de/wp-content/uploads/2024/10/Rechtsgutachten_Abfallende_Phosphorrezyklat.pdf, last accessed 1 July 2026. The same authors: „Zum Ende der Abfalleigenschaft von Phosphorrezyklaten“, AbfallR 2025, pp. 22 et seq.

and the Expert Group on Circular Economy and Sustainable Production and Consumption⁵⁴:

“The minutes of this meeting reflect that the directors broadly agreed that the CEA should strengthen the single market for secondary raw materials, with priority given to harmonising end-of-waste criteria [...] as well as boosting demand through [...] green public procurement.”

“The Commission has explained that measures included in the CEA could be based on three pillars [...] and considering additional measures (e.g. harmonisation of environmental tax [...])”

On the procurement side, the EU CEA can connect to the procurement rules of Article 65 of the EU Ecodesign for Sustainable Products Regulation and require a secondary-raw-material-oriented public procurement. On the fiscal side, it can connect to the ecological modulation of extended producer responsibility (Article 8a(4)(b) of the EU Waste Framework Directive): contributions spread according to durability and repairability set an economic incentive for durable product design. Further fiscal steering instruments as well as Regulation (EU) 2020/852 (EU Taxonomy Regulation) as a framework for sustainable investments can be added in a flanking manner – whereby measures predominantly of a fiscal nature are subject to unanimity (see **section D.II.4**) and are therefore to be designed as an option, not as an obligation.

e) Governance – planning, implementation, control, adjustment

On the theme of governance, the briefing of the European Parliamentary Research Service states, here referring to the exchange between the European Commission and the Expert Group on Circular Economy and Sustainable Production and Consumption⁵⁵:

“Many stressed the importance of [...] simplifying implementation through digitalisation, streamlined permitting, and clearer, more coherent EU rules.”

The EU CEA can meet this task by establishing a governance cycle of planning, implementation, monitoring and corrective adjustment along the time horizons 2030, 2040 and 2050, which steers the reshaping of the existing law. It can connect to existing

⁵⁴ Briefing of the European Parliamentary Research Service, op. cit., pp. 2 f.

⁵⁵ Briefing of the European Parliamentary Research Service, op. cit., p. 3.

instruments – above all national resource plans on the model of the integrated national energy and climate plans of the EU Governance Regulation, or of the national restoration plans under the EU Nature Restoration Regulation, the Digital Product Passport of the EU Ecodesign for Sustainable Products Regulation, as well as existing digital elements of the EU Waste Framework Directive, supplemented by new reporting and feedback systems.