

DIANA BOSHKOVSKA *
NATASHA DANILOSKA **

PRIORITY SECTORS FOR THE MACEDONIAN TRANSITION TO A CIRCULAR ECONOMY: STRATEGIC PATHWAYS FOR SUSTAINABLE TRANSFORMATION

Abstract

The circular economy (CE) offers a comprehensive framework for decoupling economic growth from resource use and environmental degradation. For the Republic of North Macedonia (RNM), transitioning to a CE is both an environmental necessity and an economic opportunity, aligned with the country's EU accession commitments and the Green Agenda for the Western Balkans. This paper¹ identifies five priority sectors with the greatest potential for transformation: construction; biomass and food; textiles; mining and metallurgy; and cultural and creative industries. The first four were identified in the OECD's Circular Economy Roadmap for North Macedonia based on four key criteria-economic importance, policy relevance, circularity potential, and decarbonisation potential, while the fifth sector, cultural and creative industries, is introduced here as an emerging priority following further analysis. Beyond identifying these sectors, the paper outlines strategic implications, explores cross-sectoral synergies, and proposes targeted policy measures to support their transition. By focusing on these sectors and fostering coordinated action, the analysis aims to guide governance, policy design, and investment toward areas where the CE transition can deliver the most significant economic, social, and environmental benefits for the Republic of North Macedonia.

Keywords: Circular economy, Republic of North Macedonia, sectoral prioritisation; sustainable development; policy recommendations

JEL Classification: Q01, Q56, O13, O44, L52

Introduction

The concept of the CE has emerged globally as a response to the unsustainability of the linear "take-make-dispose" economic model, which has led to overexploitation of natural resources, environmental degradation, and increased climate risks (Ellen MacArthur Foundation, 2017, Kirchherr, Reike and Hekkert, 2017). By promoting resource efficiency, waste prevention, and closed-loop systems, the CE decouples economic growth from intensive resource use, supporting long-term economic resilience.

While the CE concept spans the entire economy, effective implementation requires targeted prioritisation (Salvatori, Holstein and Böhme, 2019). Focusing on sectors with the highest potential for transformation enables policymakers to direct resources, design relevant policy interventions, and mobilise stakeholders where the impact will be greatest. International experience shows that strategic sectoral prioritisation is a common feature of successful CE

* Ph.D. full time professor, University of "Ss. Cyril and Methodius", Institute of economics-Skopje, diana@ek-inst.ukim.edu.mk

** Ph.D. full time professor, University of "Ss. Cyril and Methodius", Institute of economics-Skopje, natasha.daniloska@ek-inst.ukim.edu.mk

¹ The research was conducted for the purposes of the project: "The Republic of North Macedonia's transition towards a circular economy: prospects and challenges", financed by the University of Ss. Cyril and Methodius in Skopje, Republic of North Macedonia, NIP.UKIM.24-25.19

national roadmaps, allowing for more efficient investment allocation and stronger policy coherence (OECD, 2024).

In RNM, the prioritisation of sectors has been informed in large part by the OECD's Circular Economy Roadmap for North Macedonia, which identified four priority sectors—construction; biomass and food; textiles; and mining and metallurgy, using four key criteria: economic importance, policy relevance, circularity potential, and decarbonisation potential (OECD, 2024). Building on these findings, this paper adds cultural and creative industries as a fifth priority sector, reflecting its emerging role in promoting sustainable production and consumption patterns and influencing consumer behaviour.

Alongside sectoral identification, the paper examines strategic implications, explores cross-sectoral synergies, and proposes targeted policy recommendations for CE transition in the country.

1. METHODOLOGY FOR SECTOR PRIORITISATION

The identification of priority sectors for RNM's transition to a CE builds on the results of the OECD's Circular Economy Roadmap for North Macedonia (OECD, 2024), which applied a CE diagnostic framework combining quantitative indicators with qualitative policy considerations to ensure sector prioritisation reflects both domestic realities and international best practices. In the OECD roadmap the sectors were prioritised using four key criteria:

- Economic importance—measured through indicators such as gross value added (GVA), contribution to national GDP, employment levels, and export potential. Sectors with significant economic weight are more likely to deliver substantial CE benefits when targeted for transformation (European Commission, 2020).
- Policy relevance—alignment with existing national development strategies, EU accession requirements, and sector-specific regulatory frameworks. This ensures that CE priorities are embedded in broader economic, industrial, and environmental policies (Salvatori, Holstein and Böhme, 2019).
- Circularity potential—the extent to which sectors can adopt CE strategies such as eco-design, reuse, repair, remanufacturing, recycling, industrial symbiosis, and resource recovery (UNEP, 2019). This includes potential for innovation, substitution of virgin resources, and extension of product lifecycles.
- Decarbonisation potential, the capacity of sectors to reduce greenhouse gas (GHG) emissions through circular interventions, contributing to climate targets under the Paris Agreement and the Green Agenda for the Western Balkans (European Environment Agency, 2022).

This paper retaining these four criteria as the analytical foundation has determined four sector (construction; biomass and food; textiles; and mining and metallurgy). Through supplementary analysis the paper expands the scope by introducing a fifth sector—cultural and creative industries. This addition reflects the sector's growing role in shaping sustainable production and consumption patterns, its capacity to influence societal values, and its potential for integrating circular principles in design, manufacturing, and cultural heritage preservation.

The analysis draws on multiple sources, including national statistics (State Statistical Office of North Macedonia, 2023), EU datasets (Eurostat, 2023), international CE reports (OECD, 2024; Ellen MacArthur Foundation, 2017), and sectoral studies. Quantitative data on resource flows, energy use, and waste generation were combined with qualitative assessments of technological readiness, regulatory feasibility, and market dynamics. Where available, stakeholder perspectives from government agencies, industry representatives, and civil society

organisations were incorporated to provide additional insights into sector-specific challenges, investment barriers, and potential synergies.

2. PRIORITY SECTORS FOR MACEDONIAN CIRCULAR ECONOMY TRANSITION

The combined approach in the paper in the process of identifying five priority sectors not only reflect the OECD's evidence-based prioritisation but also integrate emerging opportunities and national strategic considerations, strengthening the overall basis for targeted policy interventions. Additionally, these sectors combine high economic significance with strong potential for circularity and decarbonisation, while also aligning with the country's EU integration commitments and long-term sustainable development objectives.

2.1. Construction Sector

The construction sector is both a major economic driver and a significant contributor to environmental pressures. It generates around 5.5% of national GDP and employs approximately 5% of the workforce, while globally construction and demolition activities account for roughly one-third of total waste. In RNM, construction is closely integrated with the mining and metallurgy sectors, as well as the domestic manufacturing of cement, steel, and other building materials (OECD, 2024).

Circular opportunities in this sector are considerable. These include substituting primary resources with secondary raw materials from demolition waste, using locally sourced renewable materials such as sustainably harvested timber (European Commission, 2015), and designing buildings for adaptability, modularity, and ease of disassembly. Expanding selective demolition practices can help recover high-value components like metals, timber, and fixtures for reuse (OECD, 2024). Additionally, establishing functioning markets for recycled aggregates and enforcing quality standards would facilitate wider adoption of secondary products (Nadazdi, Naunovic and Ivanisevic, 2022). Public procurement policies integrating CE criteria, such as mandatory recycled content or lifecycle assessments, can serve as a powerful catalyst for systemic change. The sector's transformation could also be supported by capacity-building for architects, engineers, and contractors on circular construction techniques. The OECD roadmap highlights construction as a sector with strong regulatory leverage, and building professional capacity among architects, engineers, and contractors in circular techniques is essential to accelerate transformation.

2.2. Biomass and Food Sector

Agriculture, forestry, and food processing remain pillars of Macedonian economy, employing a significant share of the rural population and contributing substantially to exports (OECD, 2024). The country's diverse agro-climatic conditions enable the production of a variety of crops, livestock, and processed food products. However, inefficiencies along the supply chain led to substantial food loss and waste, while biomass residues often remain underutilised.

The CE potential lies in valorising agricultural and food-processing by-products into energy, materials, and soil-improving products. Key measures include reducing post-harvest losses through better storage, refrigeration, and logistics (FAO, 2019), converting organic waste into biogas, biofertilizers, and animal feed, and promoting regenerative agricultural practices such as crop rotation, cover cropping, and agroforestry to restore soil fertility and biodiversity (OECD, 2024). The forestry sector also presents opportunities to utilise wood residues for bio-based products and sustainable energy. Integration with the EU Bioeconomy Strategy could

open access to funding and technological innovation (European Commission, 2018). For rural communities, these approaches can diversify income sources, enhance resilience to climate impacts, and reduce reliance on synthetic inputs. The analysis notes that biomass valorisation could also contribute directly to North Macedonian renewable energy targets, linking agricultural modernisation with decarbonisation efforts.

2.3. Textiles Sector

While representing a smaller share of GDP, Macedonian textile industry is a key export-oriented sector, heavily integrated into European fashion supply chains. Its environmental impact, however, is disproportionate to its size due to high water consumption, chemical use, and textile waste generation.

The transition towards circularity in textiles involves multiple strategies. These include designing garments for durability, reparability, and recyclability (European Environment Agency, 2022), scaling up take-back schemes and second-hand markets to extend product lifespans, and investing in fibre-to-fibre recycling technologies capable of processing mixed and blended materials (Textile Exchange, 2021). Eco-labelling and certification (OECD, 2024) can provide consumers with transparency, strengthening trust in sustainable products. The sector's strong export focus makes alignment with EU sustainability regulations, such as the Eco design for Sustainable Products Regulation. From 2025 onwards, this Regulation will introduce binding requirements on durability, reparability, and recyclability for textiles placed on the EU market, making early adaptation by Macedonian producers critical for maintaining access to export markets. Building capacity in sustainable design and manufacturing could enhance competitiveness, open access to niche high-value markets, and reduce environmental burdens. According to the OECD roadmap, capacity-building in sustainable design, production, and supply chain management is critical if Macedonian textile producers are to retain and expand their position in EU markets under tightening environmental standards.

2.4. Mining and Metallurgy Sector

Mining and metallurgy are foundational to the country's industrial economy, producing key inputs for construction, manufacturing, and export (OECD, 2024). Yet, they are resource and energy-intensive, with significant waste streams including tailings, slag, and dust emissions (European Commission, 2020).

Circular strategies in this sector include improving recovery of valuable by-products and secondary raw materials from mining waste (UNEP, 2019), adopting cleaner production technologies to improve resource efficiency, and establishing industrial symbiosis networks to exchange waste heat, water, and materials across facilities (Chertow, 2000). Given the sector's importance for export revenues, compliance with EU directives on waste management, industrial emissions, and resource efficiency will be essential. Developing expertise in environmental remediation and post-mining land restoration can also contribute to both ecological recovery and community benefits. In addition, given the EU's focus on securing critical raw materials, aligning domestic mining operations with responsible sourcing standards could enhance strategic relevance and investment attractiveness. The OECD (2024) emphasises that integrating environmental performance metrics into operational planning could help the sector align with EU environmental benchmarks while maintaining competitiveness. Best practices in environmental remediation, such as progressive rehabilitation of mined land, restoration of biodiversity, and water quality protection, can reduce long-term liabilities and improve community relations. Furthermore, given the EU's increasing focus on securing

critical raw materials, aligning Macedonian mining outputs with this strategic supply priorities can enhance policy relevance and open new trade opportunities.

2.5. Cultural and Creative Industries

Identified in this paper through additional analysis beyond the OECD roadmap, the cultural and creative industries (CCIs) encompass architecture, design, arts, crafts, publishing, media, and rapidly growing digital creative sectors such as video games and multimedia production. They also include cultural heritage, performing arts, and other creative activities with a strong innovative capacity and close connections to multiple economic value chains (UNESCO, 2021). CCIs are vital to national identity, culture, and values, and their integration into the CE cannot be treated as a “bolt-on” or secondary priority. As Foster (2020) and UNESCO (2021) note, considering environmental sustainability as merely an additional agenda item weakens the holistic approach needed for CE transformation. Instead, culture and sustainability must be addressed together to create systemic change.

In RNM, the potential for CCIs to contribute to the CE is significant. These industries can shape consumer perceptions, inspire sustainable lifestyles, and raise awareness about climate change and resource use. However, they can also be resource-intensive, meaning they must undergo their own transformation to align with environmental and sustainability principles. The most recent available mapping of Macedonian CCIs, dating back to July 2009, found that the most represented sub-sectors were advertising (13.9%), publishing (12.6%), arts and crafts (10.9%), film (9.6%), fine arts (8.3%), contemporary art (7.8%), architecture (7.4%), and software (7%) (Petkovska, 2009). While outdated, these figures provide a baseline for understanding the sector’s structure and highlight the need for updated data to guide future policy and investment.

From a CE perspective, CCIs offer multiple opportunities. Using recycled, upcycled, and bio-based materials in creative production incorporating modularity and disassembly into design processes, and embedding repair, reuse, and upcycling in artisan and craft practices (UNESCO, 2021) can significantly reduce resource use. Furthermore, the adaptive reuse of heritage buildings and the restoration of vacant or derelict properties can revitalise neighbourhoods, generate economic value, and contribute to environmental objectives (Foster, 2020). Cultural events, festivals, and media campaigns can serve as vehicles for public engagement, enabling CCIs to bridge the gap between technical CE solutions and societal adoption (European Commission, 2018).

Strategic integration with EU programmes such as Creative Europe, Horizon Europe, and the New European Bauhaus initiative could provide funding and technical support for CE-related creative projects. Cross-sector collaboration between CCIs and industries like construction, textiles, and tourism could generate innovative solutions—such as cultural events in restored heritage buildings, fashion collections from recycled fabrics, or public art installations made from industrial by-products.

Policymakers can amplify these impacts by providing targeted funding for sustainable creative projects, establishing innovation hubs for cross-sector collaboration, and integrating CE criteria into cultural grant programmes. In doing so, Macedonian CCIs can simultaneously advance environmental objectives, strengthen cultural heritage, and foster economic development.

3. POLICY RECOMMENDATIONS, STRATEGIC IMPLICATIONS, AND CROSS-SECTORAL SYNERGIES

The Macedonian transition to a CE requires a coherent policy framework, strong institutional capacity, and sustained engagement from both public and private stakeholders. Embedding CE

principles into national strategies and legislation is a critical starting point (Daniloska and Boshkovska, 2025). This means that CE objectives should be integrated into the country's development plans, environmental regulations, and sectoral strategies, ensuring alignment with the EU Circular Economy Action Plan and related legislation, including waste, eco-design, and extended producer responsibility directives. Building on the five prioritised sectors, four from the OECD (2024) and one (cultural and creative industries) identified through this paper's supplementary analysis, policy integration must account for both established and newly recognised sectoral priorities. Incorporating CE provisions into the Law on Waste Management (Ministry of Environment & Physical Planning of the RNM, 2011), the Industrial Strategy 2018-2027 (Ministry of economy of the RNM, 2018), and sector-specific development plans would provide legal certainty and send clear market signals, thereby encouraging investment in sustainable practices.

Economic incentives will play an important role in accelerating adoption by making circular practices financially viable. Tax reductions or exemptions for companies using secondary raw materials, subsidies or low-interest loans for investments in recycling infrastructure, and mandatory green public procurement (GPP) criteria could stimulate both supply and demand for circular products. In addition, specialised incentives should be tailored to sector-specific needs, such as support for selective demolition and recycled aggregate markets in construction, funding for advanced biomass-to-energy conversion facilities in the agri-food sector, or targeted grants for upcycling and adaptive reuse initiatives in cultural and creative industries.

Public sector leadership in procurement, particularly in construction and infrastructure projects, can help establish stable markets for recycled materials and resource-efficient solutions.

Infrastructure development is a cornerstone of CE adoption and a prerequisite for scaling sector-specific initiatives. Modernising waste collection, sorting, and recycling facilities would improve recovery rates and material quality. Regional centres for processing construction and demolition waste could help divert large volumes of material from landfills, while investment in composting facilities and anaerobic digestion plants would create value from biomass and food waste. Expanding logistics hubs dedicated to textile reuse and repair could also boost circularity in the apparel sector. For mining and metallurgy, upgrading waste processing infrastructure, creating industrial symbiosis hubs, and improving the recovery of secondary raw materials can maximise the reuse of by-products across multiple industries.

Equally important is the **development of skills and awareness**. The successful shift towards a CE will require a workforce equipped with relevant technical knowledge, design capabilities, and business competencies. Incorporating CE concepts into vocational training and higher education, creating certification programmes for CE-related skills, and running nationwide awareness campaigns can help foster a culture of sustainable production and consumption. In the cultural and creative industries, capacity-building should include training in sustainable design methods, integration of circular thinking into creative curricula, adaptive reuse of heritage buildings, and circular business models for creative entrepreneurs, thereby enabling the sector to influence consumer mindsets across the economy.

Research, development, and innovation will underpin long-term transformation. Dedicated funding streams for innovation in circular design, material recovery technologies, and bio-based product development should be established. Collaboration between universities, research institutes, and the private sector could be incentivised through grants, innovation hubs, and cluster-based partnerships, enabling the creation of new value chains and business opportunities. Where relevant, R&D support should explicitly encourage cross-sector projects such as linking creative design with advanced textile recycling technologies, applying digital tools to optimise material flows in construction and metallurgy, or using immersive media from CCIs to visualise and promote circular solutions in other sectors.

Reliable data is equally essential for informed decision-making. Establishing a national CE monitoring framework aligned with Eurostat indicators would provide the necessary evidence base for tracking progress, assessing policy effectiveness, and adjusting measures over time. Transparent and consistent data on material flows, waste generation, and resource productivity would also help attract investors and inform business decisions. Given the lack of recent mapping for the cultural and creative industries, targeted data collection in this sector should be a priority, including its environmental footprint, economic contribution, and capacity to deliver circular solutions.

Maximising the benefits of the CE will also depend on **leveraging cross-sectoral synergies**. For instance, mining and metallurgy can provide by-products such as slag for use as aggregates in the construction sector, reducing the need for virgin materials. Organic waste from agriculture and food processing can be converted into bioenergy for industrial processes, including textiles and metallurgy. The cultural and creative industries can act as an accelerator of these synergies—transforming textile waste into high-quality upcycled products, promoting sustainable consumption patterns through cultural platforms, branding agri-food products with sustainability narratives, and showcasing adaptive reuse in architecture and urban regeneration projects. Similarly, architects and designers in the cultural and creative industries can incorporate reclaimed materials into building projects, showcasing the potential of circular design to enhance both functionality and aesthetics.

Harnessing these synergies will require platforms for cross-sector collaboration, underpinned by supportive policy incentives, active knowledge-sharing networks, and public–private partnerships. With strategic coordination and targeted action, RNM can create a significant and competitive circular economy that delivers long-term environmental, economic, and social benefits.

Conclusion

This paper has identified five priority sectors with the highest potential to accelerate the CE transition: four of these—construction; biomass and food; textiles; and mining and metallurgy, were highlighted in the OECD (2024) CE roadmap for North Macedonia, while the cultural and creative industries have been added through the present analysis as a new, strategically relevant priority sector.

By combining substantial economic weight, high circularity and decarbonisation potential, and strong policy relevance, these sectors can deliver transformative impacts if targeted through coherent policy, investment, and stakeholder engagement. The findings highlight that focusing on these sectors will not only address pressing environmental challenges such as waste generation, greenhouse gas emissions, and inefficient resource use, but also create new economic opportunities through innovation, job creation, and enhanced competitiveness in EU and global markets. For example, scaling up selective demolition and recycled aggregate markets in construction, valorising agricultural residues into bioenergy and bio-based products, implementing fibre-to-fibre recycling in textiles, adopting industrial symbiosis in metallurgy, and promoting sustainable design and adaptive reuse in CCIs can jointly reinforce the national CE transition.

A successful transition will depend on several enabling conditions: embedding CE principles into legislation and sectoral strategies; developing targeted economic incentives; modernising recycling and reuse infrastructure; building skills and awareness across industries; fostering research, development, and innovation; and establishing robust monitoring systems. Special emphasis should be placed on cross-sectoral synergies, where outputs from one sector, such as biomass residues, metallurgical by-products, or reclaimed textiles, can serve as inputs for another, maximising resource efficiency and value creation.

In conclusion, prioritising these five sectors provides a clear roadmap for action, enabling RNM to move from fragmented initiatives towards a coordinated, economy-wide CE strategy. By leveraging both the established OECD-identified sectors and the newly recognised potential of the cultural and creative industries, the country can align environmental objectives with socio-economic development, ensuring that the CE transition delivers lasting benefits for people, the economy, and the environment.

References

Chertow, M.R. (2000): *Industrial symbiosis: Literature and taxonomy*, Annual Review of Energy and the Environment, 25(1), pp. 313–337. file:///C:/Users/User/Downloads/Industrial_symbiosis_Literature_and_taxonomy.pdf (accessed 10 July 2025)

Daniloska N., Boshkovska D., (2025): *Advancing the circular economy in the Republic of North Macedonia: principles, policies, and strategic actions*, Economic Development year.27 No.1-2/2025, p.108-123, <https://www.ek-inst.ukim.edu.mk/wp-content/uploads/2025/05/8.Advancing-circular-economy.pdf> (accessed 10 August 2025)

Ellen MacArthur Foundation (2017): *A New Textiles Economy: Redesigning fashion's future*. Cowes: Ellen MacArthur Foundation. https://content.ellenmacarthurfoundation.org/m/6d5071bb8a5f05a2/original/A-New-Textiles-Economy-Redesigning-fashions-future.pdf?_gl=1*p5ao84*_ga*MjAyMDA5MjA4NS4xNzU1Njg2NzQ1*_ga_V32N675KJX*czE3NTU2ODY3NDMkbzEkZzAkDE3NTU2ODY3NDckajYwJGwwJGgw*_gcl_au*MTcyODI4NDIxNC4xNzU1Njg2NzQ3 (accessed 1 June 2025)

European Commission (2015): *Closing the loop-An EU action plan for the Circular Economy*. COM (2015) 614 final. Brussels: European Commission. https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF, (accessed 10 June 2025)

European Commission (2018): *A sustainable bioeconomy for Europe: Strengthening the connection between economy, society and the environment*. Brussels: European Commission, file:///C:/Users/User/Downloads/a%20sustainable%20bioeconomy%20for%20europe-KI0418806ENN.pdf (accessed 18 June 2025)

European Commission (2020): *Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability*. COM (2020) 474 final. Brussels: European Commission, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0474> (accessed 1 June 2025)

European Environment Agency (2019): *Textiles and the environment in a circular economy*. EEA Briefing No. 10/2022, file:///C:/Users/User/Downloads/ETC-WMGE_report_final%20for%20website_updated%202020.pdf (accessed 20 June 2025)

FAO (2019): *The State of Food and Agriculture 2019: Moving forward on food loss and waste reduction*. Rome: Food and Agriculture Organization of the United Nations. <https://openknowledge.fao.org/server/api/core/bitstreams/11f9288f-dc78-4171-8d02-92235b8d7dc7/content> (accessed 10 June 2025)

Foster., G (2020): *Circular economy strategies for adaptive reuse of cultural heritage buildings to reduce environmental impacts*, *Resources, Conservation and Recycling*; Resource, Conservation and Recycling Journal-Volume 152, <https://doi.org/10.1016/j.resconrec.2019.104507> (accessed 15 June 2025)

Kirchherr, J, Reike, D., Hekkert, M. (2017): *Conceptualizing the Circular Economy: An Analysis of 114 Definitions*, *The Journal Resources, Conservation & Recycling* 127, 221-232 https://www.researchgate.net/publication/320074659_Conceptualizing_the_Circular_Economy_An_Analysis_of_114_Definitions (accessed 25 June 2025).

Ministry of Environment & Physical Planning of the RNM (2011): *Law on Waste Management*, <https://www.moep.gov.mk/wp-content/uploads/2014/09/Precisten-upravuvanje-otpad.pdf> (accessed 20 July 2025)

Ministry of economy of the RNM (2018): *The Industrial strategy for 2018-2027 with Action plan*, <https://economy.gov.mk/Upload/Documents/Finalna%20Industriska%20Strategija.pdf> (accessed 20 July 2025)

Nadazdi, M., Naunovic, Z. and Ivanisevic, N. (2022): *Circular Economy in Construction and Demolition Waste Management in the Western Balkans: A Sustainability Assessment Framework*, *Sustainability*, 14(2), <https://doi.org/10.3390/su14020871> (accessed 5 June 2025)

OECD (2024): *A Roadmap towards Circular Economy of North Macedonia* https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/03/a-roadmap-towards-circular-economy-of-north-macedonia_f4d7444c/1973c88c-en.pdf (accessed 1 June 2025)

Salvatori, G., Holstein, F. and Böhme, K. (2019): *Circular Economy Strategies and Roadmaps in Europe: Identifying synergies and the potential for cooperation and knowledge sharing*. Brussels: European Economic and Social Committee. <https://circulareconomy.europa.eu/platform/sites/default/files/qe-01-19-425-en-n.pdf> (accessed 25 June 2025)

Textile Exchange (2021): *Preferred Fiber & Materials Market Report 2021*. Lamesa: Textile Exchange. https://textileexchange.org/app/uploads/2021/08/Textile-Exchange_PREFERRED-Fiber-and-Materials-Market-Report_2021.pdf (accessed 5 July 2025)

UNEP (2019): *Mineral Resource Governance in the 21st Century: Gearing Extractive Industries Towards Sustainable Development*. Nairobi: United Nations Environment Programme. <file:///C:/Users/User/Downloads/MR21F.pdf> (accessed 15 July 2025)

UNESCO (2021): *Culture: A Driver and an Enabler of Sustainable Development*. Paris: United Nations Educational, Scientific and Cultural Organization. https://www.un.org/millenniumgoals/pdf/Think%20Pieces/2_culture.pdf (accessed 15 June 2025)

Антоанела Петковска и др. (2009): *Мапирање на креативни индустрии во Република Македонија*, Министерство за култура, Скопје, https://www.britishcouncil.mk/sites/default/files/mapiranje_na_kreativnite_industrii_vo_makedonija.pdf (accessed 15 July 2025)