

Promoting Circularity in Transition Economies: The Role of Trade and Economic Cooperation

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In a global economy, interconnected through international and regional value chains, there are strong links between international trade and circular economy. During the post COVID-19 recovery phase, it is particularly important to make circular economy and trade policies mutually supportive. This paper provides novel evidence on how trade and economic integration has a potential to contribute to shifting to the circular economy in the transition economies of the Eurasian region. While being significantly dependent on finite resources, this region has a big potential of transitioning to more sustainable approaches. The region has strong regional links and is actively involved in liberalizing trade at the multilateral level through acceding to the World Trade Organization (WTO), which entails undergoing significant reforms, and thus constitutes an opportunity for shifting to circular economy principles.

Keywords: Circular economy, trade, UNECE, WTO, Eurasian region, transition economies, UN SDGs, post COVID-19 recovery, sustainability

I INTRODUCTION

The link between trade and sustainable development has been recognized for decades.¹ While over the past decades, trade has contributed significantly to economic development and growth, much of this has been conducted through production based on the so-called linear approach (e.g., ‘take-make-dispose’ model) and has resulted in environmental challenges. One of the ways to shift this approach is to use circular economy principles, focusing on replacing material inputs with bio-based, renewable or recovered inputs; reducing resource use throughout the product lifecycle; and minimizing waste.² This is also in line with the United Nations Sustainable Development Goal (SDG) 12 (Responsible consumption and production), part of the 2030 Agenda for Sustainable Development.

A circular economy creates opportunities not only for resource savings and better environmental outcomes, but

also for trade and economic diversification.³ This interface between the circular economy and trade can be mutually supportive. Trade has a central role in achieving the 2030 Agenda for Sustainable Development and its SDGs,⁴ thus it is critical to use trade to shift production patterns towards more circular approach.

The current COVID-19 pandemic has highlighted the importance of shaping resilient and sustainable trade policies. Recently initiated Trade and Environmental Sustainability Structured Discussions (TESSD) at the World Trade Organization (WTO) recognize the need for greening trade with a particular focus on the circular economy.⁵

In a global economy, interconnected through international and regional value chains, there are strong links between international trade and circular economy. On the one hand trade-related policies, such as market liberalization, standardization and labelling, public procurement can facilitate the circular economy transition. Trade is also

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¹ As an over-arching goal of the multilateral trading system, the Preamble to the Marrakesh Agreement Establishing the World Trade Organization (WTO) refers to ‘the optimal use of the world’s resources in accordance with the objective of sustainable development’.

² Ellen MacArthur Foundation, *What Is the Circular Economy?*, <https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy>.

³ Andrew McCarthy, Rob Dellink & Ruben Bibas, *The Macroeconomics of the Circular Economy Transition: A Critical Review of Modelling Approaches*, OECD Environment Working Papers, No. 130 (2018), <https://doi.org/10.1787/af983f9a-en>.

⁴ In addition to contributing to delivering key SDGs, trade is recognized as a means of implementation for the 2030 Agenda (SDG 17), <https://sdgs.un.org/goals>.

⁵ WTO, *Members Discuss Possible MC12 Deliverables on Trade and Environmental Sustainability* (28 May 2021), https://www.wto.org/english/news_e/news21_e/tessd_28may21_e.htm.

critical in scaling up circular economy to the regional and global levels. On the other hand the circular economy transition has a potential impact on trade flows, including primary and secondary materials, waste and scrap and services.⁶ Therefore, it is important to make circular economy and trade policies mutually supportive, especially during the post COVID-19 recovery phase.

While significant attention has been given to the concept of circular economy in developed economies, limited work has been done on this subject in transition economies. The WTO TESSD work has also highlighted the importance of ensuring the special needs and concerns of such economies. The importance of shifting to a more circular economy is also recognized by transition economies, members of UN Economic Commission for Europe (UNECE), who have emphasized the role of a circular economy and the sustainable use of natural resources in their most recent 69th Session of the Commission.⁷ Projections indicate that that progress in the UNECE region can serve as catalyst to greater circularity worldwide.⁸

At the same time transition economies, being in many instances significantly resource-oriented, are undergoing economic and trade-related reforms. As a case-study for this article the following transition economies in the Eurasian region were considered: Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyz Republic, Russian Federation, Tajikistan, Turkmenistan and Uzbekistan. This region is interesting from several perspectives:

- The region significantly depends on finite resources, exposing countries to resource volatility and environmental impacts. At the same time, the region has a big potential of transitioning to more sustainable approaches across various sectors, including waste management, agriculture, construction, transport, energy, agri-food and services.⁹
- In many instances, countries in the region have already established minimum legal framework supporting sustainability and circular economy objectives. At the same time, concrete implementation is lagging behind.¹⁰
- From the trade integration perspective, several economies have liberalized their trade and joined the WTO relatively recently (Armenia, Kazakhstan, Kyrgyz Republic, Russian Federation and Tajikistan); several

others (Azerbaijan, Belarus, Turkmenistan and Uzbekistan) are in the process of acceding to the WTO. The WTO accession process entails undergoing significant reforms, and thus constitutes an opportunity for shifting to circular economy principles.

- These economies also have strong regional links, such as the Eurasian Economic Union, agreements with the European Union and the UN Special Programme for the Economies of Central Asia (SPECA) (see related discussion in section 5.2). In this regard, regional supply chains are an important consideration for facilitating the circular economy transition.

This article provides novel evidence on how trade and economic integration through multilateral trading system and regional integration has a potential to contribute to shifting to the circular economy in the transition economies. It is intended to serve a resource for reflection on the trade and circular economy nexus in the Eurasian region and contribute to the related discussions and policy work on this subject.

The remainder of the paper is organized as follows: Part 2 elaborates on the circular economy and trade nexus, focusing on three entry points: supply chains, trade in end-life products, and services. Part 3 analyses the Circularity Gap Index vis-à-vis the economies in the Eurasian region. This part aims to identify which countries within the region are performing better with regard to circularity. Part 4 provides an overview of existing trade instruments and tools supporting circular economy transition and Part 5 describes multilateral and regional frameworks supporting circular economy more broadly. Part 6 provides concluding remarks and develops the way forward for transitioning to the circular economy in the region.

2 THE CIRCULAR ECONOMY AND TRADE NEXUS: THE RELEVANCE TO THE EURASIAN REGION

The nexus between the circular economy and trade is twofold. On the one hand, the circular economy through resource savings and better environmental outcomes, creates opportunities for trade and economic diversification. On the other hand, trade policies, such as market liberalization, harmonization of technical regulations and public procurement could be designed to contribute to the circular economy objectives.

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⁶ Shuhta Yamaguchi, *International Trade and Circular Economy*, OECD Trade and Environment Working Papers 2021/02 (2021), https://www.oecd-ilibrary.org/environment/international-trade-and-circular-economy-policy-alignment_ae4a2176-en.

⁷ UNECE, *Biennial Report (9 April 2019 – 20 April 2021)*, https://unece.org/sites/default/files/2021-05/E_ECE_1494_e_Final.pdf.

⁸ UNECE, *Circular Economy and the Sustainable Use of Natural Resources: Trends and Opportunities in the Region of the Economic Commission for Europe*, Note by the secretariat, E/ECE/1495 of 4 Feb. 2021, https://unece.org/sites/default/files/2021-02/E_ECE_1495-2101436E.pdf.

⁹ UNECE, *Sustainability and Circularity Taking Center Stage in UNECE's Trade and Economic Cooperation Work*, https://unece.org/sites/default/files/2020-12/Sustainability%20and%20circularity%20taking%20center%20stage%20in%20UNECE_.pdf.

¹⁰ UNECE, *Promoting Sustainable Trade and Circular Economy in SPECA Countries: Current State of Play and Way Forward*, Secretariat's Report (draft 2021; Final version forthcoming 2022), <https://unece.org/speca/documents/2021/11/working-documents/draft-promoting-sustainable-trade-and-circular-economy>.

The following entry points for incorporating circular economy principles in trade could be identified: trade within supply chains, trade of end-of-life products and services.¹¹

2.1 Supply Chains

International and regional supply chains are a prominent feature of global trade. Trade has been increasingly organized through supply chains, facilitating trade in raw materials and intermediate goods in numerous countries. Thus, environmental impact of final products is spread across countries in a supply chain. Efficient and environmental supply chain management is critical for a resource efficient and circular economy.

In order to meet increasing global consumption levels, the worldwide extraction of natural resources has been expanding over the last decades.¹² Given the supply chain interconnections, resources are an important part of cross-border trade flows. Scholarship suggests two indicators to measure material consumption: domestic material consumption (DMC) – an indicator that measures the amount of materials directly used in an economy¹³; and raw material consumption (RMC) – an indicator that measures the domestic final use of products in terms of raw material equivalents.¹⁴ The comparison of the two indicators demonstrate/Comparing two indicators enables to assess country's interdependencies regarding global supply chains either due to missing endowments of particular material types or due to outsourcing activities of economic sectors. Furthermore, a high level of per-capita DMC and considerably larger per-capita RMC indicate how industrialized and wealthy countries are in general.¹⁵

Both DMC and RMC have been significantly increasing in the Eurasian region since the 2000s, with a larger proportion of DMC over RMC in the recent years (Figure 1). This indicates that countries in the region have large material endowments and an economic focus on the raw material sector, which has been expanding over years. This relates to the fact that the ore extraction needed to produce

a specific metal for the export market is allocated to the exporting country, while the weight of the exported materials is allocated to the importing country.¹⁶

Figure 2 provides a more detailed overview of DMC and RMC per capita for the selected economies. The higher DMC per cap levels might indicate export intensive activities related to intermediate goods as well as final products in these countries. This gap between two indicators and significantly higher levels of DMC per cap for some countries indicate that these economies perform minimum value-added operations after extraction of raw materials.

Circular economy policies such as eco-design and management of material content have an important role in supply chains of intermediate goods and raw materials contributing to final production processes. Traceability and transparency of value chains can contribute to these policies and foster circularity in at least three ways. First, if linked to sustainability norms and standards, traceability and transparency can help verify compliance with circularity requirements and in so doing, enable responsible consumers choices. Second, traceability and transparency can help identify hotspots for waste and loss along the value chain, creating the basis for reducing such waste (see also discussion below). And third, they can help tracing the use of resource – including the use of harmful substances.

Digitalization can facilitate transparency and traceability.¹⁷ It can be used in all phases of the supply chain, following the product life-cycle. As an example, blockchain technologies can allow brands and retailers to verify the origin of inputs used in the manufacturing process. Such tools can allow to document a product's lifecycle process, including from the perspective of the product's sustainability or circularity performance. To support the objective of supply chain transparency traceability, UNECE launched a pilot project to develop a blockchain system for the cotton value chain.¹⁸ In spring 2021, UNECE Member States adopted a toolkit of policy recommendations on traceability and transparency solutions for tracking any garment or item of footwear from raw components to point of purchase (the 'Sustainability Pledge').¹⁹

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¹¹ Yamaguchi, *supra* n. 6.

¹² MaterialFlows.Net, *The Concept of Material Consumption*, <http://www.materialflows.net/the-concept-of-material-consumption/>.

¹³ DMC is calculated as domestic extraction plus the weight of all imports minus the weight of the exports and as such allows to answer policy questions such as 'Which raw materials serve the consumption of a country?' However, it is important to notice that the DMC does not take into account the materials needed along the supply chains of traded goods, which represents its main restriction from an analytical point of view. See *ibid.*

¹⁴ The RMC accounts for the physical quantity of materials required along the supply chains of all goods and services finally consumed in a country – the so-called 'raw material equivalents' (RME). It is calculated as the sum of domestic extraction and the imports measured in minus the exports in RME. Thus, it provides a more comprehensive picture of a nation's material consumption and allows policy questions like 'Which are the domestic and foreign hot spots for resource management measures related to the domestic final demand of materials?' See MaterialFlows.Net, *supra* n. 12.

¹⁵ MaterialFlows.Net, *supra* n. 12.

¹⁶ *Ibid.*

¹⁷ See UNECE, *supra* n. 7.

¹⁸ The pilot is connected to the UNECE-UN/CEFACT wider initiative called 'Enhancing Traceability and Transparency for Sustainable Value Chains in the Garment and Footwear Sector' jointly implemented with the International Trade Centre (ITC) and with financial support of the European Union. For additional information see UNECE, *Policy Brief – Harnessing the Potential of Blockchain Technology for Due Diligence and Sustainability in Cotton Value Chains* (19–20 Apr. 2021), https://unece.org/sites/default/files/2021-04/ECE_TRADE_C_CEFAC_2021_12E-TextilePolicyBrief_0.pdf. See also <https://unece.org/circular-economy/press/unece-launches-sustainability-pledge-measurable-and-verifiable>.

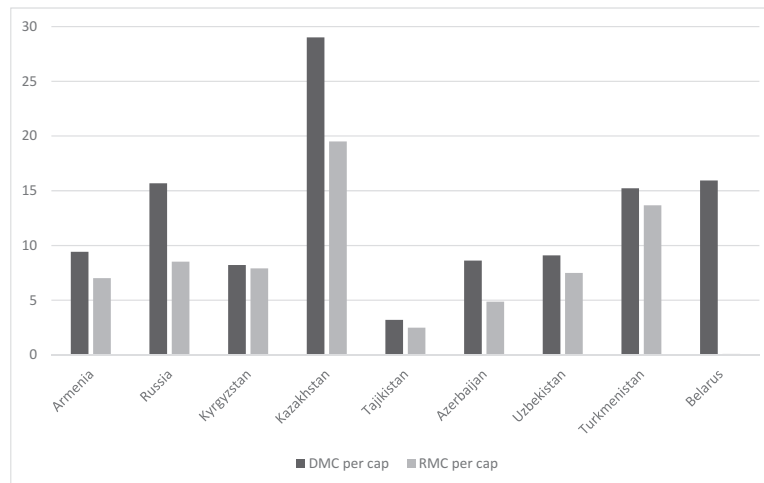
¹⁹ *Ibid.*

Figure 1 Average DMC and RMC per Cap for Eurasian Countries, 1992–2013



Source: The data refers to biomass, fossil fuels, metal ores, non-metallic minerals. Authors' compilation based on, http://www.materialflows.net/visualisation-centre/datavisualisations/?_inputs_&sidebar=%22line_chart_1%22

Figure 2 DMC and RMC per Cap for Eurasian Economies, 2013



Source: The data refers to biomass, fossil fuels, metal ores, non-metallic minerals. Authors' compilation based on, http://www.materialflows.net/visualisation-centre/datavisualisations/?_inputs_&sidebar=%22line_chart_1%22

2.2 Trade in End-of-Life Products

End-of-life products, including waste and scrap, secondary raw materials,²⁰ second-hand goods and goods for refurbishment and remanufacturing, cross borders.

Waste generation has been increasing over recent years worldwide, including in the Eurasian region, reflecting an existing correlation with economic growth. For example, every year, the Russian Federation generates 55–60 million tons of municipal solid waste with a per capita average reaching up to 400 kg per year, out of which only 5–7% is being recycled.²¹

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²⁰ There is lack of data with regard to this element. Current statistics on waste and scrap does not provide for differentiating for secondary raw materials.

²¹ WBG-IFC, *Waste in Russia: Garbage or Valuable Resource? Scenarios for Developing the Municipal Solid Waste Management Sector* (2019), <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/702251549554831489/waste-in-russia-garbage-or-valuable-resource>.

While countries in the region are not the biggest traders of waste and scrap,²² significant amount of waste in the region ends up at landfills and unauthorized dumps.

All countries in the region established legislative framework on waste management, but in many instances this framework is quite limited and does not set modern circular economy approaches. For example, most countries in the region have not yet developed standard metrics for measuring the recycled content of products, amount of saved water or fuel, amount of used plastic or level of products design for disassembly, metrics around the collection of waste.²³ At the same time, very limited government spending and not across all countries in the region is directed to waste management.²⁴

Regarding, second-hand goods, their trade can represent a positive contribution to circular economy objectives as they prolong the life-cycle of products and minimize environmental impact. At the same time, in relation to some products, such as second-hand vehicles with high emissions, there are significant environmental risks.²⁵ At the moment there is very limited data on trade in second-hand goods and in many instances it is difficult to differentiate second-hand goods from new goods or waste. Statistics is available in relation to second-hand textiles (HS 630900, 631010, 631090), and used tyres (HS 4012). Analysis of trade patterns in the Eurasian region for these HS codes indicate that countries in the region are primarily importers rather than exporters of second-hand goods. At the same time, total imports of these goods by the Eurasian countries have been minimal and constituted around 3–4% of the world imports value. The fact that the countries are not exporting these goods indicate that there is sufficient demand for them domestically. Implementation of policies such as refurbishment, reuse and repairment measures can positively contribute to prolonging the life-cycle of goods.

2.3 Services

Services play an essential role in transitioning to circular economy. While traditional services, such as services related to repair and product maintenance, waste management and recycling are an essential component of this discussion, digital technologies facilitate new types of services, e.g., related to a sharing economy and services embodied in goods.

As suggested by International Institute for Sustainable Development (IISD), the circular economy related services that are most frequently traded include:

- Information technology (IT) services
- Other professional, technical, and business services (such as technical testing or environmental consulting services)
- Leasing or rental services without an operator

R&D services

- Maintenance, repair, and installation (except construction) services
- Sewage and waste collection services
- Professional services related to construction services.²⁶

Countries in the region are not the top leaders of trading in the above-listed services, with the only exception of the Russian Federation, which is one of the leading importers of maintenance and repair services and operating leasing services. For operating and leasing services the country is also among top exporters. In some instances, it is linked to a limited integration into world trade by some countries in the region. IISD suggests that differences in regulations between jurisdictions are the most frequent barriers to trade.²⁷

Market diversification, including through expanding services sectors is an important consideration for the region in its transition to a circular economy. In that regard attention is being given to policies and measures supporting small and medium sized enterprises (SMEs). As they provide for more than 50% of employment²⁸ SMEs can constitute core engines of innovation and growth (see also related discussion in section 4.6 below).

Box 1 SMEs Contribution to a Circular Economy Transition

Being a key actor in supply chains, investment and innovation, the private sector is essential for the circular transition. SMEs face unique challenges, including constraints from legislation, lack of cross-sectoral synchronization, and reduction of risk-mitigating incentives. The public sector can help the private sector maximize value creation and circularity by creating an enabling environment. Intergovernmental mechanisms are important platforms for exchange of best practices and facilitating relevant policy dialogue. SPECA is an available avenue for supporting the circular transition in Central Asian countries (see related discussion in section 5.2).²⁹ Another related initiative – SME

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²² Eurasian economies import 1.2% and export 1.8% of world waste and scrap. Based on authors' analysis on ITC Trade Maps statistics of sixty-two HS codes, which capture both hazardous and non-hazardous waste and scrap (developed by Derek Kellenberg, *Trading Wastes*, 64(1) J. Envtl. Econ. & Mgmt. (2012). Authors recognize existing issues arising from the definition and classification of waste in various jurisdictions and ongoing work between the World Customs Organization and the Secretariat of Basel Convention.

²³ See also UNECE, *supra* n. 10.

²⁴ <https://climatedata.imf.org/pages/go-indicators>.

²⁵ Yamaguchi, *supra* n. 6.

²⁶ IISD, *Trading Services for a Circular Economy* (Oct. 2020), <https://www.iisd.org/publications/trading-services-circular-economy>.

²⁷ *Ibid.*

²⁸ G20/OECD, *High-Level Principles on SME Financing* (2015), <https://www.oecd.org/finance/G20-OECD-High-Level-Principles-on-SME-Financing.pdf>.

²⁹ SPECA Principles on Sustainable Trade recognize the need to SMEs to engage more effectively and efficiently in international trade. See UNECE/ESCAP, *Principles of Sustainable Trade* (19 Nov. 2019), https://unece.org/fileadmin/DAM/SPECA/documents/gc/session14/Principles_of_Sustainable_Trade_Trade_English.pdf.

Climate Hub, established by International Chamber of Commerce (ICC) is a one-stop platform for small business to make an internationally recognized climate commitment, access tools and resources to curb emissions and unlock incentives. To facilitate the evidence-base for interlinkages between international trade and circular economy, ICC has initiated a related research project and will provide recommendations to governments and WTO on how trade can scale up circular economy solutions from local to regional and global levels.³⁰

3 THE CIRCULARITY GAP INDEX: PERFORMANCE IN THE EURASIAN REGION

3.1 The Concept of the Circularity Gap Index

A Circularity Gap Index developed by the World Economic Forum supported Circularity Gap Reporting Initiative uses Human Development Index³¹ and Ecological Footprint per capita³² to assess countries' performance vis-à-vis circular economy objective. The 2020 Circularity Gap Report developed three categories based on the countries' advancement vis-à-vis circular economy approaches: 'Build', 'Grow' and 'Shift' countries:

- 'Build' countries: have a low material footprint per capita. As a result, the impact of their economic activities often falls within the regenerative capacity of the planet. On the downside, however, they are struggling to meet all basic needs, not least in relation to Human Development Index (HDI) indicators. Natural capital, rather than human capital, is their dominant source of wealth, which means that the focus is on extraction and sale of raw materials, while investment in education and skills is insufficient. At the same time, as they are still building-up their basic infrastructure for public services, hospitals and transport, they have an opportunity to apply circular strategies. The decentralized nature of the informal economy prevalent in Build countries also provides a platform on which to develop distributed professional services that allow welfare to grow, while providing decent health and safety conditions.

- 'Grow' countries: due to economic growth and industrialization, these countries is characterized by fast economic growth and associated material consumption, rapid stock build-up and an expanding industrial sector (also responding to demand from Shift countries). Therefore, sustainable growth is about more efficient use of natural capital – investing earnings from the likes of minerals into infrastructure and education, thereby developing human capital. Designing new infrastructure, buildings and consumer goods in a circular manner are key strategies for these countries. Also, professionalizing and improving the labour conditions in the informal parts of waste management in these countries also bears potential to reduce the environmental impact of both industrial and consumer waste.
- 'Shift' countries: maintain the highest proportion of services as part of their Gross Domestic Product (GDP). Yet, their material consumption is ten times greater than that of the Build countries. They also produce high volumes of waste. With consumption levels exceeding several planetary boundaries, however, the true impact of Shift countries extends beyond their national borders, with much of the environmental and social costs incurred elsewhere. To that end, these economies can start incentivising the dematerialization of consumption by aligning their tax regimes with sustainability ambitions.³³

The section below provides a classification for the Eurasian countries and further related analysis.

3.2 Performance in the Region

The 2020 Circularity Gap Report suggest that countries from the Eurasian region belong to all three categories, with Belarus and the Russian Federation falling in the category of 'Shift' countries; Armenia, Kazakhstan, Kyrgyz Republic, Turkmenistan and Uzbekistan falling in the 'Grow' category; and Tajikistan falling in the category of 'Build' countries. Thus, countries in the region differ based on their resource use (see also related discussion in section 1, above), but to some extent range quite close in terms of HDI. As per the Circularity Gap Report,

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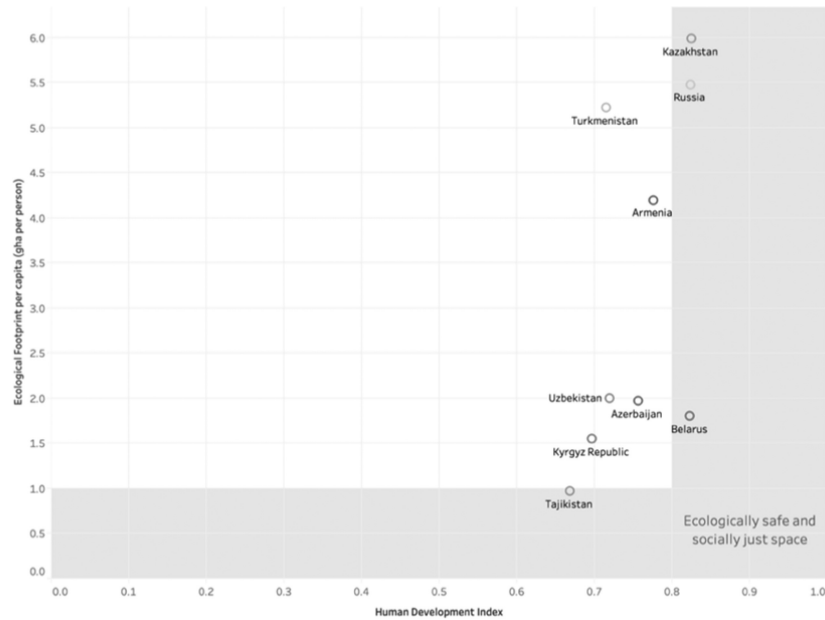
³⁰ UNECE, *supra* n. 7.

³¹ The HDI is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living (higher is better).

³² The Ecological Footprint per person is a nation's total Ecological Footprint divided by the total population of the nation. To live within the means of our planet's resources, the world's Ecological Footprint would have to equal the available biocapacity per person on our planet, which is currently 1.7 global hectares (lower is better).

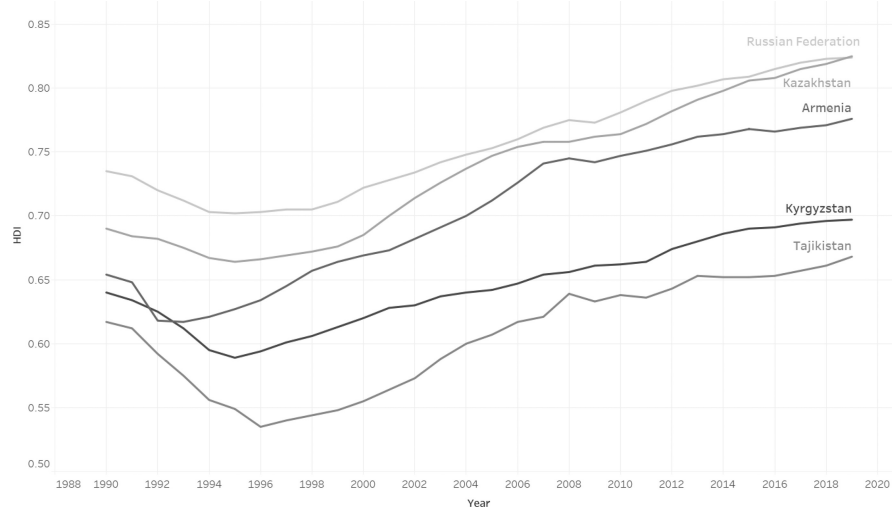
³³ Circle Economy, *The 2020 Circularity Gap Report*, https://assets.website-files.com/5e185aa4d27bcf348400ed82/5e26ead616b6d1d157ff4293_20200120%20-%20CGR%20Global%20-%20Report%20web%20single%20page%20-%2020210x297mm%20-%20compressed.pdf.

Figure 3 Assessment of Ecological Footprint per Capita and HDI



Source: Authors' estimation based on, <http://hdr.undp.org/en/content/human-development-index-hdi> and <https://data.footprintnetwork.org/#/>

Figure 4 HDI in Armenia, Kazakhstan, Kyrgyzstan, Russian Federation and Tajikistan, 1990–2019



Source: Authors' estimation based on, <http://hdr.undp.org/en/content/human-development-index-hdi>

a country with the levels of HDI above 0.8 and Ecological Footprint per capita below 1 is considered as 'ecologically safe and socially just space'. Figure 3 provides more detailed overview of ecological footprint and HDI in the region. It is seen that none of the countries in the region meet these criteria yet, however, it should be noted that

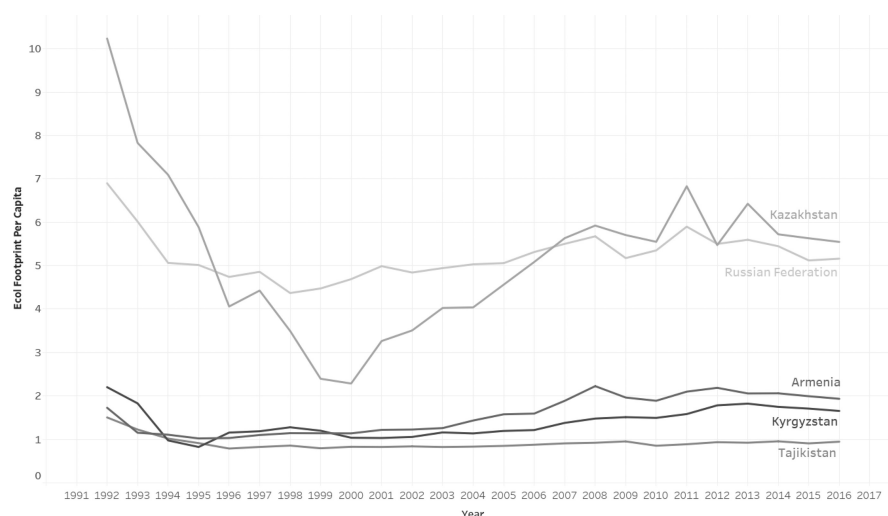
Tajikistan is considered as ecologically safe, and Belarus, Kazakhstan and the Russian Federation are considered to be Socially just countries.³⁴

Additional analysis has been conducted for the Eurasian countries, which are WTO Members (see section 5.1, below). Figure 4 suggests that since countries' accession

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³⁴ *Ibid.*

Figure 5 Ecological Footprint per Capita in Armenia, Kazakhstan, Kyrgyzstan, Russian Federation and Tajikistan, 1990–2019



Source: Authors' estimation based on, <https://data.footprintnetwork.org/#/>

to the WTO³⁵ their HDI performance was improving. This is especially for Armenia, which since its WTO accession to the WTO in 2003 improved its HDI from 0.7 to almost 0.8 in 2019. While these results do not allow any concrete conclusions with regard to the correlation between WTO Membership and HDI performance, they nevertheless point towards potential opportunities for a link that can be established between the market liberalization and HDI performance, also contributing to circular economy objectives.

Regarding ecological footprint per capita in WTO Members from the Eurasian region, Figure 5 suggests that ecological footprint per capita has been decreasing since the 1990s, thus indicating positive shift towards freeing ecological resources. Following the collapse of the Soviet Union in 1990s and associated crisis in the countries in the region, economic reforms and transition to market economy, including through accession to the WTO, seem to positively contribute to this area. At the same time, further diversification associated with market liberalization might bring additional weight on ecological footprint, thus indicating the need to take into account circular economy approaches.

4 TRADE INSTRUMENTS AND TOOLS SUPPORTING CIRCULARITY

There is already a number of trade instruments and tools supporting circular economy transition, which have been

implemented across various jurisdictions. They include: government support; technical regulations; green procurement; trade bans and licensing requirements. The sections below briefly elaborate on each of the instrument, including in relation to existing legal framework to implement them and the use of these tools in the Eurasian region.

4.1 Government Support

Based on the analysis of the environment-related WTO notifications suggests that government support, comprised of measures, such as grants and direct payments, preferential loans and loan guarantees, and income and price support, is the most frequently notified type of measure.³⁶ Government expenditure on environmental protection in the Eurasian region is quite limited and ranges from 0.1% (Belarus) to 0.35% (Armenia) of GDP. To compare, Switzerland's expenditure in 2019 constituted 0.6% of GDP.³⁷

Existing WTO legal instruments provide a framework to provide such governmental support, subject to specific rules. Relevant agreements include General Agreement in Tariffs and Trade (GATT), General Agreement on Trade in Services, Agreement on Subsidies and Countervailing Measures and Agreement on Agriculture. In addition to direct support in the

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³⁵ Armenia (since 2003); the Kyrgyz Republic (since 1998); Kazakhstan (since 2015); the Russian Federation (since 2012) and Tajikistan (since 2013).

³⁶ Karsten Steinfatt, *Trade Policies for a Circular Economy: What Can We Learn from WTO Experience?*, WTO Working Paper (2020), https://www.wto.org/english/res_e/reser_e/wpaps_e.htm.

³⁷ IMF, *Climate Policy Indicators*, <https://climatedata.imf.org/pages/go-indicators>.

form of grants or direct payments (e.g., resource efficiency payments), indirect financial support includes tax incentives, e.g., for plastic recycling and recycling machinery.

Governmental support is also linked government procurement policies (see discussion in section 4.4, below). Furthermore, financial support and incentives from other international and regional institutions and donors is an important element in facilitating transition to a circular economy in the Eurasian region (see related discussion in section 5, below).

4.2 Technical Regulations

Technical regulations, standards and conformity assessment procedures are important instruments supporting the circular economy transition. These measure are the second most frequently notified type of measure at the WTO (25% of all measures).³⁸ For some countries in the Eurasian region, this type of measure constitutes even a higher share (e.g., for Armenia – 70%; for the Kyrgyz Republic – 85%).³⁹ Some examples include: standards for responsible mining, technical regulations, standards and labelling requirements, e.g., for recyclables.

The related WTO instrument is the Technical Barriers to Trade Agreement (TBT Agreement), which aims to ensure that technical regulations and standards, including packaging, marking and labelling requirements, and procedures for assessment of conformity with technical regulations and standards do not create unnecessary obstacles to international trade.⁴⁰

The legal framework in the Eurasian countries is generally supportive of environmental objectives. At the same time, many countries have not yet developed practical mechanisms to adopt sustainability and circular economy standards in their laws and in many instances this concept is merely mentioned in the green strategies. Areas which are becoming more prominent in the region are eco-labelling of goods and services and the use of voluntary sustainability standards (VSS), specifically for textiles and agricultural sectors. Related initiatives are implemented jointly with Fair trade, Global Good Agricultural

Practices (GLOBALG.A.P.), BCI (Better Cotton Standard System). Discussions and strategic dialogues related to VSS, related policies and experiences is ongoing in the framework of the UN Forum of Sustainability Standards (UNFSS).⁴¹ These discussions are also relevant for implementing green public procurement policies (see section 4.4, below).

As recognized by the TBT Agreement, international standards can contribute to improving efficiency of production and unlock trade opportunities (see an example in Box 2, below). A harmonized approach to technical regulations and related Geneva-based trade-related dialogues, such as those hosted by WTO or the sharing of experiences in UNECE can help promote trade policies and practices that support a circular transition.⁴²

Box 2 UNECE Standard for Dried Apricots and Its Contribution to the Fergana Valley Small Businesses

UNECE Standard for Dried Apricots⁴³ adopted in 2016 incorporates new sustainable production and trading practices. The standard has offered offers producers in the Fergana Valley, an ethnically diverse area spreading across Kyrgyzstan, Tajikistan and Uzbekistan where “relations remain fragile, a sustainable way to pool their productions and increase their competitiveness on international markets.”⁴⁴ For the past five years, UNECE, United Nations Development Programme (UNDP), German Corporation for International Cooperation (GIZ) and Hilfswerk International (HWI) have been supporting capacity-building activities in the region which resulted in enhanced knowledge of public and private sectors of Central Asia on quality standards, including the Standard for Dried Apricots, and tools to improve quality along the entire value chain and increase sustainability of agricultural production and trade.⁴⁵ Importantly, better quality control in companies, and improved quality of the production led to increased sales and export contracts, new export destinations in, for example, the European Union and the Russian Federation and increased employment opportunities, particularly for SMEs and women.⁴⁶

4.3 Trade Bans and Licensing Agreements

As discussed above, trade in end-of-life products may bring environmental risks in cases when countries do not have proper capacity to recirculate, reuse or recycle them. To address some of these concerns WTO Members have turned to trade bans and licensing requirements (21% of

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³⁸ Steinfatt, *supra* n. 36.

³⁹ WTO, *Environmental Database*, <https://edb.wto.org/members>.

⁴⁰ TBT Agreement, *Preamble*, https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm.

⁴¹ UNFSS, <https://unfss.org>.

⁴² UNECE, *supra* n. 7.

⁴³ *UNECE Standard DDP-15* (2016), https://unece.org/fileadmin/DAM/trade/agr/standard/dry/dry_e/15_DriedApricots_E2016.pdf.

⁴⁴ UNECE, *Why the new UNECE Standard for Dried Apricots Matters for Fergana Valley and Peace ...* (4 July 2016), <https://unece.org/trade/news/why-new-unece-standard-dried-apricots-matters-fergana-valley-and-peace>.

⁴⁵ UNECE, *Results of the Inter-agency Impact Assessment Survey in Central Asia 2019-2020*, https://unece.org/sites/default/files/2021-02/impact%20assessment%20Agri_CentralAsia.pdf.

⁴⁶ UNECE, *How to Create Lasting Change and Impact: Empowering SMEs and Women Boosts Economies and Supports Ambitious Market Reforms in Central Asia* (10 June 2020), <https://unece.org/sustainable-development/press/how-create-lasting-change-and-impact-empowering-smes-and-women-boosts>.

all environmental measures notified).⁴⁷ These measures are related to waste and scrap (including hazardous materials); remanufactured goods; non-biodegradable plastic bags, retreaded tyres, second-hand vehicles, used batteries. These measures have been as well frequently notified by the Eurasian economies, which are WTO Members, particularly by the Russian Federation and Kazakhstan.

In terms of existing legal framework, GATT and the WTO Agreement on Import Licensing Procedures provide mechanisms to establish such measures, subject to certain requirements. Work on the issue of domestically prohibited goods is part of the work programme of the newly created Committee on Trade and Environment.

Being signatories of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposals, all countries in the region contribute to efforts aimed at addressing some environmental concerns over waste and scrap trade. To support the efficient implementation of the Basel convention, UNECE, through the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), developed a standard (UN/eBasel) for exchanging electronic messages, meaning that transboundary movements of waste and its disposal/exchange can be tracked and traced electronically in compliance with the convention, greatly facilitating legal movements.⁴⁸

4.4 Government Procurement

Public procurement is an important part of economic activity, on average accounting for 10–15% of GDP in most countries.⁴⁹ In addition to the primary function of acquiring goods, works and services, policy makers worldwide increasingly see public procurement as an important tool to achieve broader sustainable development and circular economy objectives. Government procurement measures related to the circular economy have also been notified to the WTO but to a limited extent.⁵⁰ This relates to the fact that WTO Agreement on Government Procurement (GPA) has a plurilateral nature and at the moment comprises forty-eight WTO members.⁵¹ From the Eurasian region, Armenia is a party to the GPA; and Kazakhstan, the

Kyrgyz Republic, the Russian Federation and Tajikistan are in the process of acceding to the Agreement.

In terms of circular economy solutions, the GPA provides an option to use environmental standards in technical specifications and it facilitates access to foreign innovative solutions, which might have a positive spill-over effect domestically through technology transfer (see also related discussion in section 4.6 below). The Agreement is also supportive of e-procurement, which stimulates demand for innovative digital technology solutions, thus facilitating digital services essential for circular economy.⁵² In addition, the UN/CEFACT Recommendation on Sustainable Procurement (2019) helps governments and companies to embrace more responsible business practices while avoiding additional administrative burdens for cross-border trade.⁵³

4.5 Transparency Tools

Several WTO Agreements include requirements to notifying the WTO promptly of changes to their trade rules and regulations. This also relates to trade-related circular economy measures (see discussion above for concrete examples).

Also, WTO Committees provide forums for relevant discussions and transparency exercise. For example, technical regulations, standards or conformity assessment procedures have been discussed at the Committee on Technical Barriers to Trade. This practice, known as 'specific trade concerns', is a form of peer review allowing WTO members to discuss potential difficulties associated with specific measures of their trading partners.⁵⁴

Another important mechanism in facilitating discussions related to circular economy is WTO Trade Policy Reviews (TPRs), which are performed in relation to all WTO Members. TPRs increasingly figure environment-related elements, also in relation to circular economy. From the region, such discussions were taking place in relation to TPRs of Armenia, Russian Federation and Kyrgyz Republic.⁵⁵

4.6 Trade and Technology Transfer

The development, distribution and transfer of technology relating to mitigating climate change has been an

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⁴⁷ Steinfatt, *supra* n. 36.

⁴⁸ UNECE, *Executive Guide on Transboundary Movement of Waste*, https://unece.org/fileadmin/DAM/cefact/GuidanceMaterials/ExecutiveGuides/WasteManagement_ExecGuide_Eng.pdf. See also related discussions in Elisabeth Tuerk & Mariam Soumare, *Harnessing the Power of Digitalization for Trade and Environment*, 1(2) IISD Trade & Sustainability Rev. (2021), <https://www.iisd.org/system/files/2021-03/iisd-trade-sustainability-vol-1-issue-2-en.pdf>.

⁴⁹ See WTO, *WTO and Government Procurement*, https://www.wto.org/english/tratop_e/gproc_e/gproc_e.htm.

⁵⁰ WTO, *supra* n. 39.

⁵¹ Or twenty-one parties to the Agreement as the EU Member States are counted as one party, https://www.wto.org/english/tratop_e/gproc_e/gp_gpa_e.htm.

⁵² WTO, *World Trade Report 2020*, https://www.wto.org/english/res_e/publications_e/wtr20_e.htm.

⁵³ UNECE, Recommendation 43: Sustainable Procurement (ECE/TRADE/451), Nov. 2019, <https://unece.org/trade/publications/recommendation-43-sustainable-procurement-ecetrade451>.

⁵⁴ Steinfatt, *supra* n. 36.

⁵⁵ WTO, *supra* n. 39.

important element in multilateral work on this issue and requires consideration from transition economies, which are lacking technological capacities at home. Integration into the world economy, including through WTO Membership and regional integration supports this objective (see related discussion in section 5, below). In addition to providing access to those goods and services, international market integration contributes to reducing costs of production, making technological solutions that support the circular economy more affordable.⁵⁶

At the same time, tariff protection is still significant in this area, which increases the costs of goods and services for a circular economy and impair their cross-border dissemination, especially for transition economies. To address this challenge, in 2001 WTO Members launched negotiations on Environmental Goods Agreement, which aims to liberalize trade in environmental goods.⁵⁷ These discussions are ongoing now in the framework of the WTO TESSD initiative.⁵⁸

The United Nations Framework Convention on Climate Change (UNFCCC) underlined the role and impact of intellectual property (IP) in relation to innovation and diffusion of technology relevant to climate change mitigation. In that regard, the WTO Agreement on Trade-Related Aspects of IP Rights provides mechanisms for technology transfer.⁵⁹ Recently submitted communication by several WTO Members call to look at the role of IP rights to enhance the competitiveness of SMEs as they enhance the dissemination and protection of innovations. SMEs working in the green tech sector represent key economic actors in the effort towards finding solutions to address environmental challenges.⁶⁰

5 MULTILATERAL AND REGIONAL TRADE FRAMEWORKS SUPPORTING CIRCULAR ECONOMY

5.1 Trade Liberalization and the Role of the WTO Accessions

There are synergies between the WTO accession process and UN SDGs and the circular economy in particular. WTO accession is an important tool to undertake and leverage domestic reforms. Structural and trade-liberalizing

reforms trigger further economic development and help to secure integration into the global economy. In addition to market opening, countries acceding to the WTO can benefit from economic growth, productivity, boosting trade, including through export diversification and investment opportunities. In some cases, WTO accession has helped to promote the adjustments needed to make the transition to a market economy and encouraged the incorporation of international standards.⁶¹ All of these are important tools that can also help support a transition to the circular economy.

As discussed above, participation in the WTO agreements sets out a framework supportive of circular economy objectives. Furthermore, WTO Membership allows to participate in the ongoing discussions related to this area, including WTO TESSD work (see Introduction).

At the moment, the following Eurasian countries are WTO Members: Armenia (since 2003); the Kyrgyz Republic (since 1998); Kazakhstan (since 2015); the Russian Federation (since 2012) and Tajikistan (since 2013). Environmental considerations were part of accession negotiations in cases of all Eurasian economies acceded to the WTO.⁶² As important developments in 2020, Uzbekistan resumed its WTO accession negotiations, after fifteen years since its last engagement; and Turkmenistan formally applied for WTO membership. Azerbaijan and Belarus are in the process of WTO accession, which was initiated in 1997 and 1993 respectively. Over the last years, Belarus has been carrying out this work very actively. Countries in the process of acceding to the WTO can use the reform process to facilitate more circular-based approaches.

5.2 Regional Integration

Regional approaches can play a key role in supporting a circular economy transition. The European Green Deal is a prime example of how circularity is also making its way into regional trade integration. Several economies from the region have partnership and cooperation agreements with the European Union, including with trade and sustainable development chapters, which facilitate trade, entrepreneurship, investment, energy, transport, environment, climate change and cooperation.⁶³

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⁵⁶ Steinfatt, *supra* n. 36.

⁵⁷ Environmental goods perform a variety of functions essential to tackling environmental problems, regenerating the natural environment and making production and consumption more sustainable. They comprise many goods that are needed to turn circular economy approaches into reality. *Ibid.*

⁵⁸ WTO, *supra* n. 5.

⁵⁹ WTO, *Handbook on the TRIPS Agreement* (CUP 2020).

⁶⁰ WTO, *Intellectual Property and Innovation: Making MSMEs Competitive in Green Tech*, IP/C/W/675 of 26 Feb. 2021, <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/IP/C/W/675.pdf&Open=True>.

⁶¹ WTO, *WTO Accessions*, https://www.wto.org/english/thewto_e/20y_e/acc_brochure2015_e.pdf.

⁶² WTO, *Accessions Commitments Database*, http://acdb.wto.org/new_index.aspx.

⁶³ See e.g., Ch. 10 of the Enhanced Partnership and Cooperation Agreement between Kazakhstan and the European Union, Astana, 21 Dec. 2015, in force 1 Mar. 2020, <https://www.consilium.europa.eu/en/documents-publications/treaties-agreements/agreement/?id=2015045>.

The Eurasian Economic Union to which Armenia, Belarus, Kazakhstan, Kyrgyz Republic and the Russian Federation are Member States, can help to scale up circular economy transition through facilitating regional value chains, given countries' geographical proximity and close trade ties. A dedicated Green Bridge Partnership Program was initiated by Kazakhstan as an interregional initiative to promote green economic growth in Central Asia and the Eurasian region through international cooperation, technology transfer, knowledge exchange and investment with the support of key international institutions and private sector.

Given the central role in accelerating the achievement of the SDGs and post-pandemic recovery, promoting circular economy and sustainable use of natural resources is embedded in several work streams of the UNECE – including trade and economic cooperation.⁶⁴ Concrete sustainability objectives pursued by the UNECE tools include: improving the transparency and traceability of value chains, facilitating sustainable procurement, and fostering sustainable waste management across a range of areas from plastic to food-waste.⁶⁵ Recognizing the importance of supporting countries in their transition to a more circular economy, in February 2021, UNECE launched UN Development Account technical cooperation project aimed at accelerating circularity in transition economies.⁶⁶

Furthermore, sustainability including circular processes are gaining attention among countries participating in the UN SPECA.⁶⁷ To facilitate integration of sustainable development and circular economy principles into trade policy, the UNECE members States participating in the SPECA agreed on 21 November 2019 on the Principles of Sustainable Trade in the SPECA subregion.⁶⁸ These principles support the green economy and promote export diversification, energy efficiency, food security and waste management, including through digital tools, investment, innovation and finance (such as Public and Private Partnerships). They also address socio-economic objectives, such as inclusion of SMEs and women-owned businesses and foster employment more broadly.⁶⁹

6 CONCLUDING REMARKS AND WAY FORWARD

Current efforts to foster the post-COVID recovery have reiterated the importance of ensuring the resilience, sustainability and

inclusiveness of such a recovery to the fore front, in line with the UN SDGs and the Agenda 2030. As the world is moving to a more conscious, more sustainable and also more circular use of natural resources, international trade, including trade in waste, scrap, environmental goods and services, can help scale up sustainable and circular solutions from local to regional and global.

The circularity concept has been gaining prominence in transition economies in the UNECE region and its role was emphasized at the recent 69th Session of the Commission.⁷⁰ While management and reduction of waste are obvious entry points for the region, circularity is increasingly seen as cutting across many other sectors of economic activities along supply chains and trade in services.

Based on the Circularity Gap Index, countries in the region have differing levels of material footprint. At the same time, shift to circular economy approaches is critical to the region given its large material endowments and an economic focus on the raw material sector. Infrastructure provision for public services and transport is an essential component for all countries' circular economy transition. As discussed in the paper, trade policies including trade liberalization through WTO accession process seem to positively contribute to increasing HDI levels and decreasing ecological footprint – essential elements in the circular economy transition. At the same time, it is recognized that further diversification associated with market liberalization might bring additional weight on ecological footprint, thus indicating the need to take into account circular economy approaches.

Trade tools such as government support; technical regulations; green procurement; trade bans (used selectively) and in line with international rules and licensing requirements as well as related international and regional instruments are supportive of the circular economy agenda and countries from the region have been increasingly implementing related measures.

However, a transition to a more circular and more sustainable future is not automatic. Economies need the investment, finance and innovation that are essential drivers to make the circular transition work. The UNECE discussions highlighted the need in sound policy making, including fact-based gap analyses, inclusive development of strategies, and meticulous adoption of implementing legislation.⁷¹ International and regional cooperation, including sharing of experiences and building capacity can play an important supportive work. International initiatives, such as WTO TESSD can offer an important avenue to do so.

Notes

⁶⁴ UNECE, *Circular Economy and the Sustainable Use of Natural Resources: Toolbox of Instruments of the Economic Commission for Europe*, E/ECE/1496 of 3 Feb. 2021.

⁶⁵ For additional detail see UNECE, *supra* n. 9, and related discussion in s. 4 of this article.

⁶⁶ UNECE, *UNECE Launches UNDA Technical Cooperation Project Aimed at Accelerating Circularity in Transition Economies* (9 Feb. 2021), <https://unece.org/circular-economy/news/unece-launches-unda-technical-cooperation-project-aimed-accelerating>.

⁶⁷ The countries participating in the United Nations Special Programme for the Economies of Central Asia are Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

⁶⁸ UNECE/ESCAP, *supra* n. 29.

⁶⁹ See UNECE, *supra* n. 10.

⁷⁰ UNECE, *Sixty-Ninth Session of the Commission* (20–21 Apr. 2021), <https://unece.org/sessions-commission/events/sixty-ninth-session-commission-20-21-april-2021>.

⁷¹ *Ibid.*