



**TRADE AND ENVIRONMENTAL SUSTAINABILITY STRUCTURED DISCUSSIONS**

INFORMAL WORKING GROUP ON CIRCULAR ECONOMY-CIRCULARITY

*Mapping Exercise: Trade and trade policy aspects along the lifecycle of products<sup>1</sup>*



**Table of Contents**

**1 INTRODUCTION ..... 2**

**2 INITIATIVES AND EXPERIENCES SHARED BY MEMBERS ..... 2**

**3 MAPPING OF MEASURES IN THE WTO ..... 4**

**4 TRADE ASPECTS OF THE CIRCULAR ECONOMY ..... 9**

4.1 Classifications and data for circular goods .....10

4.2 Standards and regulations .....10

4.3 Trade facilitation and promotion .....11

4.4 Trade restrictions and waste management .....12

4.5 Capacity building and technical assistance.....12

4.6 Other trade-related aspects for cooperation.....12

**5 REFLECTIONS ON WAY FORWARD ..... 13**

**ANNEX ..... 14**

<sup>1</sup> This draft document provides a mapping of the trade and trade policy aspects of the circular economy based on the work of the TESSD Working Group on Circular Economy-Circularity since 2022. The document will be revised and further developed based on the comments by Members and discussions in the Working Group.

## 1 INTRODUCTION

1.1. The role of trade in contributing to a circular economy has been a priority in Members' discussions in TESSD. In the 2021 TESSD Ministerial Statement, Members agreed to identify and compile best practices, as well as explore opportunities for voluntary actions and partnerships to ensure that trade and trade policies are supportive of and contribute to achieving a more resource efficient circular economy.<sup>2</sup> As foreseen by the TESSD Work Plan of February 2022, Members pursued more in-depth discussions in four informal working groups, including in the Working Group on Circular Economy-Circularity.

1.2. In 2022, the Working Group held two meetings on 18 May and 4 October. At the May meeting, Members heard business perspectives on the challenges and opportunities related to the circular economy as well as those to improve e-waste recycling, and shared their national experiences on how a circular economy approach was supporting sustainable development and climate change goals. At the October meeting, Members discussed trade-related policy issues related to waste, end of life, and reverse supply chains. In addition, Members also shared national experiences and discussed their priorities for the Working Group at plenary meetings 31 March and 19 July.

1.3. At the High-Level Stocktaking event on 2 December 2022, Members agreed to pursue sector-specific discussions and welcomed the proposition to pursue a mapping exercise to build a broader understanding of the trade aspects of the circular economy which are relevant to each part of the life cycle.<sup>3</sup> In the first two meetings in 2023 on 17 March and 11 May, Members discussed the specific trade issues associated with circularity in batteries and renewable energy (solar and wind), and considered presentations by the Secretariat on the mapping of measures related to the circular economy in the WTO.

1.4. The objective of this draft document is to provide an overview of the trade and trade policy aspects of the circular economy based on the work of the TESSD Working Group on Circular Economy-Circularity since 2022. In particular, the following mapping will cover: (i) initiatives and experiences shared by Members; (ii) measures relating to the circular economy in notifications and trade policy reviews (TPRs) from the WTO Environmental Database, and (iii) trade aspects of the circular economy based on presentations, analytical work and discussions in the Working Group.

## 2 INITIATIVES AND EXPERIENCES SHARED BY MEMBERS

2.1. During 2022 and 2023 Members shared initiatives and national experiences aimed at advancing the circular economy, including how a circular economy approach was supporting sustainable development and climate change goals.

**Table 1. Circular economy initiatives and experiences shared by Members**

Experience Sharing
<p><b>Canada</b> – Right to Repair, Food Waste Reduction Challenge, and regional efforts</p> <ul style="list-style-type: none"> <li>• The Right to Repair aims to extend the lifetime of products such as home appliances and electric appliances rather than purchasing new ones.</li> <li>• The Food Waste Reduction Challenge aims to reduce food waste and increased food availability, lower costs for consumers and businesses and reduced emissions, and strengthen our food systems.</li> <li>• Regional efforts with the United States already in recovered paper materials and other recovered materials will be critical to building circular supply chains in North America. It is worth noting that there is currently work underway under the Canada-Mexico-United States Commission for Environmental Cooperation to study recycling infrastructure and circular trade.</li> </ul>

<sup>2</sup> TESSD Ministerial Statement on Trade and Environmental Sustainability - [WT/MIN\(21\)/6/Rev.2](#).

<sup>3</sup> Informal Summary by the Co-convenors - [INF/TE/SSD/R/15](#); and Statement by the TESSD Co-convenors - [INF/TE/SSD/W/21](#).

## Experience Sharing

### Chile – Producer Responsibility Law

- In force since 2016, it makes producers of priority products responsible for financing the management of waste generated by products that are sold on the domestic market for seven priority products: technical and electronic equipment, batteries, packaging, newspapers and magazines, tyres, batteries, oils and lubricants.

### Colombia – National Circular Economy Plan

- The strategy prioritises action on six material or resource flows: industrial materials and consumer goods; packaging materials; biomass; energy; water and building materials. The objective of the framework is to increase the recycling rate from 8% to 12.5% by 2022. Through Extended Product Responsibility programmes, more than 500,000 tonnes of special waste have been recovered.

### Costa Rica – National Bioeconomy Strategy

- The strategy aims to build a knowledge-based, green and resilient competitive decarbonized economy based on the principles of a circular bioeconomy and decarbonization of production and consumption processes.

### European Union – Circular Economy Action Plans, EU Eco-design Directive and proposal for an Eco-design for Sustainable Products Regulation, and Waste Legislation (including Directive on batteries and accumulators, Directive on packaging and waste; Directive on end-of-life vehicles), Batteries Directive

The measures aim, *inter alia*, to improve product design to avoid the use of hazardous chemicals or materials, reducing the environmental impact of a product from conception.

- The Eco-design Directive covers a broad scope of products and aims to keep products as long as possible in the lifecycle. The proposal for an Eco-design for Sustainable Products Regulation will strengthen and/or introduce provisions concerning aspects such as product reparability, durability, and availability of spare parts, among others.
- Regarding waste, the EU objective is to bring back into the economic cycle secondary raw materials and recycle waste while promoting the uptake of extended producer responsibility (EPR) schemes.
- Regarding batteries, the EU reached a provisional political agreement on a law to make batteries in the EU market more sustainable and circular, replacing the existing Batteries Directive. The new regulation aims to ensure sustainability throughout the lifecycle of batteries, from sourcing to recycling. The law introduces gradual sustainability requirements, higher collection targets, and mandatory recycling. Further detailed rules will be adopted from 2024 to 2028.

### Japan – Japan Partnership for Circular Economy (J4CE)

- A domestic circular economy partnership was launched in 2021 to deepen the understanding about the circular economy, promote collaborative efforts and strengthen public-private alliances among a wide range of companies and stakeholders. A summary of 139 good practices was published by Japanese companies with regard to the circular economy in September 2021.

### Korea, Republic of – K-Circular Economy Implementation Plan

- This plan was formulated with the participation of stakeholders and experts from academia, civil society, and industry. It incorporates promotion of biodegradable plastics and renewable materials, and eco-friendly designs which facilitate reuse and re-production. Further, the plan also includes eco-friendly designs.

### Maldives – Ocean Preservation

- Preserving the oceans is a national priority due to its economic importance, as the source of 60% of its GDP. Banning eight varieties of single use plastics since 1 June, 2022, aims to reduce energy use and waste, while leading to value creation for plastic product collection through partnerships with industry.

## Experience Sharing

### Saudi Arabia – Circular Carbon Economy Program

- The program promotes circularity through circular approaches aiming to address both material wastes and emissions flows and could contribute to sustainable global trade by promoting solutions adapted to country's individual needs, circumstances, and priorities. Carbon removal could be an additional step in the circular cycle beyond the cycle of reduction, reusing, and recycling and could have positive effects on the extraction of natural resources by reducing emissions.

### Switzerland – Plastic and Electronic Recycling Rules (e.g. Environmental Protection Act, Ordinance On Beverage Containers); Chemicals Risk Reduction Ordinance

- National system to recycle PET, beverage containers made from aluminium and glass bottles through a federal regulation and minimum threshold of recycling (a tax will be introduced only if the recycling threshold is not met). Waste bottles that cannot be recycled are incinerated to produce electricity and heat. For electric and electronic equipment, an advance recycling contribution is included in the purchase price.
- The Chemicals Risk Reduction Ordinance (ChemRRV) in Switzerland governs the regulations for batteries. Within its Annex, there are specific provisions concerning the recycling of traction batteries. Additionally, the annex includes regulations on battery labelling, requirements for the return and collection of batteries, mandatory fee payments, and reporting obligations.

### United States – Sustainable Materials Management and National Recycling Strategy

- The concept of sustainable materials management (SMM) aims at the systemic and productive use and reuse of materials over their life cycles, with limited impacts on the environment.
- The National Recycling Strategy aims to create a more resilient and cost-effective national recycling system. And create more equitable access to recycling services reduce waste while promoting recycling and trade in recycled materials.

Note: This Table includes initiatives and experiences shared in meetings in 2022 (based on TESSD Summary Report 2022 - [INF/TE/SSD/R/14](#)), as well as those mentioned in the first two meetings in 2023.

## 3 MAPPING OF MEASURES IN THE WTO

3.1. To inform the mapping exercise of the Working Group, the WTO Secretariat has carried out a mapping of measures that relate to the circular economy at the WTO, helping Members build a broader understanding of the aspects of trade and trade policy which are relevant to each part of the lifecycle. In particular, the mapping identified measures related to the circular economy contained in notifications and trade policy reviews (TPRs) from the WTO Environmental Database.<sup>4</sup>

3.2. The mapping classified measures by circular economy activity/objective, which cover reducing resource consumption and waste generation, promoting the use of biocycles and sustainable materials, encouraging the substitution of non-renewable resources; supporting repair and remanufacturing practices, promoting reuse and recycling, facilitating waste-to-energy conversion, managing hazardous substances and waste in an environmentally sound manner, fostering technology and research development in the circular economy field, and enhancing transparency relating to material composition.

3.3. More specifically, the above-mentioned 11 activities and objectives have been defined for the purposes of the mapping as follows:

- Reduce: Increasing efficiency in manufacturing a product, or use of product, by consuming fewer natural resources and materials. Example: a measure which supports the installation of new equipment that delivers reduction in raw materials, water, or waste with the aim to enhance material efficiency ([G/SCM/N/372/GBR](#)).
- Biological cycles: Processes like composting and anaerobic digestion but only for materials that can be safely returned to the biosphere. Example: a measure that encourages the development of the production of biodegradable plastic bags ([G/TBT/N/UKR/210](#)).

<sup>4</sup> The dataset with the mapping by the Secretariat will be available on the TESSD website for Members.

- Substitute: Switching from one product to another with the latter offering the same functionality through a different product or service. Example: a measure that bans single-use plastic products where alternatives are easily available and affordable ([G/TBT/N/EU/642](#)).
- Repair: Fixing and maintenance of defective product so it can be used with its original function. Example: measures aimed at promoting repair for parts of manufacturing machinery ([G/SCM/N/372/USA](#)).
- Remanufacturing - Refurbishment: Using parts of a discarded product in a new product with the same function, and as-new-condition. Example: measures that set out standards that apply to remanufactured products ([G/TBT/N/MEX/311](#)).
- Reuse: Product is still in good condition and fulfils its original function for the same purpose for which it was conceived, or a slightly alternative function. Example: a measure that provides discounts on levy apply for certain activities which include repurposing for reuse of e-waste ([G/SCM/N/372/AUS](#)).
- Recycling: Process of recovering materials from waste to be reprocessed into new products, materials, or substances whether for the original or other purposes. Example: measures that promote recycling of waste from lead and copper extraction ([G/SCM/N/186/EEC/Add.22](#)).
- Hazardous substances and waste management: Limiting impact of hazardous substances such as, for e.g., mercury content of batteries. Waste management includes collection, transport, disposal and recovery of waste, including the control of these operations and after-care of disposal sites. Example: a measure to impose an import and/or export licensing for import and/or export of hazardous wastes from lead-acid batteries ([G/MA/QR/N/KAZ/1](#)).
- Waste-to-energy: Process of treating waste that creates energy in the form of electricity, heat, or fuel. Example: measures that promote waste-to-energy production facilities ([G/SCM/N/343/USA](#)).
- Technology/Research: Supporting research and development of technology for circular economy. Example: a measure that supports research for material recycling in electric vehicles ([G/SCM/N/372/EU/ADD.27](#)).
- Transparency on material composition: Contains details regarding material composition, as well as transparency regarding end-of-life activities such as recycling and waste sorting. Example: measures that set out requirements for the end-of-life management of batteries ([G/TBT/N/EU/775](#)).

3.4. In addition to assigning measures to circular economy activities and objectives, the mapping also assigned measures to six lifecycle stages (raw material extraction; design; production; packaging and distribution; product use; end of life and waste disposal) and nine sectors (agriculture/food; batteries; construction & buildings; electronics; manufacturing or multiple sectors; plastics & packaging; renewables; textiles; and vehicles).<sup>5</sup> It should be noted that one measure can be assigned to more than one activity/objective, lifecycle stage or sector.

3.5. The analysis finds a total of 520 measures in notifications made by Members to the WTO between 2009 and 2021 that relate to the circular economy (Table 1). Measures were notified by some 85 Members, with the top 20 Members accounting for close to 77% of the 520 measures. More than three quarters of measures related to the circular economy are found in notifications under two agreements, namely the Agreement on Subsidies and Countervailing Measures (SCM) (214 measures or 41%) and the Agreement on Technical Barriers to Trade (TBT) (180 measures or 35%). A good number of measures are also found in notifications on import licensing procedures (IL) (62 or 12%) and quantitative restrictions (QR) (30 measures or 6%).

---

<sup>5</sup> Descriptions of the six lifecycle stages are included in the Annex.

**Table 2. Measures by notifying Member and Agreement**

<b>Member</b>	<b>SCM</b>	<b>TBT</b>	<b>IL</b>	<b>QR</b>	<b>SPS</b>	<b>GP</b>	<b>Other</b>	<b>Total</b>
<b>United States of America</b>	103	12	0	0	0	0	0	<b>115</b>
<b>China</b>	30	17	1	0	0	0	0	<b>48</b>
<b>Korea, Republic of</b>	9	9	11	0	2	0	0	<b>31</b>
<b>European Union</b>	0	21	0	0	1	0	1	<b>23</b>
<b>Hong Kong, China</b>	3	1	11	7	1	0	0	<b>23</b>
<b>Philippines</b>	0	1	17	0	0	0	5	<b>23</b>
<b>Australia</b>	14	1	2	3	0	0	1	<b>21</b>
<b>France</b>	0	17	0	0	0	0	0	<b>17</b>
<b>Japan</b>	0	4	0	0	0	7	1	<b>12</b>
<b>Mauritius</b>	0	2	5	4	0	0	0	<b>11</b>
<b>Finland</b>	9	0	0	0	0	0	0	<b>9</b>
<b>Romania</b>	9	0	0	0	0	0	0	<b>9</b>
<b>Thailand</b>	2	7	0	0	0	0	0	<b>9</b>
<b>Seychelles</b>	0	1	2	5	0	0	0	<b>8</b>
<b>United Kingdom</b>	5	3	0	0	0	0	0	<b>8</b>
<b>Canada</b>	3	3	0	1	0	0	0	<b>7</b>
<b>Uganda</b>	0	7	0	0	0	0	0	<b>7</b>
<b>Estonia</b>	6	0	0	0	0	0	0	<b>6</b>
<b>Türkiye</b>	0	3	0	0	1	0	2	<b>6</b>
<b>Viet Nam</b>	3	3	0	0	0	0	0	<b>6</b>
<b>Other Members</b>	18	68	13	10	9	0	3	<b>121</b>
<b>Total</b>	<b>214</b>	<b>180</b>	<b>62</b>	<b>30</b>	<b>14</b>	<b>7</b>	<b>13</b>	<b>520</b>

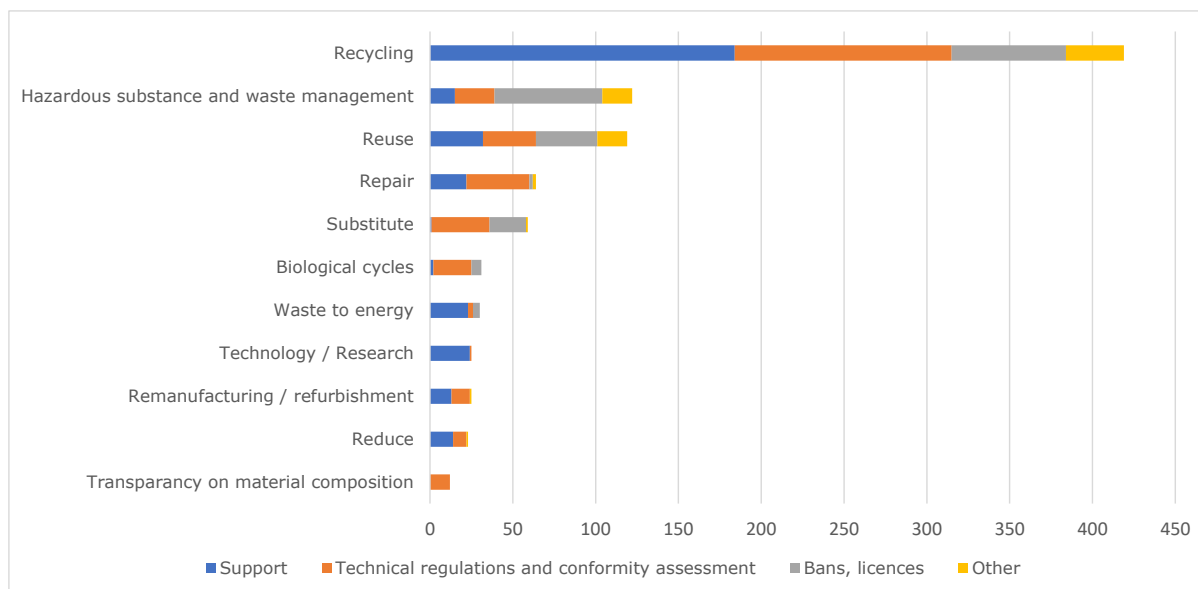
Source: WTO Environmental Database.

Note: 520 measures related to the circular economy were found in notifications of 85 Members under 12 agreements.

3.6. Figure 2 provides the mapping of measures by circular economy activity/objective and type of measure. The large majority of measures relate to downstream stages of the lifecycle, with recycling being the most frequent activity followed by hazardous substance and waste management. A good number of measures also relate to reuse and repair which are found in the middle stages of the lifecycle, while measures that relate to substitute tend to be more upstream. The analysis of measures by circular economy activity shows that while there are a good number of measures that have circular economy aspects or elements, only few measures notified to the WTO have a specific focus on the circular economy.

3.7. The large majority of measures related to the circular economy take the type of either support measures or technical regulations and conformity assessment procedures and appear relevant across most activities along the lifecycle. Another relatively frequent type of measures are bans or licences which tend to be more frequent at the end of life of products, and some other activities such as reuse and substitute.

**Figure 1. Measures by circular economy activity /objective and type in notifications**

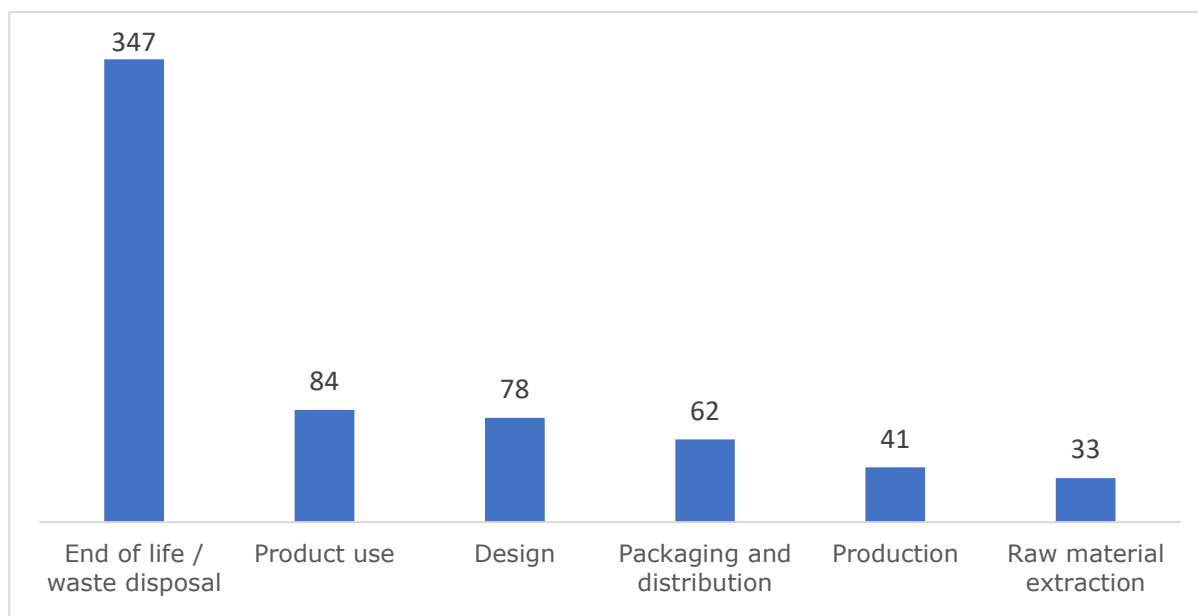


Source: WTO Environmental Database.

Note: The number of measures by activity/objective and type sum to more than 520, since one measure can be assigned to more than one activity/objective, and can consist of more than one type of measure. In particular, 520 measures were assigned to 740 circular economy activities/objectives and covered 633 types of measures.

3.8. In line with the analysis by circular economy activity/objective, Figure 2 shows that the large majority of measures relate to a products' end of life or waste disposal, while a relatively similar number of measures relate to the different stages further upstream in the lifecycle.

**Figure 2. Number of measures by lifecycle stage**



Source: WTO Environmental Database.

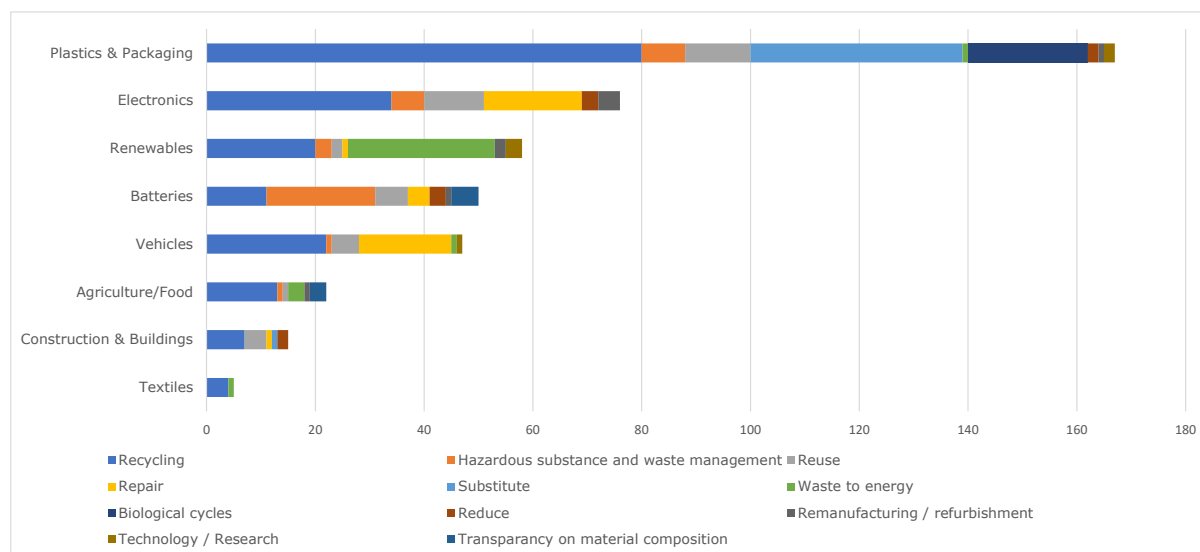
Note: The 520 measures related to the circular economy are assigned to 645 lifecycle stages.

3.9. The 520 measures apply to 580 sectors, the majority of which are specific sectors (58%) while a good number of measures apply to manufacturing horizontally or multiple sectors (42%). Figure 3 shows the number of measures assigned to specific sectors and their composition in terms of

economy activity/objective. The highest number of circular economy-related measures are found for the plastics and packaging sector, to be followed at some distance by the electronics, renewables, batteries and vehicles.

3.10. While measures relating to recycling appear prominent across all sectors, Figure 3 also illustrates sector differences and distinctive linkages with circular economy activities. For instance, repair measures are most prominent in the sectors of vehicles and electronics, likely indicating a focus on extending product lifespans and promoting maintenance practices. Similarly, the battery sector has a relatively high number of number of measures relating to hazardous waste management, highlighting the requirement for proper disposal and handling of battery waste. The plastics and packaging sector is characterised by a relatively high number of substitute measures, indicating efforts to explore sustainable alternatives. The relatively high number of waste-to-energy measures in the renewable sector can be explained by measures applying to biofuels.

**Figure 3. Number of measures by sector and circular economy activity/objective**



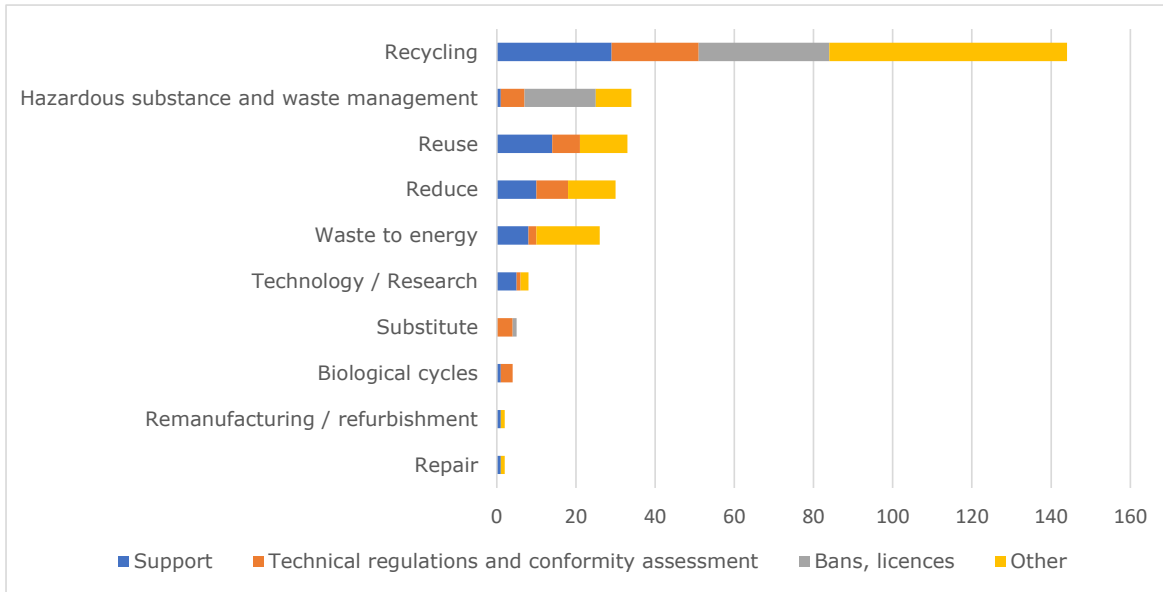
Source: WTO Environmental Database.

Note: Around 242 measures are related to manufacturing horizontally or multiple sectors, which is not shown. The Figure only shows the number of measures for specific sectors.

3.11. Besides notifications, the WTO EDB also includes measures contained in TPRs. The analysis finds that between 1999 and 2021, a total of 199 measures in TPRs relate to the circular economy. These 199 measures correspond to 259 activities and objectives. The majority of the measures relate to recycling. A good number of measures also relate to hazardous substances and waste management, reuse, reduce and waste-to-energy.



**Figure 4. Measures by circular economy activity / objective in TPRs**



Source: WTO Environmental Database.

**4 TRADE ASPECTS OF THE CIRCULAR ECONOMY**

4.1. This section provides a mapping of the trade aspects of the circular economy that have been identified throughout the discussions in the Working Group in 2022 and 2023. This is an illustrative mapping of trade-related issues, rather than an exclusive list, recognizing that trade policies for a circular economy need to flexibly respond to emerging and evolving business trends. Table 3 provides an overview of the trade aspects that are further mapped out below.

**Table 3. Overview of trade aspects of the circular economy**

Classifications and data for circular goods	Definitions and classifications for circular goods
	Data and statistics
Standards and regulations	Standards
	Product design
	Transparency and traceability
Trade facilitation and promotion	Trade facilitation
	Implementation and digitalization of Basel Convention's Prior Informed Consent procedures
	Environmental goods and services
	Trade restrictions and waste management
Capacity building and technical assistance	Trade facilitation and customs capacities
	Standards infrastructure

Other trade-related aspects for cooperation	Support measures for a circular economy
	Knowledge and technology

## 4.1 Classifications and data for circular goods

### 4.1.1 Definitions and classifications for circular goods

4.2. A key challenge in facilitating circular trade relates to the difficulty faced at the customs when differentiating and verifying between different types of waste materials, secondary materials, second-hand goods, goods for refurbishment and remanufacturing, and end-of-life goods. Existing Harmonized System (HS) codes lack the necessary granularity and differentiation needed to effectively address the trade of goods related to the circular economy. HS codes only rarely distinguish between new or used goods and between second-hand goods intended for circular economy from other types of second-hand goods. They also do not distinguish whether products are made from virgin or recycled materials.

4.3. Improving and harmonizing classification systems within HS codes and waste classification systems will likely be of benefit in this respect. Such improvement and harmonization may include developing shared exemptions, ex-outs or specific codes for tariff classification of goods for circular economy and ensuring that hazardous and non-hazardous wastes are appropriately distinguished. To effectively balance waste regulation and promote a circular economy, classifications may be defined in a manner to match the intended purpose of the products. By doing so, the waste destined for treatment and disposal could be classified separately from materials intended for the circular economy.

### 4.1.2 Data and statistics

4.4. Accurate data and statistics are the basis for better understanding and monitoring of the cross-border circular economy. Current data gaps with regard to circular trade make it difficult to comprehend trade-related challenges and opportunities in a circular transition. Improving and harmonizing classification systems within HS codes and waste classification system will also contribute to this purpose.

## 4.2 Standards and regulations

### 4.2.1 Standards

4.5. Standards, regulations and conformity assessment procedures can help identify and promote goods and services that support the circular economy. While the WTO is not a standard-setting organization, it can play an important role in enhancing transparency and cooperation in this area. Members could consider principles set out under the WTO Agreement on TBT when developing standards or mutual recognition, to ensure that these do not become barriers or pose challenges to the advancement of the circular economy. Exploring the integration of circularity within existing trade agreements, as well as developing new policies and programmes, such as digital product passports could also promote circular trade.

4.6. Standards are needed to ensure that product safety, performance and reliability are sufficiently considered throughout a products lifecycle. Developing international standards or achieving harmonization or mutual recognition of standards regarding the circular economy would be important for enhancing circularity. Standards applying to materials previously categorized as waste (like electronic waste and retired batteries) may not currently incorporate or consider elements of circularity. Recovered materials from scrap, end-of-life products, and parts for use in new products may be inhibited due to existing standards which were originally designed for environmental protections.

### 4.2.2 Product design

4.7. Product design can be an enabler of better circularity by making products easier to repair, refurbish, remanufacture, recycle etc. Practice exchanges, cooperation and potential harmonization

of circular design policies can contribute to promote the dissemination of products designed for circularity. Standards can support design for circularity which defines the durability, repairability, upgradability, and recyclability of products, as well as the material containing recycled material. Aligning eco-design standards across countries could promote the entry of environmentally friendly products into multiple markets, which in turn can support scaling of circular economy business models.

#### **4.2.3 Transparency and traceability**

4.8. Transparency and traceability in value chains can ensure safety in secondary markets, stimulate market development and support circular trade in diverse sectors. Information on material composition provided in labelling or other instruments such as product passports facilitate the products' end-of-life management in secondary markets, including by providing information on how products could be safely managed, recycled, or disposed. For example, the development of battery passports can enhance traceability and life cycle assessment. Clarifying definitions and classifications of circular economy products and developing appropriate standards and regulations also contribute to better transparency and predictability.

### **4.3 Trade facilitation and promotion**

#### **4.3.1 Trade facilitation**

4.9. Trade facilitation is an essential aspect of promoting circular business models and ensuring the smooth flow of goods across borders. However, there are various impediments that need to be addressed to enable the efficient implementation of circular trade practices. A key challenge is the perceived burden of heavy and time-consuming procedural requirements involved in shipping end-of-life products for their circular use. These issues include, but are not limited to, delays for shipping (hazardous) waste trade, delays for remanufacturing trade, limited end-of-life visibility, challenges to find shipping firms that are willing to ship certain types of second-hand materials, all of which can hinder the adoption of circular business models.

4.10. Developing effective verification processes to classify circular goods with greater accuracy can help prevent misclassification of goods, reduce revenue fraud, and maintain regulatory compliance while supporting the circular economy. Furthermore, suggestions to reduce impediments to trade include, *inter alia*, providing for simplified procedures between trusted parties, implementing fast-track or green lane procedures under the WTO Trade Facilitation Agreement, developing streamlined trade permit systems, utilizing Authorized Economic Operator (AEO) programs, and adopting national single windows. Further, reducing regulatory barriers will also support greater facilitation of circular trade. For instance, regulatory barriers result in the increase in transportation fee for disposal, waste and used batteries.

#### **4.3.2 Implementation and digitalization of Basel Convention's Prior Informed Consent procedures**

4.11. Waste and trade rules apply to circular trade. The Basel Convention aims to control the transboundary movement of hazardous waste. Trade in controlled waste, which includes hazardous waste, is either banned or subject to Basel Convention's prior informed consent (PIC) procedure. Better coordination, digitalization and automation of PIC notification procedures could streamline and expedite regulatory processes, promote efficiency by complementing customs procedures, and enhance transparency at the border.

#### **4.3.3 Environmental goods and services**

4.12. Promotion and facilitation of trade in environmental goods and services can help spread technological solutions for the transition to circular business models. A broad range of goods and services are needed to improve resource and energy efficiency, replace traditional inputs with renewable or recovered goods and manage solid and hazardous waste. Addressing various regulatory and non-tariff barriers as well as rationalizing high tariffs and complex rules of origin requirements can help promote trade in environmental goods related to the circular economy.

#### 4.4 Trade restrictions and waste management

4.13. Trade facilitation and restrictions are two sides of the same coin. Appropriate trade restrictions addressing environmental and health risks as well as illegal waste trade are the basis for facilitating circular trade. Meanwhile, there may be room for rationalizing trade restrictions so as not to hinder the efficient flow of circular goods. In fact, a significant percentage of globally traded waste and scrap attracts export restrictions, which limit the movement of these materials.<sup>6</sup> Many countries also prohibit imports of used goods for direct reuse. Such restrictions may be rationalized to minimize adverse effects such as disrupting global supply chains, disincentivizing scrap collection, hindering resource availability, and affecting the uptake of circular trade.

4.14. At the same time, it is important to ensure that trade in waste and scrap are exported to markets with appropriate recycling capacities and prevent unwanted or illegal waste imports into developing countries. Second-hand goods also tend to have shorter lifespans compared to new products, implying that the country importing a second-hand good is likely to have to burden its disposal as waste. Developing countries may often lack proper waste management infrastructure, including collection systems, recycling facilities, and treatment plants. Insufficient infrastructure would make it challenging to establish effective circular economy practices and manage waste efficiently. Further, the composition of waste in developing countries is often mixed, making it challenging to separate and recycle different materials effectively. Meanwhile, rationalization of trade restrictions and enforcement may potentially facilitate exports of circular goods from developing countries to markets with appropriate recycling capacities, contributing to circularity of potential waste.

#### 4.5 Capacity building and technical assistance

##### 4.5.1 Trade facilitation and customs capacities

4.15. Developing and least developed countries (LDCs) face challenges in enforcing the Basel Convention and the WTO TFA due to various constraints including, *inter alia*, limited capacity of customs officials to identify and distinguish between hazardous waste and circular goods, as well as fiscal and technical limitations in upgrading customs systems. Building the capacities of customs and strengthening infrastructure for trade facilitation agencies could promote the shift towards risk-based customs control and release processes which support minimizing the risk of unwanted waste imports while facilitate imports of legitimate circular economy goods. It could help customs with identifying circular goods, monitoring reman trade to prevent mislabelling or illicit activities, and implementing preferential tariff schemes. Developing countries may also benefit from engagement in trusted trader template processes.

##### 4.5.2 Standards infrastructure

4.16. Strengthening national and regional standards infrastructures — including the capacity for conducting internationally-recognized inspection, testing, and certification — helps to build trust along supply chains by allowing domestic companies to demonstrate compliance with the transparency, traceability and other requirements that are needed for a circular economy to operate safely and efficiently at a global scale.

#### 4.6 Other trade-related aspects for cooperation

##### 4.6.1 Support measures for a circular economy

4.17. Support measures can foster the uptake of circular economy models and technologies. For example, financial incentives and other support measures can encourage the adoption of circular economy practices, traceability and accountability along the lifecycle, the use of recycled materials, investment in technologies for circularity, including recycling, trade of sustainable products, and foster entrepreneurship in the sector. Transparency and practice exchanges on Members' policies

---

<sup>6</sup> According to the OECD, 40% of copper, 30% of aluminium, and 20% of iron in globally traded waste and scrap attract export restrictions in the form of export prohibitions, quotas, taxes, and nonautomatic export licensing requirements.

for promoting a circular economy can strengthen further trade-related international cooperation for enhancing a cross-border circular economy.

#### **4.6.2 Knowledge and technology**

4.18. Dissemination of knowledge and technology is an accelerator of cross-border circular economy. For instance, innovative technologies, together with the exploitation of scale economies, are important for effective and viable recycling and remanufacturing processes. Promoting technology and knowledge transfer, along with fostering cooperation, could support circular management of material flows and the extension of material lifetimes. Mechanisms to enhance cooperative exercises, particularly in areas such as technology acquisition and utilization, could be considered.

### **5 REFLECTIONS ON WAY FORWARD**

5.1. To be added based on Members' discussions and as the document is being further developed.

---

## **ANNEX**

The following six lifecycle stages have been used in the mapping:

- Raw material extraction: Process of extracting crude or virgin materials that are used in product manufacturing or processing.
  - Design: Decisions made at the design phase influence how long something lasts, what it is made of, if it can be repaired, and what happens to it at the end of life.
  - Production: Processes or methods that converts inputs like raw material or semi-finished goods to make finished product or services.
  - Packaging and distribution: Packaging and distribution will provide information on material composition.
  - Product use: Product use includes consumption, maintenance, and repair of products.
  - End of life and waste disposal: Reduce, reuse and recycle are captured by different elements of end of life, while waste disposal is limited to incineration and landfills.
-