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CHATHAM HOUSE

POLICY PAPER:

THE EU'S CIRCULAR ECONOMY TRANSITION FOR PLASTICS AND TEXTILES

Opportunities and challenges for trade partners in emerging markets

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switch
to Circular Economy
Value Chains

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i. Executive summary

- **Current plastics and textiles value chains are extractive and linear** – using large quantities of resources, emitting greenhouse gasses and pollutants, and creating large volumes of waste. These have negative impacts on the environment and human health.
- **The EU Circular Economy Action Plan (CEAP 2.0) aims to drive multiple value chains towards circular models.** It targets sourcing, design, manufacture, distribution, sale and waste management. Many of the CEAP 2.0 policies are still being developed but could have a transformative effect on producer countries once they are implemented.
- **Circular plastics policies are increasing in ambition.** As a result, producers will pay more for the costs of plastic production and waste, product circularity will become a requirement to enter the EU market, and plastic waste trade will become more restricted.
- **The plastic packaging industry is also increasing ambition towards circular models.** Pledges include reducing the use of virgin plastics in favour of recycled and/or bio-based content, and making all packaging recyclable, reusable or compostable.
- **Producers in developing countries are facing increasing pressure** to provide recyclable packaging for products to access the EU market and multinationals' portfolios. Sourcing high-quality recycled content will be a critical strategy to ensure resilience, and producers who shift to circular packaging solutions can expect stronger demand, especially if materials are traceable and impacts are third-party verified.
- **The textiles and garments value chain also faces legislation for circularity – but this is less developed** and will take time to increase in effect. The EU's new sustainable textiles strategy is an important development in this respect, but ambitious implementation is key to its success.
- **The textile sector can expect circular policies to target the entire value chain,** from design to chemical use, waste management and sourcing of recycled content. Other upcoming policies for textiles include mandatory due diligence on supply chains, digital product passports and extended producer responsibility in more countries.
- **In the absence of effective legislation on textile circularity in the EU,** industry commitments and initiatives for managing and measuring supply chain impacts have played an important role in building the capacity of producers and preparing the ground for circular policy.
- **For European brands and developing country suppliers, the pressure on supply chain transparency will grow.** Smaller businesses may struggle as a result. Measures to promote cleaner production, design for circularity and recycled content, and adoption of transparency and traceability protocols and processes, will require significant investment and capacity building. Securing a stable supply of recycled content will present multiple challenges. A supportive policy environment and collaborative approaches are needed.
- **For both plastics and textiles, policies with significant implications for producers are expected to take effect as soon as 2025.** Considering it takes years to develop coherent circular policies and transform value chains, CEAP 2.0 may become a technical barrier to trade for many producer countries in the short term.
- **Producers could benefit from adopting relevant circular practices,** not only to manage the environmental impacts of resource-intensive production, but also as a key strategy for staying competitive in greening global markets.
- **The EU will continue to support its trading partners** and use its funding instruments to support improved waste prevention and management and help producers to develop circular plastics and textiles industries worldwide, for example through the Switch to Circular Economy Value Chains project.

Key terms

Linear economy
The linear economy is the term for our current globalized economy in which we extract resources, manufacture products, use them, and then throw them away. It is based on mass production, planned obsolescence (when a product is designed to have a limited lifespan to encourage consumers to buy it again) and consumerist lifestyles promoting short-life disposable products.[1]

Circular economy
The circular economy is an evolution of the way the world produces and consumes both goods and services. The circular model involves designing out waste and pollution, sharing, leasing, reusing, repairing, refurbishing and recycling to keep products and materials in use for as long as possible. Equally vital are restoring the world's wilderness, building regenerative agricultural systems, using renewable materials, and shifting to renewable energy sources.[2]

Closed loop recycling
Closing the loop refers to the process of recycling products without material loss, thereby using fewer raw materials and reducing waste.[3]

Value chain
The value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production, delivery to final consumers, and final disposal after use.

Extended producer responsibility
Extended producer responsibility is a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of their products after the consumer has finished with them. Assigning such responsibility could in principle provide incentives to prevent waste at the source, promote sustainable product design, and support the achievement of public recycling and materials management goals.[4]

[1] Chatham House (2021), 'What is the circular economy?', https://www.chathamhouse.org/2021/06/what-circular-economy
[2] Ibid.
[3] AMCOR (2019), 'What is closed loop recycling?', https://www.amcor.com/insights/blogs/what-is-closed-loop-recycling
[4] OECD (2022), 'Extended producer responsibility', https://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.html

Glossary

AFIRM V.6	Apparel and Footwear International RSL Management Group – Restricted Substances List, Version 06
BCI	Better Cotton Initiative
C2C	Cradle to Cradle
CEAP 2.0	The EU's second Circular Economy Action Plan
CmiA	Cotton made in Africa
EMS	Environmental Management System
EPR	Extended producer responsibility
ESPR	Ecodesign for Sustainable Products Regulation
FSC	Forest Stewardship Council
GOTS	Global Organic Textile Standard
GRS	Global Recycle Standard
HDPE	High-density polyethylene
ISO	International Organization for Standardization
LCA	Life-cycle assessment
LEED	Leadership in Energy and Environmental Design
MMCF	Man-made cellulosic fibres
OCS	Organic Content Standard
PE	Polyethylene
PEFC	Programme for the Endorsement of Forest Certification
PET	Polyethylene terephthalate
PHA	Polyhydroxyalkanoates
PLA	Polylactic acid
PP	Polypropylene
RCS	Recycled Claim Standard
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals – Regulation (EU) No 1907/2006
rPET	Recycled polyethylene terephthalate
rPSF	Recycled polyester staple fibre
SCS	Scientific Certification Systems
STANDARD 100 (OEKO-TEX)	A label for textiles tested for harmful substances
UL 2809	UL 2809 Environmental Claim Validation Procedure for Recycled Content
USDA NOP	US Department of Agriculture National Organic Program
ZDHC	Zero Discharge of Hazardous Chemicals

1

Introduction

Waste plastic bottles at an informal collection point in Casablanca, Morocco. Photo: Mark Draeck

Global value chains are under huge pressure to become greener to help slow the accelerating triple planetary crisis[5] of climate change, biodiversity loss, and waste and pollution. Environmental regulations in large consumer markets and increasing environmental, social, and governance concerns among multinational companies are affecting producers of products such as plastic packaging, textiles and clothes, in countries all over the world. The concept of the 'circular economy', which aims to design out waste and keep materials in use for as long as possible, while minimizing pollution, is becoming a defining feature of the transformation of value chains.

As the circular economy agenda moves forward at pace, through policies and industry initiatives in consumer countries, there is a risk that it will create trade barriers for developing country producers. At the same time, there is a huge opportunity for producers who adopt circular strategies to become favoured suppliers in certain high value market segments. Developing country producers that implement a circular production strategy can both manage their environmental impacts and stay competitive in greening export markets.

This paper assesses how EU policy is accelerating the circular economy transition, what implications this will have for global value chains, and how developing country producers may navigate changing markets.

The report is structured as follows. Chapter 2 outlines the key features of the EU's Green Deal and second Circular Economy Action Plan. Chapter 3 looks at the drivers of circularity and potential impacts for developing country producers in the plastic packaging value chain, and Chapter 4 does the same for the textile and garments value chain. Chapter 5 outlines a shortlist of donor programmes and initiatives supporting circular value chain transformations and Chapter 6 gives concluding remarks and comments on the way forward.

Unsorted plastic waste at an informal collection point in Marrakech, Morocco. Photo: Camille Tahon

[5]UN Framework Convention on Climate Change (2022), 'What is the Triple Planetary Crisis?', https://unfccc.int/blog/what-is-the-triple-planetary-crisis

2

EU policies drive the greening of global value chains

Baled plastic waste. Photo: Envato

Chapter 2 in brief:

- The European Union is rapidly implementing environmental policies through the Green Deal agenda, with circular economy as a defining feature.
- The EU's second Circular Economy Action Plan (CEAP 2.0) introduces strict policies to target environmental impacts along the whole value chain, inside and outside the EU.
- Two key developments are that:
    - Products should be designed and manufactured for circularity.
    - Greater transparency will be required on the environmental impacts of products, production methods and supplier entities.
- The EU is mobilizing finance to implement the Green Deal and support partners, but producer countries must be prepared to seed and attract additional private capital to increase the circularity of their export industries, should they wish to maintain competitive access to the EU market.

The EU represents 15.3 per cent of global GDP and is the world's largest trading bloc, which means it can exert significant influence over international value chains.[6] The EU is now carrying out a comprehensive environmental reform agenda, both through sectoral policies and through its Green Deal.[7] The Green Deal contains an updated Circular Economy Action Plan (CEAP 2.0),[8] which sets out the legislative agenda for the current five-year term, 2019–2024. CEAP 2.0 will have important ramifications along global value chains, in particular for producers and suppliers in developing and emerging markets.

One of the flagship policies of CEAP 2.0 is the Ecodesign for Sustainable Products Regulation. This expands on the existing EU Ecodesign Directive for energy by introducing detailed and harmonized sustainability criteria for products. It is likely to make product circularity a necessary condition for access to the European market. This means that exporting developing countries will have to make their products more durable, reusable, repairable, recyclable and free of harmful substances to meet these requirements. While this is necessary to reduce the life cycle impacts of goods with high environmental footprints, it may also prove a barrier to trade and shut many low- and middle-income countries out of the European market.[9,10,11,12]

[6] World Bank (2022), 'GDP (current US$)', https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2020&start=1960 (accessed 17 Sep. 2022)
[7] European Commission (2019), 'The European Green Deal', https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF
[8] European Commission (2020), 'A new Circular Economy Action Plan: For a cleaner and more competitive Europe', https://eur-lex.europa.eu/resource.html?uri=cellar:9903b325-6388-11ea-b735-01aa75ed71a1.0017.02/DOC_1&format=PDF
[9] Lucas, P., Brink, H. and van Oorschot, M. (2022), 'Addressing impacts of the Dutch circular economy transition', PBL Netherlands Environmental Assessment Agency, The Hague, https://www.pbl.nl/sites/default/files/downloads/pbl-2022-addressing-international-impacts-of-the-dutch-ce-transition-4322.pdf
[10] Jack's paperBarrie, J. et al. (2022), 'The role of international trade in realizing an inclusive circular economy', Chatham House, London, https://www.chathamhouse.org/2022/10/role-international-trade-realizing-inclusive-circular-economy
[11] Circle Economy (2022), 'Thinking beyond borders to achieve social justice in a global circular economy', https://www.circle-economy.com/resources/thinking-beyond-borders-to-achieve-social-justice-in-a-global-circular-economy
[12] van der Ven (2022), 'Circular innovation and ecodesign in the textiles sector: Towards a sustainable and inclusive transition', TULIP Consulting & Sitra, Helsinki, https://www.sitra.fi/app/uploads/2022/09/sitra-circular-innovation-and-ecodesign-in-the-textiles-sector.pdf

CEAP 2.0 will also mandate more information about products' sustainability at the point of sale, and require environmental claims to be backed up by robust and harmonized evidence, such as the Product Environmental Footprint.[13] In the case of packaging, the EU will also introduce harmonized labelling to enable correct collection, segregation and disposal of waste. While labelling and product information are unlikely to shift demand to green products in the near term, producers will be burdened by more measurement and reporting of content and impacts.

The EU Green Deal also contains a raft of policies beyond the CEAP 2.0 that will affect developing country producers of textiles and plastics. For example, the Green Deal includes a comprehensive reform of sustainable finance policy.[14] To improve transparency and guide investments toward green activities, European firms will now be asked to provide third-party assured environmental disclosures as part of the Corporate Sustainability Reporting Directive. This will add to the reporting burden on suppliers.[15] Furthermore, the green finance taxonomy, a classification of sustainable economic activities, aspires to shift capital to operations that meet specific environmental performance criteria relating to pollution, water, climate, circular economy, and biodiversity.

Plastic baler at a sorting centre in Oum Azza, Morocco. Photo: Yasmina Lembachar

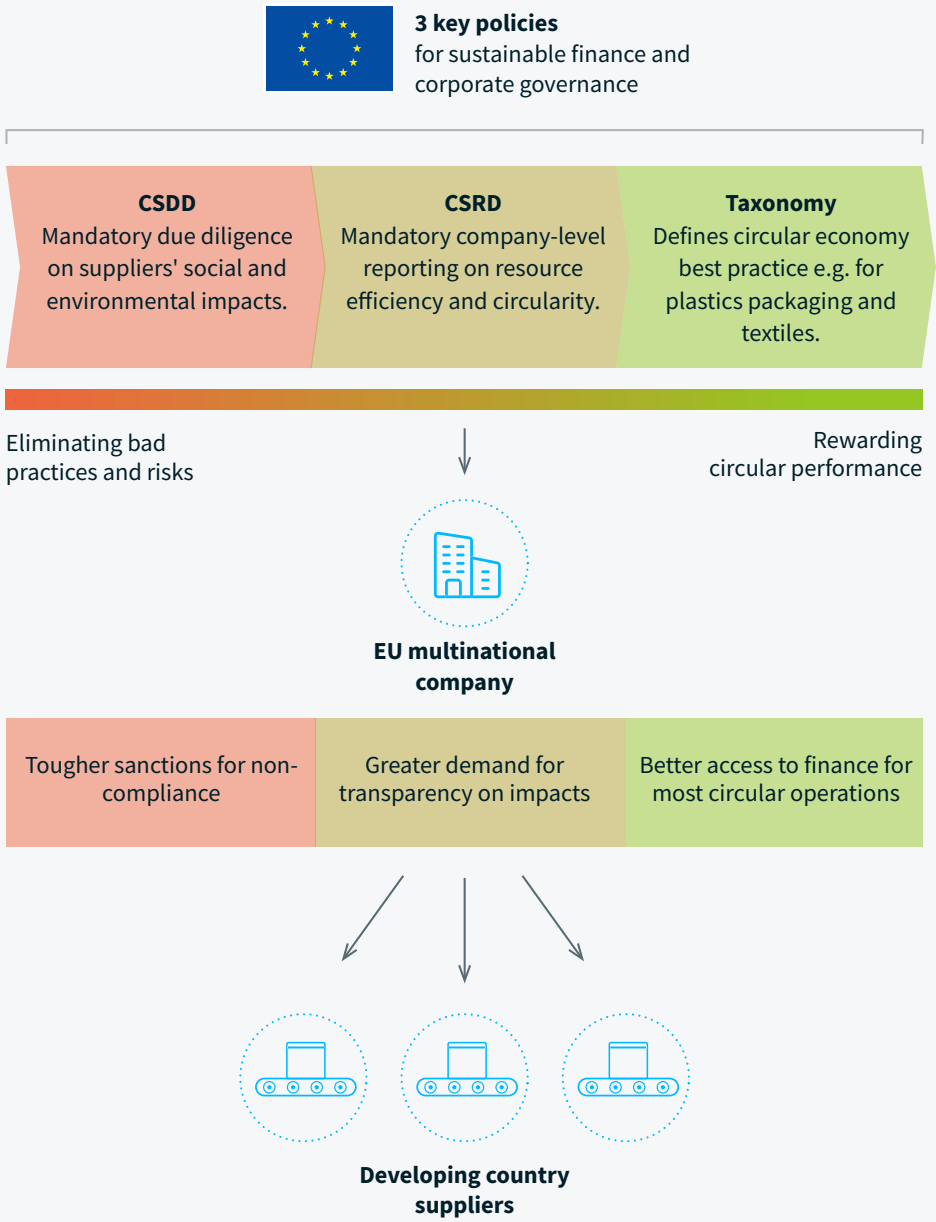
[13] Gumbau, A. (2022), 'EU to tackle 'green claims' with unified product lifecycle methodology', https://www.euractiv.com/section/circular-economy/news/eu-to-tackle-green-claims-with-unified-product-lifecycle-methodology/

[14] European Commission (2021), 'Strategy for financing the transition to a sustainable economy', https://ec.europa.eu/info/publications/210706-sustainable-finance-strategy_en

[15] European Financial Reporting Advisory Group (2022), 'Exposure draft: ESRS E5 Resource efficiency and circular economy', https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FED_ESRS_E5.pdf

Elements of the EU regulatory framework on corporate governance and sustainable finance

Three key elements of the EU Green Deal – the Corporate Sustainability Due Diligence Directive, the Corporate Sustainability Reporting Directive and the green finance taxonomy – will drive improvements in multinational corporations' social and environmental impacts.



Other reforms will seek to eliminate bad practices across entire supply chains. The proposed Corporate Sustainability Due Diligence Directive will force EU companies to address human rights and environmental impacts throughout their supply chains. For companies with more than €150 million turnover and 500 employees, due diligence needs to be tied to the corporate strategy and violations must be prevented, identified and mitigated – otherwise member states will impose sanctions. For the textile sector, smaller companies (250 employees and €40 million turnover) will also be covered by due diligence requirements.[16] Producers can therefore expect much tighter scrutiny from buyers over environmental impacts such as waste, pollution, greenhouse gas emissions, natural resource use and ecosystem degradation.[17]

Policies may take some time to see an effect, but by 2025, EU CEAP 2.0 should significantly change the way suppliers do business. Producers will be expected to improve monitoring and management of waste, emissions and origin of raw materials. New due diligence requirements will likely mean stronger enforcement of buyers' supplier codes. The technologies and management systems needed to meet new requirements are going to be expensive – and producer countries cannot rely solely on support from developed countries support to cover the costs, especially for resource efficiency and circularity. While foreign direct investment in renewable energy shows a strong trend, support for other Sustainable Development Goals is weak relative to pre-COVID-19 pandemic levels.[18] The Goal that is most relevant to the circular economy, Goal 12 on Sustainable Consumption and Production, attracts very little development assistance compared with other goals.[19] Recent G7 initiatives may boost green foreign investment, such as investment in infrastructure for waste management,[20] but developing countries must be prepared to seed and attract capital for the greening of their export industries if they are to maintain a strong relationship with the EU market.

The EU's economy-wide approach to make goods and services, supply chains and investments more circular is complemented by a series of policies for specific value chains, both in CEAP 2.0 and some individual EU member states. Chapters 3 and 4 of this paper look in more detail at policies affecting the plastic packaging and textile value chains, with a particular focus on EU policy.

[16] European Commission (2022), 'Corporate Sustainability Due Diligence', https://ec.europa.eu/info/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en

[17] European Parliament (2021), 'European Parliament resolution of 10 March 2021 with recommendations to the Commission on corporate due diligence and corporate accountability', https://www.europarl.europa.eu/doceo/document/TA-9-2021-0073_EN.html

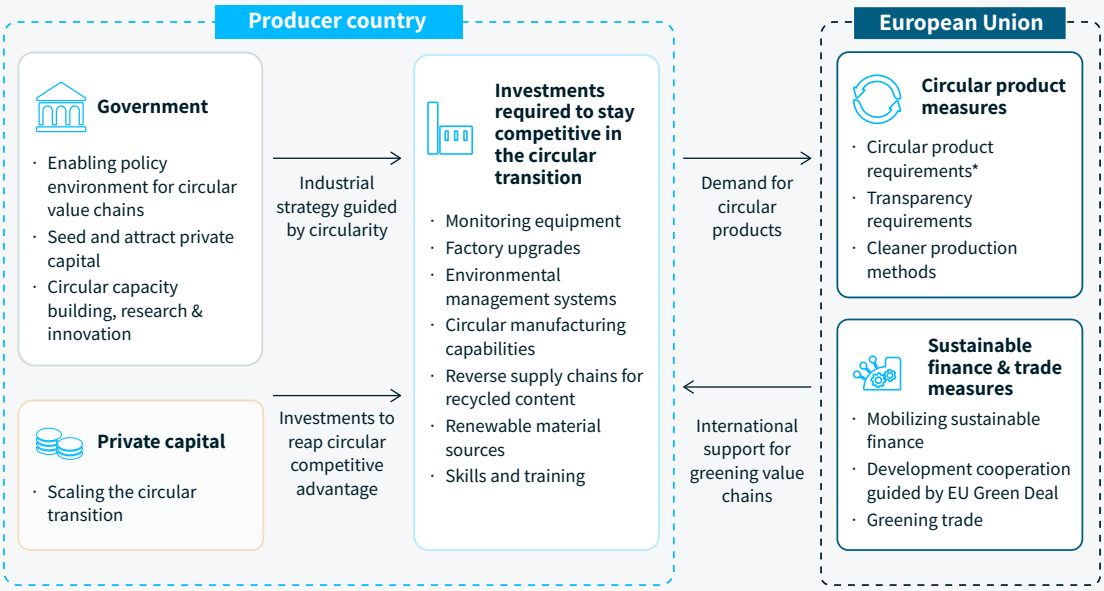
[18] United Nations Conference on Trade and Development (2022), 'World Investment Report 2022', https://worldinvestmentreport.unctad.org/world-investment-report-2022/chapter-1-global-investment-trends-and-prospects/

[19] Schröder, P. and Raes, J. (2021) 'Financing an inclusive circular economy', Chatham House, https://www.chathamhouse.org/2021/07/financing-inclusive-circular-economy

[20] Scull, D. and Healy, C. (2022) 'One vision in three plans: Build Back Better World and the G7 global infrastructure initiatives', E3G, https://9tj4025ol53byww26jdkao0x-wpengine.netdna-ssl.com/wp-content/uploads/B3W-G7-Report-E3G.pdf

Go circular to stay competitive

Producer countries will need to demonstrate leadership through bold industrial policy to reap a competitive advantage in greening markets, which are accelerated by EU circular economy policy measures.



*Products that are more durable, repairable, reusable and recyclable. Sourcing of renewable and recycled content, rather than virgin resources.

3

Plastics and plastic packaging value chain

Employees of the Valplast recycling company in Morocco feed plastic waste into a metal detector. Photo: Yasmina Lembachar

Chapter 3 in brief:

- The global plastic pollution problem has become so urgent that circular policies in the sector are advancing fast, especially in the European Union.
- The EU now plans to make the global plastic packaging value chain more circular by:
  - Requiring that plastic packaging that enters the EU is recyclable at scale.
  - Making it more costly to produce virgin plastics through taxes and extended producer responsibility.
  - Limiting plastic waste exports and increasing the value of waste management within the EU.
- Many large brands have targets to reduce plastic packaging, leading to premiums for, and growth in, circular solutions.
- Producer country governments and industry must both prepare for the risks of upcoming trade barriers and innovate into growing circular market segments.
- Design for recyclability, as well as domestic supplies of traceable and certifiable recycled content, will be essential to remain competitive.

3.1 Plastic packaging – a global problem with circular solutions

Plastics production is growing exponentially. Greenhouse gas emissions from plastic production and disposal are projected to reach over 10 per cent of the total amount of carbon that can be emitted for temperatures to remain below target limits.[21] The spiraling problem of plastic pollution of oceans and land, and the threats it poses to human health, make plastic one of the highest priorities in the circular transition. The plastic value chain is incredibly linear.

Only 9 per cent of all the plastic waste ever generated has been recycled, while 12 per cent has been incinerated and 79 per cent has ended up in landfills or polluted the environment.[22]

Without decisive action, the plastic pollution problem will double in the next decade.[23] Packaging makes up almost half of Europe's plastics demand, and most packaging is designed to be single use.[24]

Packaging also offers significant potential for improving circularity. Many items are excessively packaged, offering opportunities to reduce material use, and many packaging applications could go from single- to multi-use if packaging formats, distribution systems and consumer behaviour changed. Plastics in packaging are also one of the easiest recycling challenges to tackle, thanks to the large volumes of waste available. Single material packaging solutions offer the greatest potential for closed-loop recycling.[25]

[21] Center for International Environmental Law (2019), 'Plastics & Climate: The Hidden Costs of a Plastic Planet', https://www.ciel.org/reports/plastic-health-the-hidden-costs-of-a-plastic-planet-may-2019/
[22] Geyer, R., Jambeck, J. R. and Law, K. L. (2017), 'Production, use, and fate of all plastics ever made', Science Advances 3(7): e1700782, doi: https://doi.org/10.1126/sciadv.1700782/
[23] Borrelle, S. B. et al. 'Predicted growth in plastic waste exceeds efforts to mitigate plastic pollution', Science, 369(6510): 10.1126/science.aba3656
[24] PlasticsEurope (2021), 'Plastics the Facts', https://plasticseurope.org/wp-content/uploads/2021/12/Plastics-the-Facts-2021-web-final.pdf
[25] Principles for Responsible Investment (2020), 'Plastics: The challenges and possible solutions', https://www.unpri.org/plastics/plastics-the-challenges-and-possible-solutions/4773.article

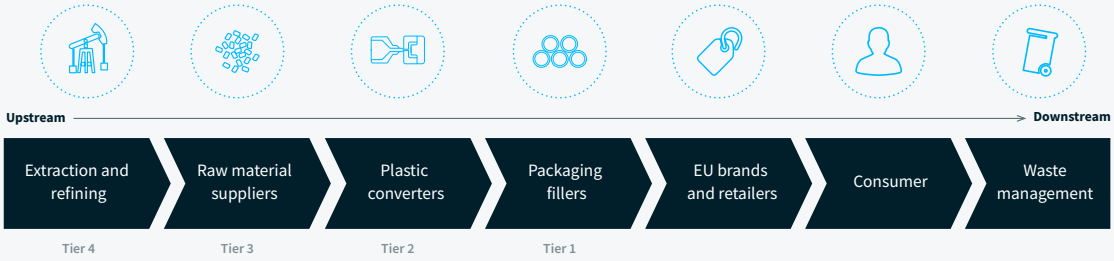
Governments, businesses, investors, NGOs and international organizations are now mobilizing to tackle the plastics value chain. In March 2022, 175 countries agreed to develop a global treaty to restrict plastic waste, which elevates the issue to a similar level to preventing biodiversity loss and tackling climate change.[26] The plastics treaty is expected to be finalized by the end of 2024, meanwhile, ambitious policies are already being introduced around the world. Most efforts target plastic pollution through bans of specific plastic items, as well as improved waste management solutions and restrictions on the trade in waste plastics. Collection, sorting and recycling of plastics are expected to nearly double in the next decade.[27]

However, under business-as-usual, the overall growth in plastic volumes will far outpace growth in recycling capacity[28]

leading to even greater leakage of plastics into oceans and on land, as well as open burning of waste leading to toxic air pollution. Most of the growth in plastic waste will occur in regions where collection and recycling systems are not equipped to deal with existing waste, let alone even greater quantities.[29]

The plastic packaging value chain

The current linear model for producing plastic packaging in a simplified diagram. In reality, the structure of the supply chain varies greatly by packaging type and application.



[26] UNEP (2022), 'What you need to know about the plastic pollution resolution', https://www.unep.org/news-and-stories/story/what-you-need-know-about-plastic-pollution-resolution
[27] S&P Global Platts (2021), 'Global recycled plastics set for continued growth', https://plattsinfo.spglobal.com/rs/325-KYL-599/images/Steel%20vs%20plastics%20-%20race%20to%20sustainability.pdf?mkt_tok=MzI1LUtZTC01OTkAAAGCHKPwOshsPnHCdljWyh9Uw-41x3_vIuS0AjcJIe4xhGastzRP6ns7zhoJvf7P9zn-jUdnEoIHQfq8aevsp6TmgI10iGvl7CRMxjIGTC8Wausgu-Yy
[28] SYSTEMIQ (2022), 'ReShaping Plastics', https://www.systemiq.earth/wp-content/uploads/2022/04/ReShapingPlastics-v1.9.pdf
[29] SYSTEMIQ (2020), 'Breaking the Plastic Wave' https://www.systemiq.earth/wp-content/uploads/2020/07/BreakingThePlasticWave_MainReport.pdf

3.2 Policy and market drivers of circularity for plastics

3.2.1 Background to EU policy on plastic packaging

Europe has struggled with high levels of plastic waste and pollution for several decades, and the plastics sector has a relatively advanced regulatory framework on circularity.

The Waste Framework Directive and Packaging and Packaging Waste Directive have set recycling targets and circular design requirements on plastic packaging products for over a decade. Most member states have an Extended Producer Responsibility (EPR) scheme for packaging, several of which have been in operation since the 1990s.[30] But with growing public concern about plastic pollution, EU regulation on plastics circularity has gained additional momentum in recent years. Since the 2018 launch of the European Strategy for Plastics in a Circular Economy, action has increased, with bans on commonly littered single-use plastic items and a levy on member states for non-recycled plastics.[31] With a regulatory framework to build on, and strong public support for further action on plastic pollution, EU legislation could exert significant pressure on global plastic value chains to become more circular in the near future.

3.2.2 EU plastics policy is entering a new phase

The EU now wants to move into a new phase of more transformative policy. Upcoming reforms will shift the economics of plastics production, control which plastics are used in Europe, and strengthen the management of plastic waste. These trends are explained below, and Section 3.3 discusses possible consequences for producer countries.

Sorted plastic bottles at a sorting centre in Oum Azza, Morocco. Photo: Camille Tahon

[30] European Environment Agency (2020), 'Plastics, the circular economy and Europe's environment – A priority for action', https://www.eea.europa.eu/publications/plastics-the-circular-economy-and

[31] European Commission (2022), 'Plastics in a circular economy', https://ec.europa.eu/info/research-and-innovation/research-area/environment/circular-economy/plastics-circular-economy_en

Costs of the linear system are passed on to producers

Plastics production and pollution have staggering environmental costs, but the EU and member state governments have previously done little to address this through fiscal measures. With increased attention to the problems caused by plastics, incentives are now gradually shifting, strengthening the price competitiveness of recycled options, especially for plastic packaging. Following an EU levy on member states for non-recycled plastic packaging waste, more European countries, including Poland, Spain, Italy and the Netherlands, are expected to introduce plastic packaging taxes imminently.[32] The United Kingdom, which is not a member of the EU, also introduced a tax of £200 per tonne on plastic packaging with less than 30 per cent recycled content in April 2022, boosting demand for recycled polymers for the UK market.

The main mechanism for passing costs of waste management onto consumers and producers in Europe is through EPR schemes. However, these have failed to fully recover the costs of plastic waste management and have not appropriately incentivized packaging re-design for circularity. Many schemes also contain loopholes that allow producers to ship collected plastic waste abroad for processing or recycling, without having to show proof that it was actually recycled, thereby encouraging waste dumping abroad.[33,34] To deal with these issues, plastic waste trade is becoming restricted, and several EU member states are starting to use EPR fee differentiation (or 'eco-modulation') as a tool to incentivize circular polymer choices and packaging designs over those that create a greater waste burden.[35] For example, in the French EPR system, CITEO, polyethylene (PE) and polypropylene (PP) packaging with at least 50 per cent recycled content has a 50 per cent reduced EPR fee.[36] Overall, as countries seek to shift economic incentives towards circular packaging options, producers and users of non-recyclable plastics with no recycled content can expect EPR fees and taxes to increase over time.

Plastic waste going on a conveyor belt at a sorting centre in Oum Azza, Morocco. Photo: Yasmina Lembachar

[32]WTS Global (2022), 'Plastic Taxation in Europe', https://wts.com/global/publishing-article/20220406-plastic-taxation-in-europe~-publishing-article?language=en

[33]Institute for European Environmental Policy (2017), 'EPR in the EU Plastics Strategy and the Circular Economy: A focus on plastic packaging', https://ieep.eu/uploads/articles/attachments/95369718-a733-473b-aa6b-153c1341f581/EPR%20and%20plastics%20report%20IEEP%209%20Nov%202017%20final.pdf

[34] Geyer, R., Jambeck, J. R. and Law, K. L. (2017), 'Production, use, and fate of all plastics ever made', Science Advances, https://doi.org/10.1126/sciadv.1700782

[35] Leal Filho, W. et al. (2019), 'An overview of the problems posed by plastic products and the role of extended producer responsibility in Europe', Journal of Cleaner Production, https://doi.org/10.1016/j.jclepro.2018.12.256

[36] OECD (2021), 'Modulated fees for extended producer responsibility schemes (EPR)', https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/EPOC/WPRPW(2020)2/FINAL&docLanguage=En

Circularity is becoming a requirement for EU market access

The EU is increasingly using access to the internal market as leverage for the greening of value chains. This has led to bans on certain single-use plastics, such as cutlery, plates and expanded polystyrene food containers. Requirements that packaging be designed for reuse and recycling are also being enforced through the Packaging and Packaging Waste Directive, and a Commission proposal expected at the end of 2022 will strengthen these.[37] The EU has also indicated that the Ecodesign for Sustainable Products Regulation could introduce mandatory requirements on recyclability, recycled content and hazardous substances.[38] Circular solutions will need to meet tough quality requirements. For example, the EU has issued detailed guidance on chemical and mechanical recycling processes that can produce recycled polyethylene terephthalate (PET) for use in food-contact materials – a quality assurance system that will apply to plastics imported into the EU.[39] Guidance will also be issued on the conditions under which bio-based and biodegradable packaging is desirable.

All plastic packaging for the EU market must be recyclable by 2030

Only the most recyclable plastic packaging formats can be sure to pass through the funnel of EU's recyclability requirements, as these restrictions tighten over time.

Single-material items with minimal colouring and contamination will be favoured. Widely recyclable polymers such as PE, PP and PET may grow in use.

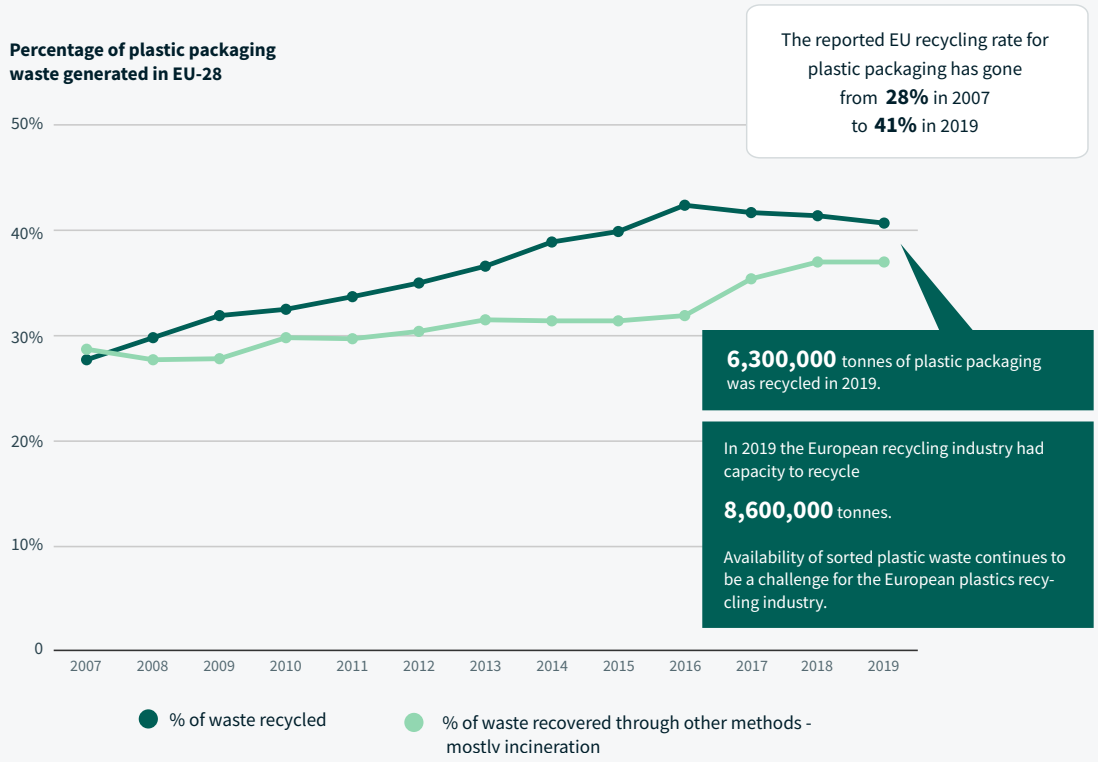
[37] European Commission (2022), 'Reducing packaging waste – review of rules', https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12263-Reducing-packaging-waste-review-of-rules_en
[38] European Commission (2022), 'Sustainable products initiative', https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12567-Sustainable-products-initiative_en
[39] European Commission (2022), 'Commission adopts new rules to enhance safety of recycled plastics used in contact of food', https://food.ec.europa.eu/safety/chemical-safety/food-contact-materials/plastic-recycling_en

The EU is strengthening its own capacity to valorize plastic waste

There is a strategic push to deal with more plastic waste on EU soil. Following decades of high reliance on exporting plastic waste outside the EU, the EU updated its plastic waste shipment regulations in 2021. This made shipments of hard-to-recycle plastic waste to non-OECD countries subject to prior notification and consent by the recipient country, similar to Basel Convention Amendments.[40] The scaling-up of the European plastics recycling industry is stimulated through taxes on incineration and landfill, harmonized labelling of plastic materials, and investments in collection and sorting.[41] Despite this, much of the plastic waste will likely continue to go to incineration, which is still a fast-growing treatment option across Europe.[42] And plastic waste exports will continue at least in the medium term, but only for plastics with reasonable recyclability and to destinations that can provide proof of sound management of the traded waste.

Plastic packaging waste treatment in the EU 2007–2019

The recycling rate for plastic packaging waste has increased steadily in the last decade, but the availability of sorted plastic waste inhibits further progress.



(Sources: Eurostat, Plastic Recyclers Europe)

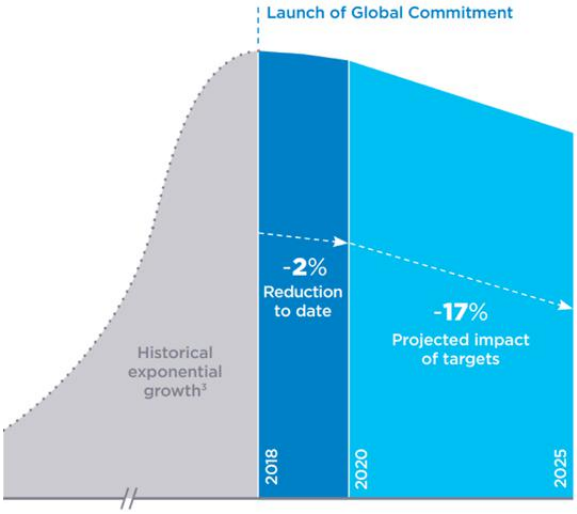
[40] European Commission (2021), 'Plastic waste shipments', https://ec.europa.eu/environment/topics/waste-and-recycling/waste-shipments/plastic-waste-shipments_en

[41] Confederation of European Waste-to-Energy Plants (2021), 'Landfill taxes and bans overview', https://www.cewep.eu/wp-content/uploads/2021/10/Landfill-taxes-and-bans-overview.pdf

[42] Eurostat (2021), 'Packaging waste by waste management operations', https://ec.europa.eu/eurostat/databrowser/view/env_waspac/default/table?lang=en

3.2.3 Voluntary approaches to tackle plastics are ramping up

The plastic problem is not only a worry for policymakers, it has also received a lot of attention from an increasingly concerned public, NGOs and industry. This has resulted in an array of voluntary commitments and partnerships that promise, if delivered, to reshape the plastic packaging value chain. The Ellen MacArthur Foundation's Global Commitment and Plastic Pact Network has united companies behind commitments to source recycled content, reduce virgin plastics use, and ensure 100 per cent recyclability, reusability or compostability by 2025. Companies representing 20 per cent of all plastic packaging produced globally have committed to these targets and begun replacing virgin plastics with recycled content or bio-based polymers. That demand is driving investment and innovation in recyclable, reusable, compostable and bio-based solutions, which are growing rapidly in use.[43] Major companies have also joined forces in initiatives like the Alliance to End Plastic Waste[44] to promote collaborative investment in strategic projects for closing plastic loops.



Estimated trajectory of the weight of virgin plastic in packaging for Global Commitment brand and retail signatories, 2018–2025

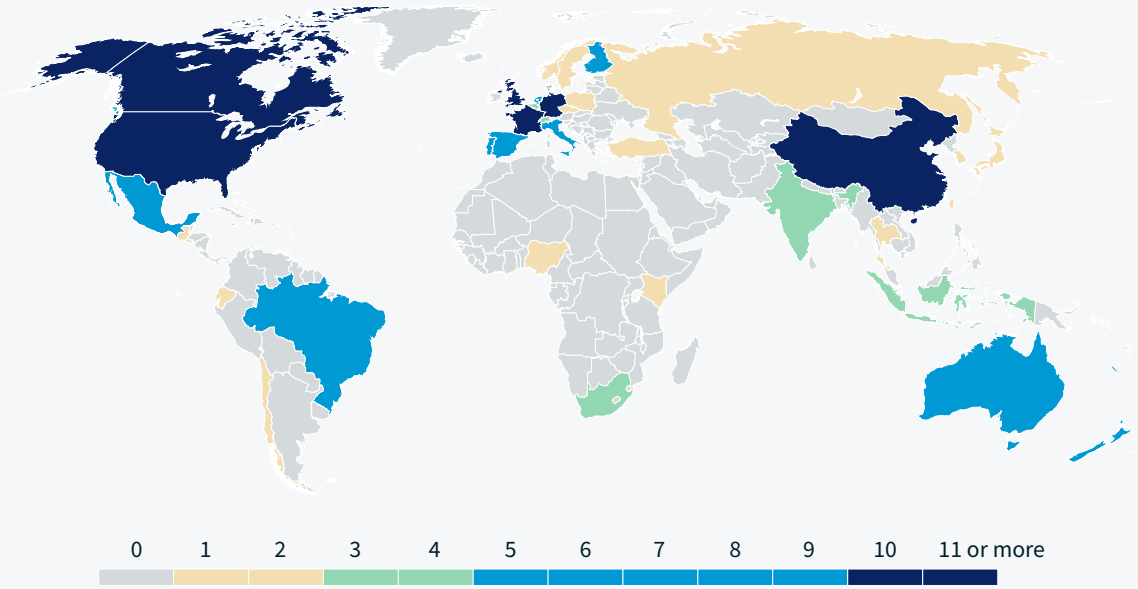
Image reproduced from the Ellen MacArthur Foundation's 'The Global Commitment 2021 Progress Report'[43]

Industry collaboration is a welcome development for circularity, but not without caveats. Some of the Ellen MacArthur Foundation Global Commitment targets, such as ensuring plastics are recyclable in practice and at scale, are practically impossible to achieve in many developing countries before 2025. As a result, many brands prioritize attainment of plastics circularity targets in countries with mature collection and recycling systems, over developing countries where packaging cannot become recyclable at scale and recycled content is less available. Global Commitment signatories are also heavily skewed towards consumer-facing companies in the Global North.[45] Meanwhile, most firms in the plastic packaging value chain are not reporting publicly on material footprints or circularity.[46] Without stronger regulation and financial incentives, companies will struggle to drive the use of recycled and recyclable materials, which are often more expensive than virgin or non-recyclable options.

[43] Ellen MacArthur Foundation (2021), 'The Global Commitment 2021 Progress Report', https://ellenmacarthurfoundation.org/global-commitment/overview
[44] Alliance to End Plastic Waste (2022), 'We are working together to end plastic waste', https://endplasticwaste.org/
[45] Mah, A., (2021), 'Future-Proofing Capitalism: The Paradox of the Circular Economy for Plastics', Global Environmental Politics 21(2): pp. 121-142, doi: https://doi.org/10.1162/glep_a_00594)
[46] Minderoo Foundation (2022), 'Identifying the sources of plastic pollution', https://www.minderoo.org/no-plastic-waste/news/identifying-the-sources-of-plastic-pollution/

The Ellen MacArthur Foundation Global Commitment: where are signatories based?

Number of private sector signatories per country in 2022, based on where company headquarters are located.



Circularity in the plastic packaging value chain is also heavily influenced by rapid technological innovation in several areas, not least material substitution. Innovations in industrial biotechnologies offer potential for local sourcing of bio-based plastics, high-barrier PE films now provide a recyclable alternative to multi-material laminates, and a suite of biodegradable polymers, like polylactic acid (PLA) and polyhydroxyalkanoates (PHA), are growing in use.[47] Waste management options are also improving rapidly. Plastic waste sorting is becoming increasingly automated, and 85 companies are now trialing digital watermark technologies to improve this further.[48]

Advanced recycling technologies are growing in use worldwide and offer the possibility of keeping more plastics in play.[49] Many advanced recycling technologies can reduce greenhouse gas emissions relative to incineration or landfill, but not as much as mechanical recycling.[50] Furthermore, digital innovations create new possibilities for transparency over, and certification of, recycled resources. The trend towards greater transparency is accelerated by consumer demand for more sustainable products.[51] Plastic packaging producers should be ready for new possibilities, as well as new demands, thanks to continued rapid innovation.

[47] Ellen MacArthur Foundation (2021), 'Upstream Innovation: a guide to packaging solutions', https://plastics.ellenmacarthurfoundation.org/upstream

[48] Holy Grail 2.0 (2021), 'Pioneering digital watermarks for smart packaging recycling in the EU', https://www.digitalwatermarks.eu/

[49] Closed Loop Partners (2021), 'A Landscape Mapping of the Molecular Plastics Recycling Market', 14 January 2022, https://www.closedlooppartners.com/research/advancing-circular-systems-for-plastics/

[50] Broeren, M., Roos Lindgreen, E. and Bergsma, G. (2019), 'Exploratory study on chemical recycling. Update 2019', https://cedelft.eu/publications/exploratory-study-on-chemical-recycling-update-2019/

[51] Herrmann, C., Rhein, S. and Sträter, K. F., (2022), 'Consumers' sustainability-related perception and willingness-to-pay for food packaging alternatives.' Resources, Conservation and Recycling, 181, 106219, https://www.sciencedirect.com/science/article/pii/S0921344922000672

3.3 Implications for plastic producing countries trading with the EU

3.3.1 Circular strategies will help developing countries to stay competitive

Strong regulation, voluntary commitments and industry trends are all accelerating momentum towards circularity in the plastic packaging value chain, but what does this mean for non-EU producers? Below are a set of strategies that producer countries must consider if they are to stay competitive:

Prioritize recyclability to access the EU market

As part of the Green Deal, the EU is using the internal market and the bloc's trading relationships as leverage to green supply chains, notably through the upcoming Ecodesign for Sustainable Products Regulation and a reinforced Packaging and Packaging Waste Directive. Recyclability in practice and at scale will become a mandatory requirement for more and more packaging formats in the near term. For many producers, this means packaging designs, adhesives, inks, and polymer choices must be revisited and aligned with design for recyclability guidelines.

Secure access to recycled polymers to ensure industry resilience

The drastic increase in global commitments to source recycled plastic content means demand for recycled polymers is currently outstripping supply, particularly for food-grade recycled PET (rPET).[52] While the EU will not mandate recycled content for packaging immediately, it probably will do for some packaging formats by 2025. Incentives for producing recycled plastic packaging will improve: not only will buyers pay a premium, but some markets will give recycled plastics a lower EPR fee or packaging tax exemptions. For producer countries outside the EU, plastic waste from overseas will not be a reliable feedstock as trade tightens. Therefore, a recycled polymer supply from domestic collection and recycling of plastic waste will give plastic packaging manufacturers most resilience. For recycled plastic packaging for food-contact applications, alignment with new norms on food safety and quality assurance will be essential to ensure products are exportable to the EU. Efforts to build capacities for high-quality recycling must begin soon, as the EU is already scaling up its own plastics recycling, with high environmental and social standards. Producer countries will face the double challenge of meeting market access requirements as well as increasing competition from within the EU.

Circular packaging segments offer significant growth potential

Considering the high demand for plastic packaging with recycled content, producers who take a lead in the circular transition can expect to tap into rapidly growing and high value markets. Demand for biodegradable and bio-based plastics is also expected to continue growing quickly, as well as for mono-material films and widely recycled high-density polyethylene (HDPE), PP and PET packaging.[53, 54]

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[52] Packaging Insights (2022), 'Recycled plastic prices soar as rival industries dip into beverage producer's supply', https://www.packaginginsights.com/news/recycled-plastic-prices-soar-as-rival-industries-dip-into-beverage-producers-supply.html

[53] Cision (2021), 'Rigid Recycled Plastics Market Size to grow by 623.86 thousand MT', https://www.prnewswire.com/news-releases/rigid-recycled-plastics-market-size-to-grow-by-623-86-thousand-mt--17-000-technavio-research-reports-301447870.html

[54] European Bioplastics (2021), 'Bioplastics market development update 2021', https://docs.european-bioplastics.org/publications/market_data/Report_Bioplastics_Market_Data_2021_short_version.pdf

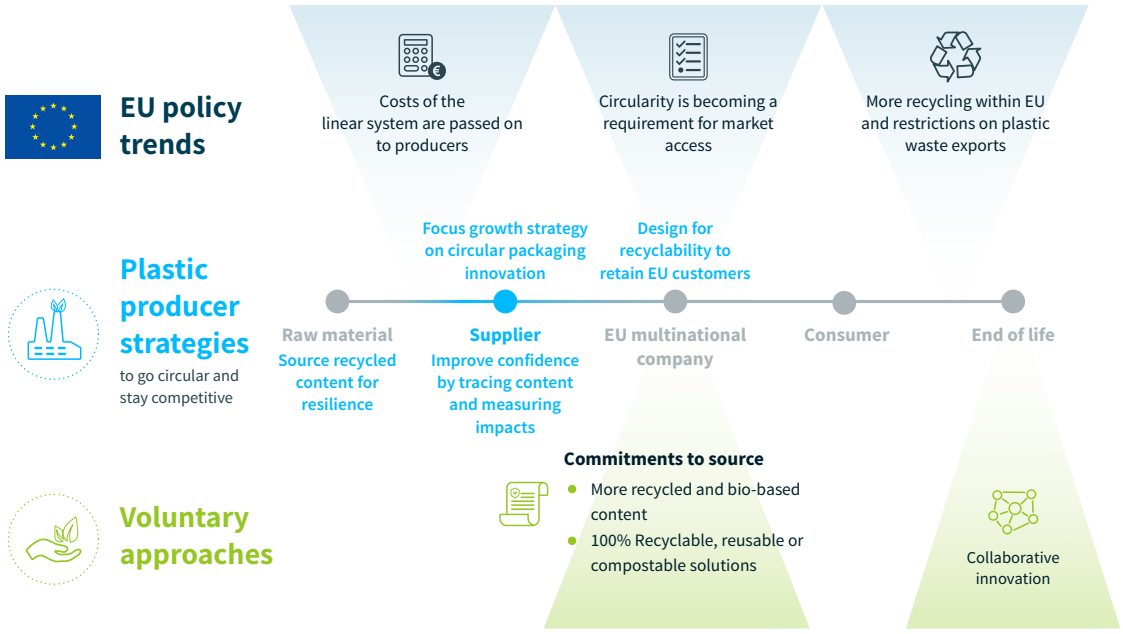
More customers will demand traceability and impact measurement

As the EU demands more circular-relevant product information, and strengthens the need for integrity of green claims and due diligence, plastic packaging producers will need to improve impact measurement and information management through the adoption of digital innovations. As requirements on third-party assurance of sustainability become more common, recycled plastic content may not be acceptable if these flows are not fully traceable and verified. Life cycle assessments (LCA) are growing in use, and European plastic packaging users may more frequently ask producers for LCAs, or simpler assessments of environmental impacts at a facility level, as environmental claims must be substantiated to consumers and investors.

Both industry and policymakers in producer countries will need to take concerted action to invest in new equipment and skills and develop an enabling policy framework. This will be key to take advantage of green market segments and reduce exposure to growing regulation and risk around linear models – such as companies refusing to buy virgin plastics and more countries taxing plastic packaging without recycled content.

Drivers of circularity in the plastic packaging value chain

Policy measures and voluntary approaches are both driving producers to adopt circular strategies



3.3.2 The circular economy is only one market trend among many in the plastics sector

Producers that take a lead on circular solutions may be more resilient towards emerging EU environmental regulations and changing demand from multinational buyers, but their business model is still subject to substantial risk. Turmoil in the market in recent years demonstrates this well. During the COVID-19 pandemic, fears over contamination put reuse initiatives on hold, and there was a dramatic increase in the use of single-use plastics.[55] Another source of uncertainty is that virgin polymers compete with recycled ones when oil prices are low. Since Russia's invasion of Ukraine, the sector has also been facing a combination of rising freight, energy and raw material costs.[56]

Amid other market forces, many policies in the CEAP 2.0 have yet to be implemented, and proposals may be watered down following consultations with member states and industry. For example, previous experience shows that recycled content thresholds could face resistance by packaging producers and petrochemical companies.[57]

Meanwhile, investment in virgin polymer production remains strong, with $400 billion committed to growing production capacity for 2020–2024.

Therefore, most signs point to continued growth in linear plastic packaging, possibly because the market has yet to correct for stranded assets.[58]

Even if the regulatory signal from the EU is strong, it will not affect all producer countries equally. Empty plastic packaging has a low value relative to its volume and therefore high transport costs, so packaging production and filling operations are often located together. Domestic regulation is therefore most important to packaging manufacturers, followed by legislation in the most significant export markets. In some markets, the EU's demand for circular packaging will not strongly influence plastic production, but restrictions on plastic waste exports will. There are signs that in many Asian markets, reduced plastic waste trade coupled with volatility in plastic scrap prices has led to a reduction in plastic recycling rates.[59] Nonetheless, in the long term, EU legislation can be expected to have a significant influence on global markets, as the region's environmental policies often affect environmental performance among key trading partners.[60]

[55] OECD Forum (2021), 'The Plastic Pandemic', https://www.oecd-forum.org/posts/the-plastic-pandemic
[56] Recycling International (2022), 'Plastic prices still high but trade issues remain', https://recyclinginternational.com/plastics/prices-still-high-but-trade-issues-remain/48861/
[57] HM Revenue & Customs (2020), 'Plastic packaging tax: Summary of responses to the policy design consultation', https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/934566/Plastic_packaging_tax_-_summary_of_responses_to_the_consultation_on_policy_design.pdf
[58] Carbon Tracker Initiative (2020), 'The Future's Not in Plastics: Why plastics demand won't rescue the oil sector', https://carbontracker.org/reports/the-futures-not-in-plastics/
[59] Ibid.
[60] Prakash, A. and Potoski, M. (2016), 'The EU effect: does trade with the EU reduce CO2 emissions in the developing world?', Environmental Politics, 26(1), https://www.tandfonline.com/doi/abs/10.1080/09644016.2016.1218630

CASE STUDY

Establishing Morocco's first PET bottle-to-bottle recycling process

Plastics represent around 10 per cent of Morocco's household waste, with only 17 per cent being recycled according to industry estimates. The EU is a critical trade partner for the Moroccan plastics industry: in 2020 the country exported 71,000 tonnes, worth $763 million, to the EU. This represents 87 per cent of the country's plastic exports by value.[61] Therefore, the Moroccan plastic industry must respond decisively to emerging EU incentives and requirements for circular plastics. The EU and Morocco agreed to enter a Green Partnership in 2021.[62]

One of the largest recyclable plastic waste streams in Morocco is polyethylene terephthalate (PET) packaging. Moroccan citizens consume approximately 1.2 billion PET bottles a year. Collection of PET is largely done by the informal sector at landfills or in urban centres. The number of informal waste pickers in Morocco is estimated as between 10,000 (official figures) and 34,000 (estimated by the Zero Zbel Association). Waste pickers live close to the poverty line and work in environments with poor health and safety conditions. Roughly a third of the plastic they collect comes from landfills, and this, combined with the absence of plastic sorting systems, means that the quality of the materials collected is generally low. High degrees of contamination make recycling into high-value products difficult.

Which countries are most dependent on the EU for their plastics exports?

Exports to EU as a proportion of all plastics exported, by country, in 2020

Country	By value
Cabo Verde	100.00%
Luxembourg	88.28%
Morocco	86.69%
Bosnia and Herzegovina	86.58%
Albania	85.96%
Slovakia	83.40%
Poland	81.75%
Netherlands	80.69%
Slovenia	80.56%
Czechia	80.32%

Source: UNCTAD[61]

[61] UNCTAD, 'Plastics trade by partner, annual', https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=208091, 9 October 2022

[62] EU (2022), 'The EU and Morocco launch the first Green Partnership on energy, climate and the environment ahead of COP 27', https://neighbourhood-enlargement.ec.europa.eu/news/eu-and-morocco-launch-first-green-partnership-energy-climate-and-environment-ahead-cop-27-2022-10-18_en

To help address these challenges, the SWITCH2CE project is working with European and Moroccan stakeholders to pilot Morocco's first PET bottle-to-bottle recycling process. The professionalization and empowerment of informal waste pickers will be key to ensuring consistent high-quality collection of PET. The pilot will seek to address social justice issues facing informal workers including (i) lack of formal legal recognition, which results in stigmatization and limits their ability to collect waste directly from householders; (ii) lack of access to land to legally conduct collection and sorting operations; (iii) unequal power relationships with waste traders; (iv) exposure to the volatility of the recycled PET market; (v) lack of worker safety and training; and (vi) limited supply chain traceability and transparency.

Success of the project relies on overcoming a number of policy-related challenges, including conflicting waste policies and waste governance, a ban on the sale of food-contact packaging with recycled content, the lack of formal recognition of waste pickers, and the lack of bottle sorting and cleaning infrastructure.

Promisingly, the Moroccan Government, with several Ministries, has shown clear ambition to improve the situation and move towards a circular economy. Several donor initiatives, such as the EU-funded Water and Environment Support in the ENI Southern Neighbourhood Region[63] and the World Bank's Littoral Sans Plastique (Plastic-free beaches)[64] project have been launched in the past few years to tackle plastic waste through innovative and inclusive models. With these promising initiatives, and learning developed from the SWITCH2CE project, there is hope that national recycling and waste collection targets can be achieved in Morocco, and that Moroccan producers will be able to meet the circularity standards required by the EU and keep their position as a key supplier to this important market.

Man sorting plastic waste in Casablanca, Morocco. Photo: Mark Draeck

[63] Water and Environment Support (WES) in the ENI Southern Neighbourhood Region (2022), 'Environment activities: Morocco', https://www.wes-med.eu/environment/activities/morocco/

[64] World Bank (2022), 'Plastic Free Coastlines: A Contribution from the Maghreb to Address Marine Plastic Pollution', https://documents1.worldbank.org/curated/en/099840405192226019/pdf/P170596007a62909b09b97093cc82dd1f01.pdf

4

Textile and garments value chain

Yarn manufacturing at Dulal Brothers Limited (DBL) factory in Gazipur, Bangladesh.
Photo: Mark Draeck

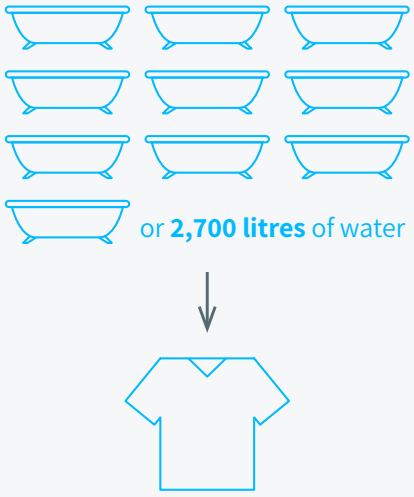
Chapter 4 in brief:

- The textile and garments sector has in the past mostly been governed by voluntary sustainability approaches, but its environmental impacts have become so big that the EU is setting circular policies for the entire value chain.
- If implementation of the EU's new textiles strategy stays on course, several policies could become effective by 2025, such as:
    - Requirements for products to be more durable, repairable and recyclable.
    - Enhanced social and environmental due diligence on suppliers.
    - Greater transparency on garment sourcing, content and production methods.
- This is going to be a challenge for many producer countries, especially if there are requirements on recycled content. A circular textile transition requires decisive policy, supportive trade, public-private collaboration, and capacity building for producers.
- Early adopters of circular solutions – particularly in fibre-to-fibre recycling – could have an advantage as the reverse supply chain for used textiles grows and matures.
- Voluntary approaches and certification schemes are likely to form the backbone of future EU textile policies, so producer countries may consider these to prepare for upcoming buyer requirements.

4.1 A linear sector with enormous environmental and social impacts

The global textiles and garments value chain is almost entirely linear. The sector relies on extraction of vast amounts of non-renewable resources, such as fossil oil to produce synthetic fibres, dyes and treatments, and fertilizers to grow cotton. The production of natural fibres requires large areas of land and consumes significant volumes of water. It takes around 2,700 litres of water to produce one cotton t-shirt. The production process commonly requires the use of toxic chemicals and can result in local water and air pollution,[65] and in the use phase, the laundering of synthetic clothes represents over a third of all microplastics released to the environment.[66] The fashion industry is responsible for almost 10 per cent of global carbon emissions – more than international flights and maritime shipping combined.[67]

It takes around 2,700 litres of water to produce one cotton t-shirt.

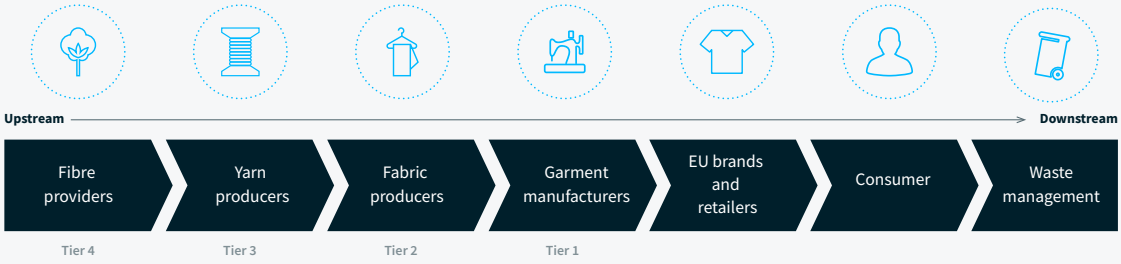


[65] European Commission (2011), 'Green Public Procurement Textiles Technical Background Report', https://ec.europa.eu/environment/gpp/pdf/tbr/textiles_tbr.pdf
[66] European Parliament (2021), 'The impact of textile production and waste on the environment (infographic)' https://www.europarl.europa.eu/news/en/headlines/society/20201208STO93327/the-impact-of-textile-production-and-waste-on-the-environment-infographic
[67] Niinimäki, K. et al. (2020), 'The environmental price of fast fashion', Nature Reviews Earth & Environment, 1, pp. 189–200 https://www.nature.com/articles/s43017-020-0039-9

These negative impacts are set to increase in line with increasing consumption of textiles in emerging economies and growth of leisure spend in markets like Europe and the US.[68] The garments sector is heavily reliant on 'fast fashion', where there is rapid turnaround of new styles. In this model, garments are produced for a short lifespan at low cost. Only around 1 per cent of textiles produced gets recycled into new textiles. Globally, only 20 per cent of clothing waste is collected for reuse or recycling (mostly into material of lower quality and functionality than the original items). This picture is uneven across regions and countries: in the USA, collection rates are as low as 10 per cent whereas Denmark and the Netherlands collect over 40 per cent of discarded textiles.[69] In many low-income countries, waste management systems cannot keep up with the quantities of imported used textiles, leading to the dumping and burning of textile resources.[58] This pollutes and degrades natural ecosystems and creates significant negative societal impacts.

The textile value chain

The current linear model for producing textiles and garments. The graphic below is a simplified diagram that excludes, for example, ginning and wet processing. The textile and garments value chain is characterized by very long and complicated supply chains, often spanning multiple countries.



A circular economy is an indispensable strategy for addressing the textile sector's negative environmental and social impacts. Efforts for textile sustainability have, to date, focused mainly on certification and sourcing of more sustainable fibres, cleaner production of garments, and collecting and recycling end-of-life items.[70] More recently, there have been additional attempts at scaling circular business models (such as leasing of clothing) and increased efforts to improve traceability and transparency across the supply chain.[71] However, policymakers, particularly in the EU, are now recognizing that industry-led approaches are not delivering sustainability quickly enough.

[68] McKinsey (2021), 'The State of Fashion 2022', https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/state%20of%20fashion/2022/the-state-of-fashion-2022.pdf
[69] Köhler, A. et al. (2021), 'Circular economy perspectives in the EU textile sector: final report', Publications Office of the European Union, Luxembourg, https://publications.jrc.ec.europa.eu/repository/handle/JRC125110
[70] European Clothing Action Plan (2019), 'Driving circular fashion and textiles: ECAP summary report', https://wrap.org.uk/resources/report/driving-circular-fashion-and-textiles-ecap-summary-report
[71] United Nations Economic Commission for Europe (2022), 'Traceability for Sustainable Garment and Footwear', https://unece.org/trade/traceability-sustainable-garment-and-footwear

4.2 Policy and market drivers of circularity for textiles

4.2.1 Background to EU policy on textiles and garments

The circular policy agenda for textiles is less mature than it is for other product categories (such as plastic packaging). To date, it mainly consists of public procurement guidelines, chemical regulations and voluntary measures.[72]

Voluntary measures have been a cornerstone in the EU-wide strategy on textile circularity, such as the EU Ecolabel for Textiles, which covers over 3,300 products at the time of writing.[73] The label is granted subject to a range of sustainability criteria including: (i) limited use of substances harmful to health and environment; (ii) reduction in water and air pollution; and (iii) shrink and colour resistance during washing and drying.[74] Uptake of voluntary measures has, however, been insufficient – leading to calls for more ambitious measures.[75] Through the EU Strategy for Sustainable and Circular Textiles,[76] circular market interventions will now enter a new era. With this package, the Commission is taking a value chain approach to align investments, information, incentives and requirements for textile sustainability, both in the EU and overseas. However, due to the lack of industry preparedness and to vested interests in the linear model, it may take time for the policy to show effects. It is therefore likely that new policies will leverage existing voluntary mechanisms, by making them mandatory or tying them to incentives.

Textile sorting at CYCLO factory in Mymensingh, Bangladesh. Photo: Mark Draeck

[72] UNEP (2020), 'Sustainability and Circularity in the Textile Value Chain: Global Stocktaking', oneplanetnetwork.org/sites/default/files/unep_sustainability_and_circularity_in_the_textile_value_chain.pdf
[73] European Commission (2022), 'EU Ecolabel Clothing and textiles / Textile products', http://ec.europa.eu/ecat/category/en/14/textile-products
[74] European Commission (2009), 'The EU Ecolabel for Textiles – The official EU mark for Greener Products', https://ec.europa.eu/environment/ecolabel/documents/factsheet_textiles.pdf
[75] European Parliament (2021), 'European Parliament resolution of 10 March 2021 with recommendations to the Commission on corporate due diligence and corporate accountability', https://www.europarl.europa.eu/doceo/document/TA-9-2021-0073_EN.html
[76] European Commission (2022), 'EU strategy for sustainable and circular textiles', https://environment.ec.europa.eu/strategy/textiles-strategy_en

4.2.2 Circularity is at the centre of the EU's strategy for sustainable textiles

In recognition of the growing environmental impact of textile and garment consumption in Europe, and of the fact that the current suite of measures is not sufficient to stimulate a systemic shift toward a circular textiles system, textiles has been targeted as a priority sector within the EU CEAP 2.0. The European Commission has published an ambitious legislative timeline,[77] which is likely to present trade barriers for many export-dependent producer countries:

Virginijus Sinkevičius, EU Commissioner for Environment, announcing the EU's product-oriented sustainability strategy.

Implementation plan for the EU Strategy for Sustainable and Circular Textiles 2022-2024

2022	2023	2024
Empowering consumers in the green transition and ensuring the reliability of green claims	Review of the Textile Labelling Regulation and considering the introduction of a digital label	Mandatory performance requirements for the environmental sustainability of textile products
Initiative to address the unintentional release of microplastics from textile products	Extended Producer Responsibility requirements for textiles with eco-modulation of fees and measures to promote the waste hierarchy for textile waste management	Digital Product Passport for textiles with information requirements on environmental sustainability
Review of the Best Available Techniques Reference Document for the Textiles Industry	Enforcing the Corporate Sustainability Due Diligence Directive in the textile sector	Mandatory requirements concerning green public procurement and Member State incentives
		Disclosure of the number of discarded products by large enterprises and their subsequent treatment, and measures on banning the destruction of unsold textiles
		Revision of the EU Ecolabel criteria for textiles and footwear
		Product Environmental Footprint Category Rules for apparel and footwear

Colour code:

Greater visibility on impacts and claims	Shifting the incentives and funding circular solutions	Ecodesign for Sustainable Products Regulation	Other instruments

[77] European Commission (2022), 'Communication - EU Strategy for Sustainable and Circular Textiles', https://environment.ec.europa.eu/document/download/74126c90-5cbf-46d0-ab6b-60878644b395_en?filename=COM_2022_141_1_EN_ACT_part1_v8.pdf

The main trends in the EU regulatory approach are described below, and Section 4.3 discusses possible consequences for producer countries.

A strategic, cross-value chain approach is replacing piecemeal policy

The EU Strategy for Sustainable and Circular Textiles aims to strengthen industrial competitiveness and innovation in the sector and boost the EU market for sustainable and circular textiles. Circularity will be promoted through product design and production requirements, better consumer information, tighter supply chain management and Union-wide textile waste collection. Complementary initiatives will also drive circular business models, research and innovation into sustainable textiles, and tighter national enforcement of the new requirements. The plan is weaker on financial incentives for circularity. The Commission has flagged that it wants to support demand for sustainable textiles through green public procurement. EPR may be used to incentivize recyclable textiles, but this will be subject to member state implementation.

Producers will have to design for circularity after 2025

The instruments that will have the biggest impact on producers are expected to be tabled in 2024. Many new obligations are likely to take effect in 2025. Most notable is the Ecodesign for Sustainable Products Regulation (ESPR), which will promote durable, reusable and repairable garments, mandatory recycled content and greater transparency on hazardous chemicals. The detail has not yet been agreed, but it is likely to promote fibre-to-fibre recycling. To this end, the EU may restrict the use of certain fibres, such as elastane, and steer away from fibre blends that impede recyclability. Even before the ESPR comes into effect, the Commission is expected to introduce specific requirements for testing and design of textiles from synthetic fibres to reduce the release of microplastics.

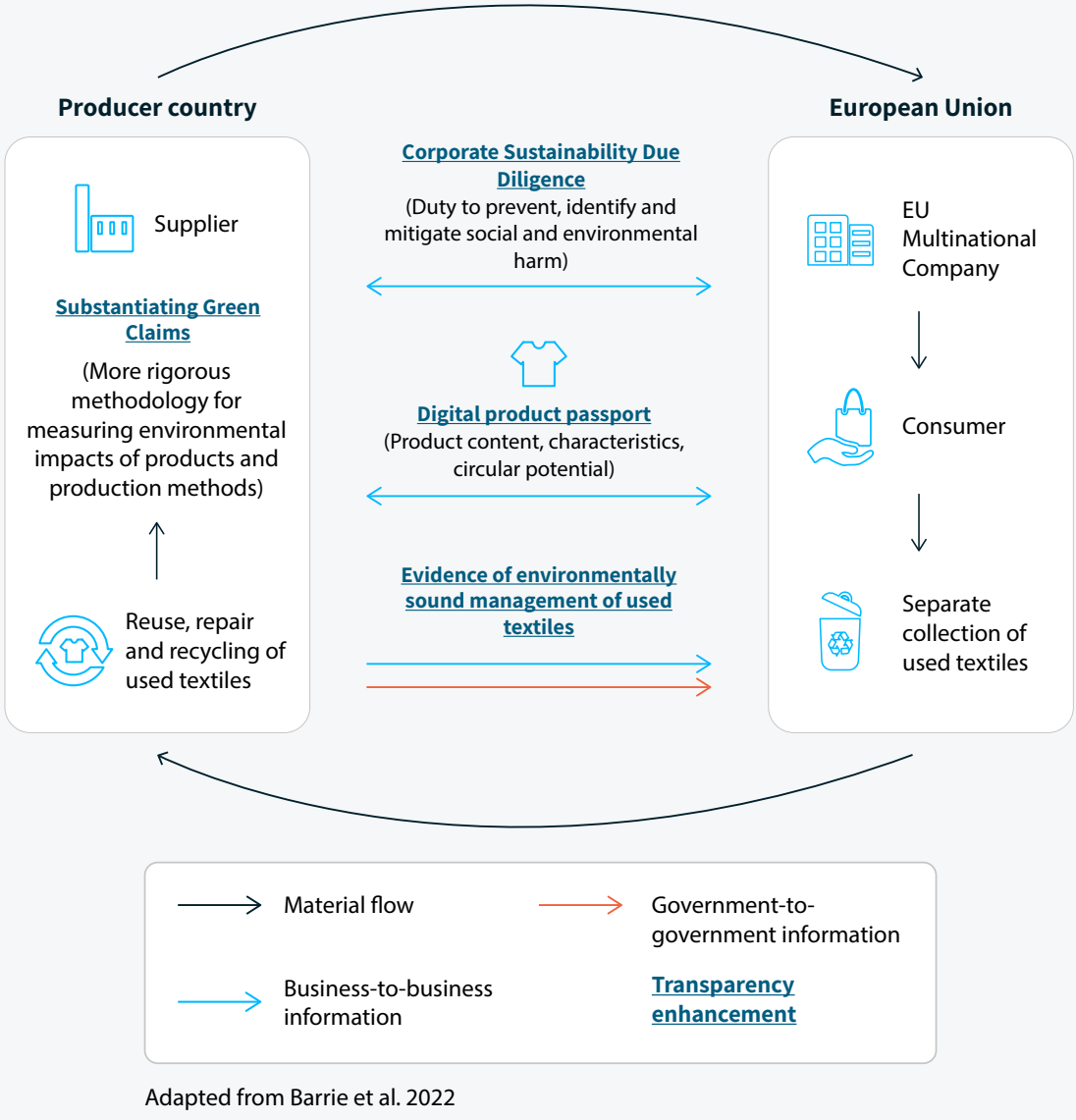
Greater demand for supply chain transparency, traceability and due diligence

Despite strong concerns about environmental impacts and human rights abuses in the textiles sector, transparency and traceability have historically been poor due to the very long and complicated supply chains. The EU will address this with a holistic approach. Firstly, as part of the ESPR, so-called digital product passports will be introduced. These will provide all actors across the value chain with information on what the product contains, its environmental impacts, how it was produced and how it could be recirculated effectively. Secondly, measures through the Empowering Consumers in the Green Transition Initiative and Substantiating Green Claims Initiative will give consumers trustworthy information on product sustainability.[79] Thirdly, the textiles sector can also expect greater transparency on social conditions and human rights through the Directive on Corporate Sustainability Due Diligence.[80] The scope of these requirements is still under development. A critical question for producers is to what extent the digital product passport and due diligence requirements will require factory-level information and risk mitigation, as this could add to their costs.

[78] Ibid.
[79] Policy Hub for Circular Economy (2021), 'What's in the Pipeline? A Closer Look into the Upcoming EU Policies Impacting Textiles', https://www.policyhub.org/articles/whats-in-the-pipeline-a-closer-look-into-the-upcoming-eu-policies-impacting-textiles
[80] European Commission (2022), 'Corporate Sustainability Due Diligence', https://ec.europa.eu/info/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en
[81] Policy Hub for Circular Economy (2021), 'What's in the Pipeline? A Closer Look into the Upcoming EU Policies Impacting Textiles', https://www.policyhub.org/articles/whats-in-the-pipeline-a-closer-look-into-the-upcoming-eu-policies-impacting-textiles

Enhanced traceability and transparency to meet EU circular economy requirements.

Producer countries must prepare for tighter scrutiny of their value chains, both for upstream production and downstream waste management



Adapted from Barrie et al. 2022

Separate collections will grow the textile recovery potential, but the final destination is uncertain

The textile waste market in Europe is being overhauled. The EU is making efforts to address the overseas dumping of textile waste. The EU Waste Shipment Regulation revision, tabled in November 2021, and recent amendments to the Basel Convention aim to prevent these flows and promote upstream waste reduction and collection. A future ban on exporting waste outside the EU could include textile waste and in particular blended synthetic textiles.[81]

While low-value textile exports from the EU will face tough restrictions, overall textile waste exports from the EU are expected to increase. In 2018, the EU decided that waste textiles should be separately collected by 2025.[82] As a result, the collection rate of textiles could increase from 30–35 per cent in 2020 to as much as 80 per cent in 2030.[83] Already today, there is huge potential to redirect waste textiles from 'down-cycling' into low-value products such as filling materials, wipes or incineration to mechanical and chemical recycling into higher-value products.[84] This potential will grow when separate textile collections become the norm, and the European textile industry is mobilizing to capture this opportunity. However, the quantities of collected textiles will exceed the EU's capacity for textile recycling and reuse within the internal market, so a lot will inevitably go for export.[85,86] This is a major economic opportunity for developing country producers, who already have more infrastructure and capacities to re-integrate post-consumer textiles into global value chains, relative to countries with a smaller textile manufacturing industry. In order to get access to these waste textiles, they would need to demonstrate that they can guarantee environmentally sound management of the used textiles.[87]

Extended producer responsibility for textiles is becoming more common

Separate collections in EU member states will likely be financed by new textile EPR schemes in many member states. EU multinational companies can therefore expect to pay fees for the textiles they sell, in line with their collection (and to some extent also treatment) costs.[88] The EU will issue guidelines for design and implementation of EPR to ensure that schemes are harmonized across member states. The Commission has indicated that it wants these guidelines to include eco-modulation of fees, to incentivize textiles that have a low environmental impact or high recyclability.[89] As EPR schemes for textiles in Europe become more common and mature over time, the economic rationale for producer countries to embrace the circular economy will improve.

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[81] Policy Hub for Circular Economy (2021), 'What's in the Pipeline? A Closer Look into the Upcoming EU Policies Impacting Textiles', https://www.policyhub.org/articles/whats-in-the-pipeline-a-closer-look-into-the-upcoming-eu-policies-impacting-textiles

[82] Official Journal of the European Union (2018), 'Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018, amending Directive 2008/98/EC on waste', https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L0851&-from=EN

[83] McKinsey (2022), 'Scaling textile recycling in Europe – turning waste into value', https://www.mckinsey.com/industries/retail/our-insights/scaling-textile-recycling-in-europe-turning-waste-into-value

[84] Fashion for Good and Circle Economy (2022), 'Sorting for Circularity Europe – an evaluation and commercial assessment of textile waste', https://reports.fashionforgood.com/report/sorting-for-circularity-europe/

[85] McKinsey (2022), 'Scaling textile recycling in Europe – turning waste into value', https://www.mckinsey.com/industries/retail/our-insights/scaling-textile-recycling-in-europe-turning-waste-into-value

[86] CBI (2021), 'The European market potential for recycled fashion', https://www.cbi.eu/market-information/apparel/recycled-fashion/market-potential

[87] European Commission (2022), 'Communication: EU Strategy for Sustainable and Circular Textiles', https://environment.ec.europa.eu/document/download/74126c90-5cbf-46d0-ab6b-60878644b395_en?filename=COM_2022_141_1_EN_ACT_part1_v8.pdf

[88] Bukhari, M. A., Carrasco-Gallego, R. and Ponce-Cueto, E. (2018), 'Developing a national programme for textiles and clothing recovery', Waste Management & Research 36(4): pp. 321-331, doi: https://doi.org/10.1177/0734242X18759190

[89] European Commission (2022), 'Communication - EU Strategy for Sustainable and Circular Textiles', https://environment.ec.europa.eu/document/download/74126c90-5cbf-46d0-ab6b-60878644b395_en?filename=COM_2022_141_1_EN_ACT_part1_v8.pdf

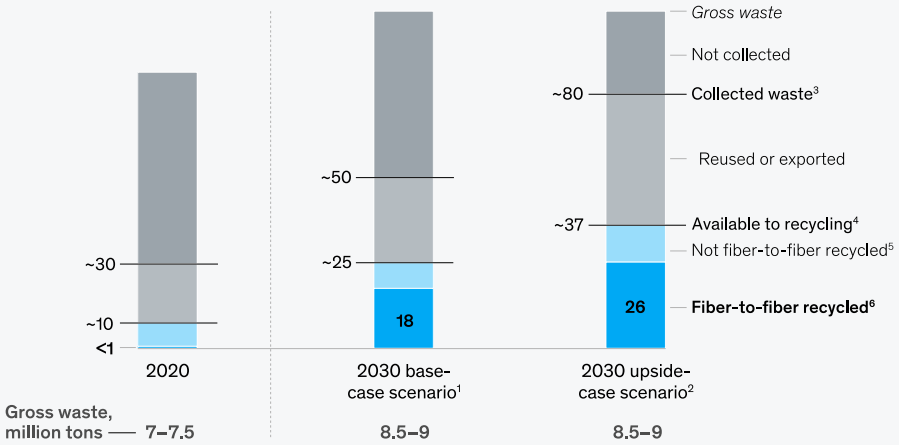
Some member states are moving faster than the EU

Some member states have already introduced their own legislation on circular textiles. For example, the Netherlands has set an ambitious target to have 25 per cent recycled content in clothing by 2025.[90] France recently introduced a new anti-waste law, which bans landfilling and incineration of an estimated 10,000–20,000 tonnes of unsold textile products every year. Instead, companies will have to donate or recycle their unsold items.

The EU will likely allow more time for such measures. Meanwhile, companies will only be required to disclose details of their unsold items and a potential ban would only be introduced after 2025.[91] Some countries have also moved ahead on EPR for textiles, before EU guidelines are issued. France has had a legal framework for managing textiles waste with an EPR policy since 2007 and Sweden introduced one in 2022. Further schemes are now being developed in the Netherlands, Spain, Italy and Greece.[92]

Fiber-to-fiber recycling could reach 18 to 26 percent of gross textile waste in 2030.

Breakdown of EU-27 and Switzerland estimated textile-waste volume as of June 2022, %



[1]The base-case scenario refers to a situation where 50% of EU-27 and Switzerland's postconsumer household textile waste is collected, up from today's 30–35%. [2]The 2030 upside case refers to a situation where 80% of EU-27 and Switzerland's postconsumer household textile waste is collected. [3]Refers to the collection rate of postconsumer household waste. Total collection rate is slightly different due to other waste streams having other collection dynamics. [4]There are different ways of defining what share of textile volume is "available to recycling." This paper uses the term to describe textile waste that is collected and does not have an alternative use with a higher value that is further up in the waste hierarchy (for example, resale). Of the share that is available to recycling, there may be fiber fractions that technically are not eligible for fiber-to-fiber recycling. Our base-case scenario with allocated textile waste to the different recycling technologies assumes—based on our analysis of forward-looking feedstock purity requirements by recycling technologies—that 70% of what is available to recycling can technically be recycled. [5]Can either be open-loop recycled products like cleaning rags, or thermo-chemical recycling to create syngas. [6]Here defined as fiber-to-fiber recycled volume divided by total gross waste. The rate reflects the estimated full potential of fiber-to-fiber recycling of 70% of what is available to recycling. This number excludes open-loop recycling.
Source: Deloitte European Market Study for ETSA, 2014; Ellen MacArthur Foundation; European Commission Joint Research Centre (JRC), 2021; Eurostat Prodcom; expert interviews; Higher Institute for Environmental Protection and Research, Italy reports #1 and #2, 2021; Humana Annual Report, 2020; Intecus, Germany report, 2020; JRC Technical Report, 2021; Le Figaro, 2019; Modare, Spain country report, 2021; Nordic Council for Ministers Baltic Countries report, 2020; Rebel, Netherlands report, 2021; ReFashion, France report, 2020; unweltbundesamt, Austria report, 2022

McKinsey & Company

A study by McKinsey[85] which was supported by EURATEX, the European Apparel and Textile Confederation, found that there is huge potential to increase textile recycling following the introduction of separate textile waste collections in the EU. However, even in the most optimistic scenarios for increased recycling within the EU, textile exports in 2030 will be significantly higher than current levels.

[90] Lucas, P., Brink, H. and van Oorschot, M. (2022), 'Addressing international impacts of the Dutch circular economy transition', PBL Netherlands Environmental Assessment Agency, The Hague, https://www.pbl.nl/sites/default/files/downloads/pbl-2022-addressing-international-impacts-of-the-dutch-ce-transition-4322.pdf

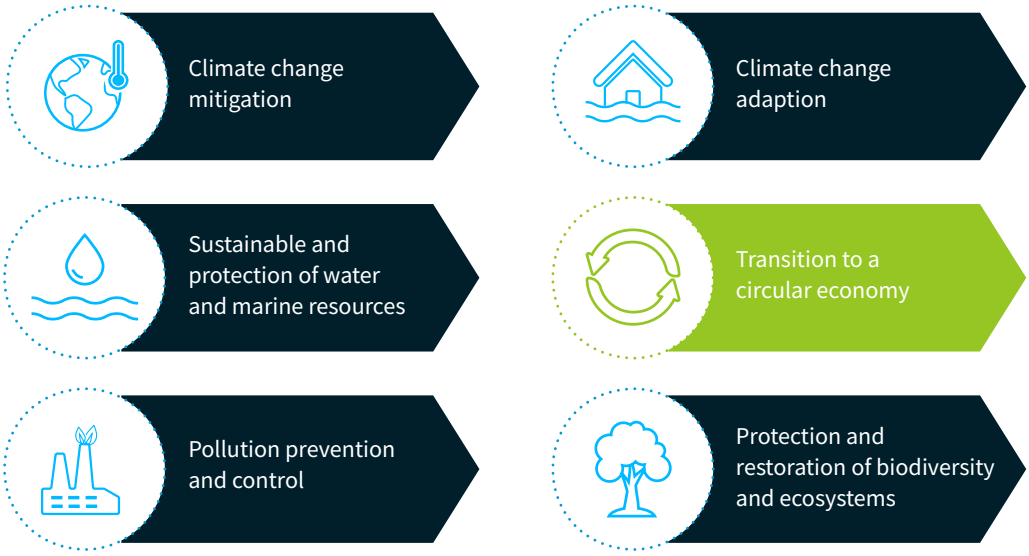
[91] European Commission (2022), 'Communication: EU Strategy for Sustainable and Circular Textiles', https://environment.ec.europa.eu/document/download/74126c90-5cbf-46d0-ab6b-60878644b395_en?filename=COM_2022_141_1_EN_ACT_part1_v8.pdf

[92] Policy Hub for Circular Economy (2021), 'What's in the Pipeline? A Closer Look into the Upcoming EU Policies Impacting Textiles', https://www.policyhub.org/articles/whats-in-the-pipeline-a-closer-look-into-the-upcoming-eu-policies-impacting-textiles

Circular design criteria in the EU's draft circular economy taxonomy for sustainable finance

The EU's green finance taxonomy is one of the earliest policies to emerge. It indicates how the EU may approach the circular economy in the textiles sector. A draft proposal issued by the Platform for Sustainable Finance in March 2022 outlines the production and design requirements that clothing products must meet to classify as a 'Significant contribution' to the circular economy. The taxonomy is meant to define top performance in terms of sustainability, and other regulations will not be as strict. Nonetheless, it gives indications of policies to come.

The six environmental objectives of the EU Sustainable Finance Taxonomy



Like other EU legislation, the draft taxonomy relies heavily on voluntary standards and certifications. The proposed criteria, set out below, are indicative and will be revised by the Commission before adoption: [93]

Circular principle	Performance criteria	Standards and certification schemes referenced
Design for sustainability and durability	• Compliance with holistic and detailed certifications for sustainable manufacture. • High performance on standardized tests (as specified by ISO) for fabric resistance to piling and abrasion, colour fastness, and durability of water, oil and stain repellents.	ISO standards for quality tests (multiple), EU Ecolabel, Blue Angel Ecolabel, upcoming EU Product Environmental Footprint Category Rules
Sourcing of sustainable fibres	• Recycled and renewable synthetic content must be at least 70% of garment weight and third-party verified. • Recycled content can be pre- or post-consumer, but must be traceable to the feedstock source. • Man-made cellulosic fibres (MMCF) must be from certified sources. • Virgin cotton or natural cellulosic seed fibres must comply with production and inspection requirements for organic production.	**Recycled content:** RCS, SCS, UL 2809, verification and traceability in line with ISO 14021 **MMCF**: FSC, PEFC **Organic cotton**: USDA NOP, Council Regulation (EC) No 834/2007
Design for circularity	• For cellulose-based fibres, no more than 10% non-cellulose-based content by weight. • For protein-based fibres, no more than 2% non-protein-based content by weight. • For synthetic fibres, only mono-material polyester and polyamide are accepted. • Elastane content cannot exceed 2%. • No more than two fibres can be blended.	
Chemical restrictions	• Comprehensive restrictions of Substances of Very High Concern under REACH regulations, both for the final product and during all production stages. • Requirement of 90–95% biodegradability, recyclability or eliminability in wastewater treatment for most spinning, sizing and wet treatment agents.	**Final product restrictions:** EU Ecolabel, Blue Angel Ecolabel, AFIRM V.6, STANDARD 100 (OEKO-TEX) **For dyes and auxiliaries:** ZDHC Manufacturing Restricted Substance List V2.0 **For test results:** Performance supported by ISO 17025-accredited laboratory

[93] EU Platform on Sustainable Finance (2022), 'Platform on Sustainable Finance: Technical Working Group, Part B – Annex: Technical Screening Criteria', https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/220330-sustainable-finance-platform-finance-report-remaining-environmental-objectives-taxonomy-annex_en.pdf

4.2.3 Voluntary approaches have advanced inexpensive sustainability solutions

In the absence of circular economy policymaking for the textiles sector, voluntary action by industry, NGOs and international organizations has grown into many niches. These efforts have not yet achieved a structural change in the clothing industry's linear and extractive model.[94]

Global brands and retailers in the fashion and textile industry have joined coalitions that set voluntary sustainability commitments (e.g. Science-Based Targets initiative, The Fashion Pact, Circular Fashion Pledge) and create space for advancing best practices and innovative solutions (e.g. Textile Exchange, Make Fashion Circular, Sustainable Apparel Coalition, Circular Fashion Partnership). Partnerships have also been created to define best practice (e.g. The Jeans Redesign), deal with secondary textiles (e.g. ReHubs, TexAid, Sorting for Circularity) and finance sustainable innovations (e.g. Fashion for Good, Circular Apparel Innovation Factory).

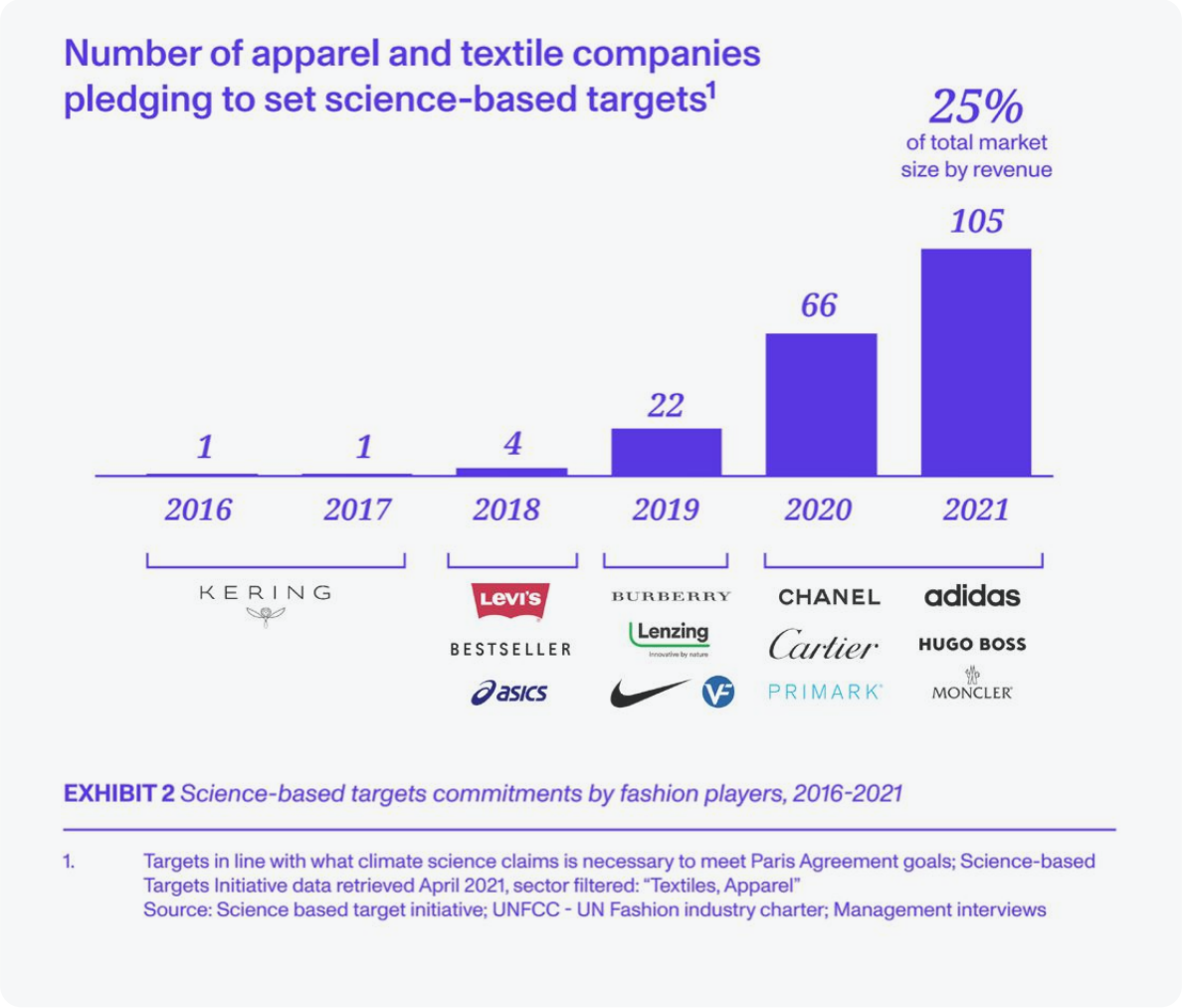


Image reproduced from Circular Fashion Partnership's 'Scaling Circularity: A Policy Perspective'

[94] Buchel, S., Hebinck, A., Lavanga, M. and Loorbach, D. (2022), 'Disrupting the status quo: a sustainability transitions analysis of the fashion system', Sustainability: Science, Practice and Policy, 18(1), 231-246, https://www.tandfonline.com/doi/pdf/10.1080/15487733.2022.2040231

New approaches, technologies and business models are gaining attention. One important circular trend is recent growth in the secondhand fashion market. Affordability, consumer sustainability concerns and digital innovations were already driving growth in this market segment before 2020[95] – and the COVID-19 pandemic has accelerated these trends. Online peer-to-peer resale platforms like Vinted and Depop are growing particularly fast, but traditional thrift and donation retail are also doing better than before.[96] While this gives some clothing a second life, only around half of secondhand purchases displace the sale of a new item, so the secondhand market does not entirely mitigate linear textile models.[97] A much smaller, but fast-growing, circular business model is the fashion rental market, which was estimated at $1.8 billion globally in 2021.[98] Textile multinationals are now experimenting with different resale, rental and repair models alongside their traditional linear business model. If these circular business models continue growing, they could potentially drive demand for durable garments with a lasting appeal.

Image reproduced from ThredUP's 'Resale Report 2022'

[95] Boston Consulting Group (2020), 'The Consumers Behind Fashion's Growing Secondhand Market', https://www.bcg.com/publications/2020/consumer-segments-behind-growing-secondhand-fashion-market
[96] URWLab (2021), 'Trends: the boom of the second-hand apparel market', https://urwlab.com/trends-the-boom-of-the-second-hand-apparel-market/
[97] Farfetch (2019), 'Understanding the environmental savings of buying pre-owned fashion', https://cdn-static.farfetch-contents.com/content/UP/PRODUCTION/LANDING-PAGES/SUSTAINABILITY-CALC/Understanding%20the%20Environmental%20Savings%20of%20Pre-owned_Farfetch%20Report%202020.pdf
[98] Future Market Insights (2022), 'Online Clothing Rental Market By Product Type', https://www.futuremarketinsights.com/reports/online-clothing-rental-market

The textile value chain has many standards, agreements, benchmarks, labels and certifications. A few examples of product and production method certifications are provided below:

- **Sustainable cotton**
  e.g. Better Cotton Initiative (BCI), Cotton made in Africa (CMiA)
- **Organic cotton** e.g. Organic Cotton Standard (OCS), Global Organic Textile Standard (GOTS)
- **Forest resource management for cellulosic fibres** e.g. Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC)
- **Recycled content and circularity** e.g. Recycled Claim Standard (RCS), Global Recycle Standard (GRS), Cradle to Cradle (C2C)
- **Chemicals management** e.g. Bluesign, Oeko-Tex, Zero Discharge of Hazardous Chemicals (ZDHC) – Manufacturing Restricted Substance List

Other certifications and initiatives target factory buildings and manufacturing processes (e.g. Leadership in Energy and Environmental Design (LEED), Environmental Management System (EMS) certifications, as well as social sustainability issues such as working conditions (e.g. Fairtrade, STeP by OEKO-TEX, Fair Wear Foundation, Better Work Programme).[100]

Most multinational textile brands and retailers have a supplier Code of Conduct that sets requirements for their suppliers to align with different certifications, performance standards and initiatives. Sometimes these Codes are accompanied by technical assistance to meet the desired standards, however this rarely includes financial assistance.[101] Textile multinationals are also increasingly held to account on their circularity and sustainability management. Several initiatives aim to provide transparency on environmental impacts and supply chain practices (e.g. the Higg Index, Transparency Pledge, The Sustainability Pledge) and others streamline environmental and social auditing requirements (e.g. Initiative for Compliance and Sustainability).[69] Smaller operators often lack the technical and financial capacity to comply with an increasingly challenging and complicated sustainability landscape. This, among other factors, has led to a decline in micro, small and medium enterprises (MSMEs) in the ready-made garment sector, in Bangladesh for example.[70]

Voluntary approaches

Both capacity building and Codes of Conduct are essential to promote sustainability in the production stages of the value chain. Capacity building initiatives often lack sufficient resources and investment and voluntary approaches alone have not achieved a structural change in the textile industry's linear model.

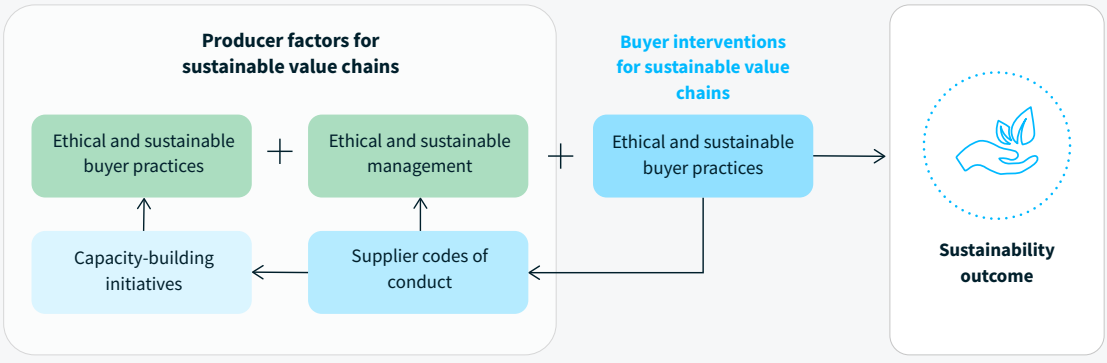


Image adapted from Richard M. Locke's 'The Promise and Limits of Private Power', 2013

[100] UNEP (2020), 'Sustainability and Circularity in the Textile Value Chain: Global Stocktaking' , oneplanetnetwork.org/sites/default/files/unep_sustainability_and_circularity_in_the_textile_value_chain.pdf
[101] UNCTAD (2021), 'The role of exports in manufacturing pollution in Sub-saharan Africa and South Asia', https://unctad.org/system/files/official-document/ditctedinf2021d6_en.pdf

Industry-led circularity has given birth to a wide range of strategies that have received high uptake among the largest brands. According to the Sustainable Apparel Coalition, their members have a combined revenue of $845 billion – more than half the size of the global apparel market in 2021.[102] Global brands' commitment to sustainability has delivered particularly on fibre sourcing practices. For example, since its launch in 2009, the Better Cotton Initiative has grown to license 22 per cent of the global cotton market, and

Recycled polyester has grown from an 8 per cent market share in 2008 to 15 per cent in 2020.[103,104]

Similar trends are seen at the producer site level. The number of textile production sites meeting recycled content standards (RCS and GRS) doubled in both 2019 and 2020, and sites that met organic standards (OCS and GOTS) doubled between 2018 and 2020.[105]

However, more transformative action seems to be difficult even for the largest industry players to achieve. The Better Cotton Initiative may be popular with producers, but it makes small improvements to the climate, water and waste impacts of cotton products compared with recycled fibres.[106] Circular fibres with big reductions in environmental impacts, such as recycled cotton and recycled synthetics other than polyester, remain under 1 per cent of the fibre market.[107] To achieve change at scale, there is a need for greater collaboration, finance and policy coherence.[108] Without a clear policy direction, investments in circular solutions will often be too risky in relation to returns, and there is a risk of corporates treating sustainability programmes as optional. For example, there are signs that compliance with voluntary sustainability measures in the ready-made garments sector in Asia was compromised in the wake of the COVID-19 pandemic, at a time when the sector faced mass cancellations of orders and employment losses.[109,110]

Despite their limitations, voluntary approaches to textile sustainability are an important driving force behind greater circularity in the textile value chain. By setting up the knowledge, innovation, and collaboration infrastructure for sustainability, they lay the foundation for ambitious policy. Sustainability standards and pacts are now an essential part of the circular policy infrastructure, and many of the upcoming EU circular policies, such as the Directive on Corporate Sustainability Due Diligence, the green finance taxonomy and ESPR, will cross-reference them. Therefore, suppliers should see certification with sustainability standards as an insurance policy and capacity-building exercise to enable them to comply with upcoming regulatory requirements.[111]

[102] Statista (2022), 'Global Apparel Market – Statistics & Facts', https://www.statista.com/topics/5091/apparel-market-worldwide/#dossierKeyfigures
[103] Better Cotton Initiative (2022), 'Our history', https://bettercotton.org/who-we-are/history/
[104] Statista (2022), 'Recycled and conventional polyester fiber as share of total production worldwide from 2008 to 2020'https://www.statista.com/statistics/1250998/global-share-recycled-polyester-fiber/
[105] Bextile Exchange (2021), 'Preferred Fiber & Materials: Market Report 2021', https://textileexchange.org/wp-content/uploads/2021/08/Textile-Exchange_Preferred-Fiber-and-Materials-Market-Report_2021.pdf
[106] European Clothing Action Plan (2019), 'Quantified reduction of environmental impact by brands and retailers', http://www.ecap.eu.com/wp-content/uploads/2019/12/B3-Deliverable_ECAP-quantified-reduction-report-FINAL.pdf
[107] Apparel Impact Institute (2021), 'Unlocking the trillion-dollar fashion decarbonization opportunity: Existing and innovative solutions', https://apparelimpact.org/wp-content/uploads/2021/11/Aii_UnlockingTheTrillion-DollarFashionDecarbonisationOpportunity_Report_v11.pdf
[108] Boston Consulting Group, Inc., Global Fashion Agenda and Sustainable Apparel Coalition (2019), 'Pulse of the Fashion Industry 2019', http://media-publications.bcg.com/france/Pulse-of-the-Fashion-Industry2019.pdf
[109] European Parliament (2021), 'Textile workers in developing countries and the European fashion industry: Towards sustainability?', https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/652025/EPRS_BRI(2020)652025_EN.pdf
[110] International Labour Organization (2022), 'Opportunities for a Just Transition to environmental sustainability and COVID-19 recovery in the textile and garment sector in Asia', https://www.econstor.eu/bitstream/10419/263117/1/ilo-wp54.pdf
[111] van der Ven, C. (2022), 'Circular innovation and ecodesign in the textiles sector: Towards a sustainable and inclusive transition', TULIP Consulting & Sitra, Helsinki, https://www.sitra.fi/app/uploads/2022/09/sitra-circular-innovation-and-ecodesign-in-the-textiles-sector.pdf

4.3 Implications for textile producing countries trading with the EU

4.3.1 Circular strategies can help developing countries to stay competitive

EU legislative developments and industry-led initiatives on circularity will have consequences for textile producers in developing countries, both in the short and long term. Key implications are outlined below:

Recycled content requires coherent policy, finance, and industry collaboration

Producers will be expected to incorporate more and more factory and post-consumer textile waste over time. To begin with, this is unlikely to be mandatory. However, the market for recycled fibres will be stimulated by green public procurement, multinational buyer targets and the EU taxonomy, among other drivers. Therefore, in the medium term, it is likely to become a minimum requirement, at least for polyester. Preparing to meet recycled content requirements is no easy task, and the demand for recycled content may well outpace the ability of producer countries to set up relevant reverse logistics supply chains and overcome lock-in effects of vested interests in the current linear model.

Greater use of recycled content will require capital investment in new textiles recycling infrastructure, removal of policy barriers, and skills training, and will bring additional costs of compliance. One challenge will be securing access to high-quality recycled fibres, as demand could outstrip supply, especially if current feedstocks like PET bottles are directed to closed-loop recycling rather than downcycled into polyester staple fibre (rPSF).[112,113] Supply-side uncertainty could lead to an inconsistent influx of materials and intermittent production, which threatens the economic viability of recycling operations. One solution would be to encourage manufacturers to form networks to stimulate industrial symbiosis and match supply and demand of textile waste.

Proactive waste and trade policy is needed to drive the change

Producer countries can create enabling conditions for circular textile value chains through coherent policy. Extended producer responsibility would help fund textile waste collections and the construction of advanced fibre sorting and recycling infrastructure. This would need to be supported by penalties for waste treatments which destroy the value in waste textile fibres, such as incineration and landfill.[114] Decision-makers must not only implement bold circular policy, but also identify investments or alternative opportunities that can ensure just transitions for textile workers.[115] Alongside measures to improve waste management, policy should also focus on upstream production improvements, reducing consumption of water and chemicals and shifting to renewable energy use. For producers with mostly cotton-based exports, another important improvement is the fibre

[112] Netherlands Enterprise Agency (2021), 'Feasibility Study Textile Recycling', https://www.rvo.nl/sites/default/files/2021/06/Feasibility%20Study%20Textile%20Recycling.pdf
[113] Harmsen, P., Scheffer, M., Bos, H., 'Textiles for circular fashion: The logic behind recycling options.', Sustainability, 13(17): 9714, doi: https://doi.org/10.3390/su13179714
[114] Circular Fashion Partnership (2021), 'Scaling Circularity', https://globalfashionagenda.org/news-article/scaling-circularity-a-policy-perspective/
[115] Chatham House (2020), 'Promoting a Just Transition to an Inclusive Circular Economy', https://www.chathamhouse.org/2020/04/promoting-just-transition-inclusive-circular-economy

length. If industry is incentivized to source long-staple cotton, this could help to position the country as a producer of quality products with high recyclability, as fibre length will likely be the next frontier for circular standards.[116]

Since many producer countries export more textiles than they consume, there is also a need for planning and trade policies that open up opportunities in waste textiles from abroad. For example, Pakistan has co-located sorting, recycling and production operations around the Karachi Export Processing Zone, which will become an increasingly strategic trade hub as textile exports from the EU are expected to increase following mandated separate collections.[117] For developing countries to successfully leverage trade for more circular textiles, they first need to identify what comparative advantages they may have in a global circular textiles value chain, as well as challenges and opportunities associated with the transition. Producer countries could then, for example via regional trade agreements, facilitate technology transfer, reduce barriers to specific goods and services, and target investments.[118]

Tougher, but more harmonized, requirements on traceability and transparency

Traceability and transparency requirements are set to increase in the short term, driven by due diligence requirements and the EU digital product passport. To comply, suppliers will have to invest in facility monitoring equipment, solutions for tracing materials more effectively across the supply chain, and relevant environmental management systems. The overall burden of reporting will increase. This may be beyond the capacity of many MSMEs, unless they get support to invest in information management as well as cleaner and safer production. This trend is already underway as textile production shifts towards larger, more advanced factories – for example in Bangladesh, the number of MSMEs decreased by over a third between 2012 and 2018, from around 6,000 to 3,856.[119]

Small businesses and workers will need capacity building and technology improvements to meet long-term effects

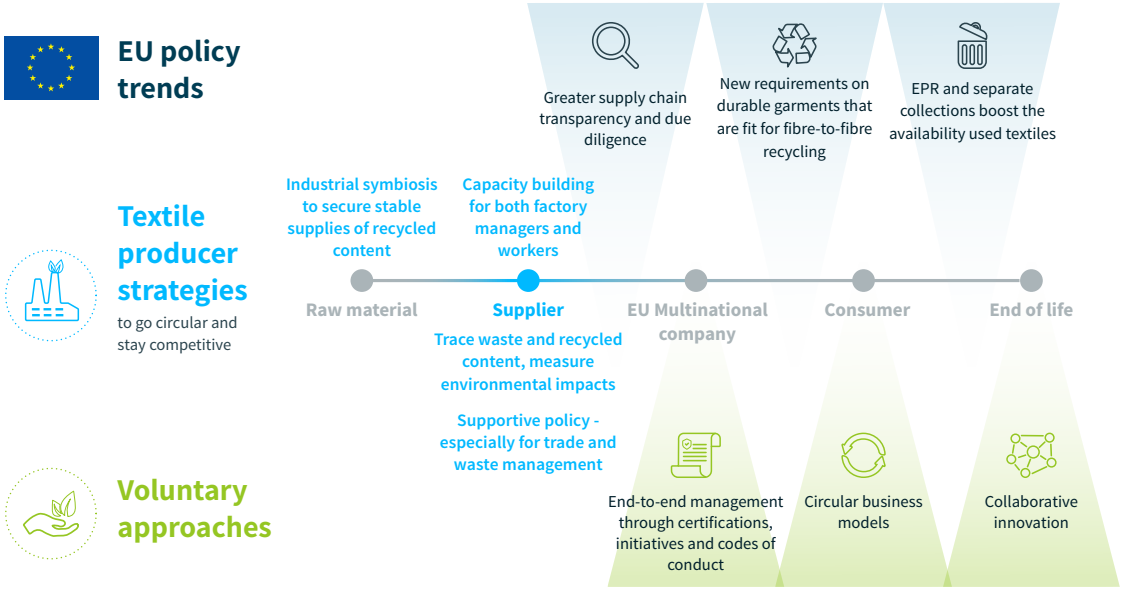
As the EU circular textiles policy landscape matures, some production of clothes with recycled content could shift closer to end customers, and away from traditional producers outside the EU.[120] Textile producing countries enjoy significant advantages that limit this risk to some extent, but competitive pressure may increase. To mitigate negative employment effects, developing country producers would need to alter their production processes and workforce skills.[121] One area that will pose particular challenges in the near

[116] PBL (2021), 'Potential effects of Dutch circular economy strategies on low and middle-income countries', https://www.pbl.nl/en/publications/potential-effects-of-dutch-circular-economy-strategies-on-low-and-middle-income-countries
[117] Ibid.
[118] van der Ven, C. (2022), 'Circular innovation and ecodesign in the textiles sector: Towards a sustainable and inclusive transition', TULIP Consulting & Sitra, Helsinki, https://www.sitra.fi/app/uploads/2022/09/sitra-circular-innovation-and-ecodesign-in-the-textiles-sector.pdf
[119] UNCTAD (2021), 'The role of exports in manufacturing pollution in Sub-Saharan Africa and South Asia', https://unctad.org/system/files/official-document/ditctedinf2021d6_en.pdf
[120] Ecopreneur (2020), 'Circular Fashion and Textile Producing Countries', https://ecopreneur.eu/wp-content/uploads/2020/02/EcopreneurEU-Research-Note-on-Circular-Fashion-Impacts-26-2-2020.pdf
[121] Repp, L., Hekkert, M. and Kirchherr, J. (2021), 'Circular economy-induced global employment shifts in apparel value chains: Job reduction in apparel production activities, job growth in reuse and recycling activities', Resources, Conservation and Recycling, 171, https://www.sciencedirect.com/science/article/pii/S0921344921002305

term is sustainable use of chemicals. With tougher restrictions, even the largest players will struggle to register and scale safe alternatives to conventional chemicals according to EU chemical policy procedures.[122,123] Capacity building will also be required to move production from low-value fast fashion items to making more durable and recyclable items, or potentially even repairing used garments. But investments in capacity building can pay off. Initiatives like Ella Pad, a programme for women in garment factories to produce, distribute and sell sanitary pads from textile scraps, has shown that such investments can marry circular and social development objectives.[124]

Drivers of circularity in the textile and garments value chain

International circularity drivers and potential producer responses.



[122] Chemical Watch (2021), 'EU textiles and chemicals strategies must incentivise, not penalise industry, says ZDHC head', https://chemicalwatch.com/330537/eu-textiles-and-chemicals-strategies-must-incentivise-not-penalise-industry-says-zdhc-head

[123] Eurofins BLC (2020), 'Annex XVII of REACH Textiles Regulations Coming into Force November 2020', https://www.blcleathertech.com/news/annex-xvii-of-reach-textiles-regulations-coming-into-force-november-2020

[124] Chatham House (2020), 'Promoting a Just Transition to an Inclusive Circular Economy', https://www.chathamhouse.org/2020/04/promoting-just-transition-inclusive-circular-economy

4.3.2 Concurrent trends complicate the circular textile transition

It is difficult to predict the full impact of voluntary regulation and EU circular economy policy on producer countries, as producers could choose to sell to a different market with less stringent requirements. For some countries, like Bangladesh, the EU market is significant but is expected to decline: more than half of the country's exported textiles go to Europe, but strong growth in the Chinese market and preferential trade between the EU and Vietnam could soon mean this proportion will decline.[125] As Europe and the US face tough economic situations following the COVID-19 pandemic and Russian invasion of Ukraine, South Asian countries are actively seeking to diversify their exports, for example to Gulf markets.[126] Nonetheless, the EU market will remain one of the main export destinations for the South and Southeast Asian textile industries.

Strong growth is expected in the textiles market in jurisdictions with less strict environmental demands. While circular solutions are on the rise in some markets, there will be ample space for growth into more linear segments of the apparel market. The global textile market is expected to grow by 50 per cent between 2020 and 2027, and the fast fashion segment even more quickly.[127,128] Without stronger policy on fast fashion, sustainable textiles will remain a premium option for consumers. With high inflation and a looming recession, European consumers are likely to react negatively to further price increases for greener textiles, so it may be difficult to muster the political will for ambitious implementation of the EU textiles strategy. Meanwhile, the garment sector in many producer countries is still recovering from the shock of the pandemic, at the same time as the cost of energy and raw materials increases.[129] For businesses with tight margins, investments in long-term competitiveness and supply chain resilience will be difficult in current market conditions. Circular value chains can reduce supply chain length and ensure a resilient supply of secondary raw materials, but these benefits are not immediate.[130]

Another development that will affect developing country producers is the domestic pressure for environmental protection that will build as environmental impacts and levels of development increase. Local communities could be important drivers of change, but they lack political agency. Since communities live with the impacts of water mismanagement and are critical stakeholders for improving water stewardship, they must be better included in planning processes. Decentralized forms of monitoring and enforcement, demands for consultations with local communities, and stronger community-based organizations could create societal support for cleaner production.[131]

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[125] McKinsey (2021), 'What's next for Bangladesh's garment industry, after a decade of growth?', https://www.mckinsey.com/industries/retail/our-insights/whats-next-for-bangladeshs-garment-industry-after-a-decade-of-growth

[126] Vietnam Posts (2022), 'The risk of recession in the Eurozone is approaching', https://vietnam.postsen.com/trends/119509/The-risk-of-recession-in-the-Eurozone-is-approaching.html

[127] Research and Markets (2021), 'Global Textile Market Size, Trends & Growth Opportunity', https://www.researchandmarkets.com/reports/5437867/global-textile-market-size-trends-and-growth

[128] Research and Markets (2021), 'Fast Fashion Global Market Report 2021, https://www.researchandmarkets.com/reports/5321430/fast-fashion-global-market-report-2021-covid-19

[129] Devnath, A. (2022), 'Bangladesh's garment sector faces energy, demand crises', Al Jazeera, https://www.aljazeera.com/economy/2022/8/2/bangladeshs-garment-sector-faces-energy-demand-crisis

[130] Chatham House (2021), 'Transitioning to a circular global textiles industry', https://www.chathamhouse.org/2021/04/transitioning-circular-global-textiles-industry

[131] WWF & H&M (2015), 'Water Governance in Bangladesh: Challenges and opportunities around policy, institutional function and implementation for a sustainable water future', https://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_hm___water_governance_in_bangladesh_published.pdf

CASE STUDY

Case study: Scaling recycling of textile and plastic waste in Bangladesh

The ready-made garment industry is the lifeblood of Bangladesh's economy – accounting for more than 11 per cent of the country's GDP and 83 per cent of exports.[132] The majority of Bangladesh's textile exports go to the EU, so the upcoming circular economy policies for textiles will have implications for the industry's practices. As the country prepares to graduate from least-developed country status in 2026, diversification of the textile industry into high-value sustainable market segments will be important to maintain its competitiveness.

Garment manufacturers in Bangladesh have already made excellent achievements in greening factories, including 171 LEED certified facilities as of September 2022[133]. Meanwhile, Bangladesh currently foregoes a massive circular opportunity. Its factories produce around half a million tonnes of textile waste every year. Rich in cotton and produced in consistently large volumes, these post-production materials (also known as 'jhoot') have strong upcycling potential. However, they are managed by informal networks characterized by several middlemen, inefficient segregation and high levels of contamination. A lot of the waste ends up being exported to India, where it is downcycled into lower value products.[134] Analysis by the Circular Fashion Partnership[135] estimates that

In 2019, 250,000 tonnes of cotton waste could have been sold to the recycling market for $100 million.

Inspection of recycled cotton at CYCLO factory in Mymensingh, Bangladesh. Photo: Mark Draeck

[132] Bangladesh Garment Manufacturers and Exporters Association (2022), 'About Garment Industry of Bangladesh', https://www.bgmea.com.bd/page/AboutGarmentsIndustry
[133] Hossain, S. (2022), 'Bangladesh boasts 171 Leed-certified green RMG factories now' https://www.dhakatribune.com/business/2022/09/12/bangladesh-boasts-171-leed-certified-green-rmg-factories-now
[134] Circular Fashion Partnership (2021), 'Pre-feasibility Analysis of Post Industrial Textile Fiber-2-Fiber Recycling in Bangladesh', https://globalfashionagenda.org/product/pre-feasibility-report/
[135] Circular Fashion Partnership (2021), 'Policy brief: Scaling circularity in garment manufacturing countries, such as Bangladesh', https://globalfashionagenda.org/resource/policy-brief-circular-fashion-partnership/

If the materials were processed and upcycled in Bangladesh and reintroduced into garment manufacturing, it could have saved the country 15 per cent of raw material imports, or around $500 million.

Industry players have sought to improve circularity in the Bangladeshi textiles sector but have come up against several barriers. Data and transparency on post-production textile waste is poor, a lot of textile waste is diverted for incineration, and vested interests maintain the informal waste network model. Multistakeholder partnerships in Bangladesh such as the Textile Sustainability Platform, which will soon evolve into a new phase as the Textile Competitiveness Platform, have promoted resource efficiency and advocated for alternative pathways for the textile sector.[136] Bangladesh's government has recognized that improved waste management is key to addressing the textile sector's environmental impacts, but relevant policies have not been put in place and implemented. In 2010, the country presented a National Strategy Document on the 3R,[137] but this was not fully operationalized. While Bangladesh's eighth five-year plan mentions circular economy, it focuses mostly on municipal solid waste and the introduction of an EPR scheme for plastics.[138]

To accelerate Bangladesh's transition to a more circular textiles sector, SWITCH2CE[139] will implement two pilot projects in the country. Both projects will target Bangladeshi producers with capacity development, data collection, ecosystem development and improving access to finance for circular models across the value chain. One of the pilots will focus on blended textile waste and post-consumer plastic waste, the other on post-production (factory) cotton waste.

The pilots will require holistic efforts that enhance R&D, change supplier practices, accelerate supportive policies and successfully engage informal waste networks. This will be done through broad partnerships between local and international experts, as well as multinationals and hundreds of their suppliers. By 2025, the SWITCH2CE pilot project on cotton aims to increase waste segregation by 50 per cent every year, and the pilot on blended and plastic waste aims to replace 2,500 tonnes of virgin raw materials per year, compared to business as usual.

Textile scraps at Dulal Brothers Limited (DBL) factory in Gazipur, Bangladesh. Photo: Mark Draeck

[136] Business Initiative Leading Development (2022), 'BUILD Connect Newsletter May-June 2022', https://buildbd.org/wp-content/uploads/2022/08/Connect-2022-03.pdf

[137] Bangladesh Department of Environment (2009), 'National 3R Strategy for Waste Management', http://globalrec.org/wp-content/uploads/2014/03/Draft-National-3R-Strategy.pdf

[138] Bangladesh Planning Commission (2020), '8th Five Year Plan July 2020 - June 2025: Promoting Prosperity and Fostering Inclusiveness', https://policy.asiapacificenergy.org/sites/default/files/Eighth%20Five%20Year%20Plan%20%28EN%29.pdf

[139] SWITCH2CE (2022), 'Switch to Circular Economy Value Chains', https://switchtocircular.eu/

5

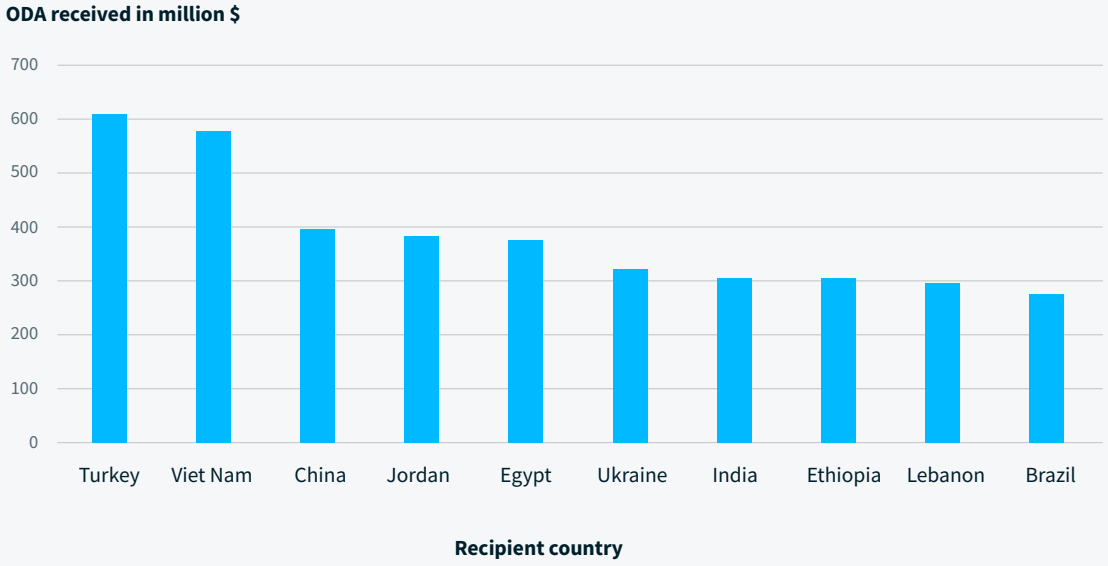
International support for the circular transition in developing countries

Plastic bottles going on a conveyor belt at a sorting centre in Oum Azza, Morocco. Photo: Camille Tahon

In recognition of the difficulties of transitioning to circular economy value chains, the EU will support trading partners through international cooperation efforts. The EU Green Deal is a top geopolitical priority for the EU's €79.4 billion international development cooperation instrument for 2021–2027.[140] While the EU is the frontrunner on assistance for sustainable consumption and production, individual member states such as Germany and France, as well as other countries like the US and Japan, are not far behind.[141]

Top recipients of Overseas Development Assistance relating to SDG 12, 2015-2019

Significant flows of overseas development assistance specifically support countries' efforts to attain Sustainable Development Goal 12, Responsible Consumption and Production. These efforts often include circular economy approaches.



Source: SDG Financing Lab, 2022

The EU is also supporting joined-up circular transitions through trade and development cooperation. For example, it is embedding circular economy ambitions in trade agreements,[142] and supporting harmonized standards with other countries, to ensure that circular transitions do not disrupt value chains.[143] Another conduit for collaboration between the EU and producer countries is Aid for Trade, which aims to support developing countries to overcome supply-side and trade-related infrastructure obstacles which constrain their ability to engage in international trade. As the EU is the leading donor (€17.9 billion in 2019) to Aid for Trade, and there is increasing recognition that the initiative should support the greening of trade,[144] it will be an important tool

[140] CONCORD (2022), 'Guide to Global Europe Funding 2021–2027: For civil society organisations, Part 1',
[141] Schröder, P. and Raes, J. (2021), 'Financing an inclusive circular economy', Chatham House, https://www.chathamhouse.org/2021/07/financing-inclusive-circular-economy/02-sdgs-and-how-circular-economy-finance-can-0
[142] Institute for European Environmental Policy (2022), 'Trade in support of circular economy: A synthesis report', https://ieep.eu/publications/trade-in-support-of-circular-economy
[143] European Commission (2020), '2020 Circular economy action plan: International aspects', https://ec.europa.eu/environment/international_issues/pdf/Circular%20Economy%20ActionPlan_FS_EN_web.pdf
[144] OECD and World Trade Organization (2022), 'Aid for Trade at a Glance 2022: Empowering Connected, Sustainable Trade',

for the EU and producer countries to overcome trade barriers created by circular policies.[145] In the development and investment sphere, the EU is also creating 'Green Partnerships' with regions like the Association of Southeast Asian Nations and individual countries like Morocco, where the EU will collaborate closely with trading partners to promote alignment with the Green Deal objectives, including the circular economy action plan.[146] This is also done through project-based development cooperation, such as the SWITCH to Green facility: a family of development cooperation projects aiming to raise awareness and develop capacities in high-impact value chains like food, textiles and construction materials. By 2020, the EU had committed over €400 million to the facility, with most of the funds going to the SWITCH Asia programme, supporting the green transition across Asia, with an emphasis on MSMEs.[147] SWITCH to Circular Economy Value Chains (see case study on page 53) is a recent addition to the SWITCH to Green facility, and aims to work across the full length of value chains to demonstrate and scale-up circular transitions in practice.[148]

Beyond the EU, circular economy and resource efficiency have become more coordinated and formalized, largely thanks to Sustainable Development Goal 12 on Sustainable Consumption and Production. For example, 140 governments are connected to the One Planet Network, where expertise is pooled, knowledge shared and joint resources produced to raise awareness about the need for sustainable consumption and production to allow people and planet to prosper.[149]

Circular economy approaches also feature in many countries' bilateral development support. Furthermore, UN institutions like the UN Environment Programme, UN Industrial Development Organization and UN Development Programme make strategic contributions to advance value chain approaches, industrial collaboration and development of circular economy collaboration. Another key player is the 42-country-strong Global Alliance on Circular Economy and Resource Efficiency (GACERE), which was formed in 2021. The platform is open for countries with an interest in accelerating circular transitions, and is a space for open knowledge exchange, research and formation of new partnerships.[150] Altogether, this means that the international community is better prepared to collaborate for circularity, even if a managed value chain transition will require more finance and capacity building for developing countries to be mobilized.

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[145] EU (2021), 'Economic integration, trade and connectivity: Mapping of AfT activities in Partner Countries', https://international-partnerships.ec.europa.eu/policies/sustainable-growth-and-jobs/economic-integration-trade-and-connectivity_en#mapping-of-eu-aft-activities-in-partner-countries

[146] EU (2021), 'Chantier d'un partnenariat vert: UE–Maroc', https://climate.ec.europa.eu/system/files/2021-06/20210628_partenariat_vert_eu_maroc_fr.pdf

[147] European Commission (2020), 'Leading the way to a global circular economy: state of play and outlook', https://ec.europa.eu/environment/pdf/circular-economy/leading_way_global_circular_economy.pdf

[148] SWITCH2CE (2022), 'Switch to Circular Economy Value Chains', https://switchtocircular.eu/
One Planet Network (2022), 'About the One Planet Network', https://www.oneplanetnetwork.org/about/the-one-planet-network

[149] One Planet Network (2022), 'About the One Planet Network', https://www.oneplanetnetwork.org/about/the-one-planet-network

[150] GACERE (2021), 'Concept Note: Global Alliance on Circular Economy and Resource Efficiency (GACERE) Towards Just Transitions'https://ec.europa.eu/environment/international_issues/pdf/GACERE%20Concept%20Note.pdf

CASE STUDY

SWITCH to Circular Economy Value Chains

SWITCH to Circular Economy Value Chains (SWITCH2CE) is an international development project funded by the European Union and Finland, which aims to support enterprises in selected value chains to adopt circular economy practices. It draws on the experiences of previous and ongoing EU cooperation programmes such as SWITCH-Asia, SWITCH-Med and SWITCH Africa Green.

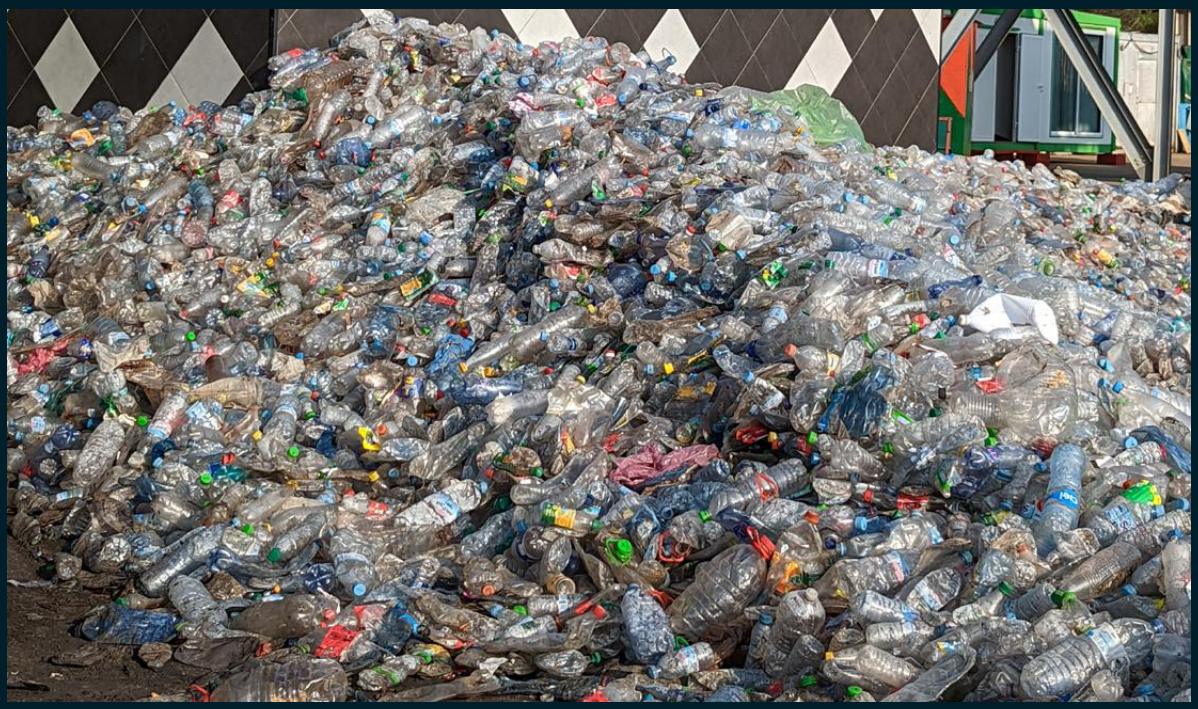
The project recognizes that the application of circular economy practices requires collaboration by all actors in the global value chains, from leading multinational companies to suppliers and small and medium-sized enterprises. Therefore, SWITCH2CE will run pilot projects between 2022–2025 in several target countries, where suppliers of EU multinational companies will be assisted in making the switch to circularity. The pilots are:

Plastic packaging: Bottle-to-bottle recycling for rPET in Morocco (see case study page 27);

Textile and garments: Recycling of post-production blended textile and post-consumer or post-production plastics in Bangladesh (see case study page 48);

Textile and garments: Recycling of post-production cotton in Bangladesh (see case study page 48);

ICT and electronics: Refurbishment and reuse of used electrical and electronic equipment in Egypt.



Plastic bottles waste stocked at a sorting centre in Oum Azza, Morocco. Photo: Camille Tahon

[151] The SWITCH2CE ICT and electronics pilot project is at an earlier stage of project design than the textile and plastics pilots. Because there is still considerable uncertainty about the nature of SWITCH2CE's activities in this value chain, this paper does not discuss circular policies for the ICT and electronics value chain.

Transformations to a circular model also require a supportive landscape of circular economy-friendly policies, finance mechanisms, skills, consumer awareness and platforms for collaboration. The SWITCH2CE pilot projects are complemented with activities to create this enabling environment, including mapping the economic, business and environment policy and regulatory frameworks in each target country.

This policy paper, which is the first report from SWITCH2CE, outlined how international market forces are greening value chains, and how producer countries may navigate this transformation. Over the course of the SWITCH2CE project, additional value chain and target country-specific reports will be produced.

Project workshop for SWITCH2CE in Rabat, Morocco. Photo: UNIDO Morocco

6. The way forward

EU policy, corporate sustainability and technological trends are all creating an urgently needed change in markets that will ensure a level playing field for sustainable businesses that is ripe for change. Some of the regulatory changes in the EU, particularly mandatory product requirements, may force producer countries to move quickly, if they wish to have continued access to the EU market. Achieving circularity will also become an important competitive advantage both nationally and globally.

Reorienting business models to a circular economy requires coherent policy, value chain collaboration and decisive policies to shift away from low-value waste management systems, This may be hindered by vested interests committed to maintaining the status quo. Change takes time, and many developing countries risk being struck hard by product and supply chain due diligence requirements that will take effect around 2025.

Piloting collaborative circular economy approaches across value chains, with capacity building, policy, and finance support, will be key to building resilience in producer countries. Fully understanding the opportunities for change, barriers to circularity, and policy levers that could enable the circular transition requires more country-specific analysis. Policy dialogue and research will therefore accompany SWITCH2CE pilot projects (see page 53) to guide the circular transition in Morocco, Bangladesh and Egypt, and inform policy development in other developing countries that supply the EU.