

BRIEFING NOTE No. 142

The role of low- and middle-income countries in the circular economy transition of the Netherlands and the EU

By **Nadia Ashraf and Jeske van Seters**

December 2021

In the Netherlands and the EU, there is an ambition to move towards a more circular system. Such a transition affects Dutch or European businesses, consumers and citizens, but also countries outside of Europe. These include low- and middle-income countries (LMICs), which, as important manufacturing hubs and resource-based economies, are potential suppliers of circular products and 'green' raw materials. They can also provide a market for recyclable and reusable materials generated in the EU.

This paper presents the perspectives of public, private and civil society actors on the roles LMICs can play in the circular economy transition of the Netherlands and the EU. It explores their views on the opportunities and challenges for LMICs, and how these should be reflected in the circular economy strategies of the Netherlands and the EU.

The paper highlights that a circular economy transition in the Netherlands and the EU will have significant implications for LMICs which merit to be considered more seriously. There are several steps the Netherlands and the EU can take to reflect these in their circular economy strategies. These include:

- promoting the development and harmonisation of circular economy standards, and making sure LMICs are included in these processes;
- making more use of trade policy measures, such as trade agreements and the unilateral Generalised System of Preferences, for a circular economy transition in global value chains;
- supporting LMICs through development cooperation and trade and investment promotion tools to seize circular economy-related trade opportunities and mitigate negative spillover effects resulting from a transition.

Acknowledgements

The paper was commissioned and financially supported by PBL Netherlands Environmental Assessment Agency.

The authors would like to thank, in particular, Hester Brink and Paul Lucas of PBL for their valuable input and good collaboration. The authors also thank the people they interviewed for sharing their valuable experiences and insights. Furthermore, the authors are grateful to their ECDPM colleague Inna Perova for layout.

The views expressed in this study are exclusively those of the authors and should not be attributed to any other person or institution. The authors can be contacted by sending an email to na@ecdpm.org (Nadia Ashraf) and jvs@ecdpm.org (Jeske van Seters).

1. Introduction

In the Netherlands and the EU more broadly, there is an ambition to move away from a linear economy towards a more circular system. This is reflected in the Netherlands' government-wide programme for a circular economy that was launched in 2016 (Government of the Netherlands 2016). At the EU level, a new Circular Economy Action Plan was adopted in 2020, succeeding the 2015 action plan (European Commission 2020). This transition seeks to limit environmental pressures, address potential supply security risks for crucial resources, and create sustainable growth and jobs.

While several aspects of a circular economy transition in the Netherlands and the EU would affect Dutch/European businesses, consumers and citizens, there are potential impacts of the Dutch or European circular economy transition on countries outside of Europe. Low- and middle-income countries (LMICs) are connected with the Netherlands and other EU member states through global supply chains and international trade. A move towards a more circular

economy in the Netherlands or Europe can affect the people, economies and environment in those countries. For example, harmful waste dumping in LMICs is receiving growing criticism in the past few years, with several countries imposing bans on waste imports. At the same time, extending loops beyond the EU can allow products to have a new life and provide economies with potentially valuable materials. As such the impacts on LMICs can both be positive and negative, based on different contexts and scenarios. There is however little knowledge at present about such potential implications, and how they can be taken into account in policy-making in the Netherlands and the EU.

In this context, the paper aims to present the perspectives of a broad range of stakeholders on the roles LMICs can play in the Dutch/European circular economy transition. It explores the views of actors on the opportunities and challenges for low- and middle-income countries, and their perspectives on the extent to which this should be reflected in circular economy strategies of the Netherlands/EU. Perspectives relate to different types of circular economy strategies, which can be clustered into the three categories: 1) *narrowing loops* – aimed at reducing the amount of material input (refuse, rethink and reduce); 2) *slowing loops* – keeping products or materials in use longer (reuse, repair and refurbish); and 3) *closing loops* – recovering energy or recycling materials and preventing losses (recycle and recover). The paper further outlines some of the relevant policy measures and actions that can be taken by the Netherlands Ministry of Foreign Affairs and EU foreign policy actors, as suggested by different stakeholders.

Data on stakeholder perspectives has been collected through desk review, and online interviews of various public, private and civil society actors. The full list of interviewees is presented in the annex. The following section (2) will discuss the views of stakeholders on the external dimensions of circular economy transition in the Netherlands and the EU. Section 3 provides an overview of suggested policy recommendations, followed by a concluding section (4).

2. External dimensions of circular economy transition in the Netherlands and the EU

The importance of integrating external dimensions into the circular economy transition of the Netherlands and the EU draws consensus from all the different stakeholders interviewed for this paper. As countries depend on global value chains and international trade, it is challenging for a country or region to create a circular economy on its own. Domestic circular economy related policies have transboundary implications for other countries. The EU and the Netherlands are importing certain raw materials and manufactured goods from outside the continent, as well as exporting a part of their post-consumer materials/products (waste, scrap, recycled and used goods). A shift in consumption, production and management of post-consumer materials can have both positive and harmful economic, environmental and social impacts in other countries, particularly LMICs. At the same time, LMICs can play a role in achieving the circular economy ambitions of the EU and the Netherlands. These countries provide a market for recyclable waste and reusable materials generated by products consumed in the EU. They are also important manufacturing hubs that will play a part in furthering the EU's ambition towards more circular products.

Some stakeholders argue that such considerations need to be better reflected in the EU's circular economy related policies to avoid inward looking approaches that only focus on the EU's economic competitiveness (interviews). In addition, greater support is required for vulnerable countries, which rely on linear value chains, to promote a just transition towards a global circular economy. This section discusses some key implications, as identified by stakeholders.

2.1. Implications for demand for raw materials and finished products

Circular economy strategies are aimed at reducing resource demand, which can have significant implications for low-income, resource-dependent countries. A fall in the demand of raw materials in the EU arguably corresponds with a loss of export earnings and the risk of job losses for countries dependent on the extractive sector (Preston et al. 2019, OECD 2020, UNEP and IRP 2020, van Der Ven 2020). In a similar vein, there is an expectation of output and job losses in the manufacturing sector. Disruptions to global value chains in the pandemic, as well as trade tensions, encourage companies to explore opportunities to bring production closer to end markets.¹ This may be coupled by a fall in demand for products as consumers exhibit more responsible buying practices, which help narrow material loops by reducing the amount of material inputs. This could entail both a reduction in demand as consumers become more aware of the harmful impacts of relentless consumption, as well as a conscious decision to move away from less sustainable products. These consumption patterns are supported by EU policies aimed at increasing the durability and lifespan of products, allowing consumers to keep using products for longer, so 'slowing' material loops (interviews).

At the same time, interviewees recognise that the likelihood of such shifts is low in the short run and subject to several factors. For one, the extent to which people's consumption patterns will change is not certain. It appears that stakeholders from LMICs generally are not overly concerned about the possibility of falling demand from European consumers. This is especially true for low-income countries (LICs), which are reliant on demand for mass produced low-priced goods (interviews). The demand for such products is not likely to change significantly in the short-term. The textiles sector is a good example, given that the import of clothing into the EU has increased by 62% in value over the last decade.²

The demand for certain primary materials and finished goods may still continue notwithstanding the circular economy transition in Europe. Population growth and rising incomes is likely to contribute to growing raw material demand globally, including in developing countries, which are projected to account for more than half of all global consumption by 2030 (Kettunen et al. 2019). While raw material demand would behave differently in countries with stable population figures, the demand for critical/high-tech materials is not likely to slow down (de Jong 2016). As Europe moves towards more renewable energy production, mineral-rich countries are likely to experience a rise in demand for cobalt, nickel, lithium and other critical minerals needed for the energy transition (IEA 2021). Moreover, the private sector recognises that for some product categories the EU would continue to source from outside its borders as businesses cannot (yet) compete with the cost of production in LMICs (interviews). As such, closing material loops within the EU through near-shoring production may be a 'utopia' for some types of products/materials.

Finally, it is uncertain whether a transition towards a more circular economy in the Netherlands and the EU more broadly could lead to a significant impact on LMICs, as this depends also on what other major importers will do. It is argued that the Netherlands, and even the EU, may be too small a player to significantly impact raw material exporting countries (de Jong et al. 2016). Relatedly, demand for raw materials in LMICs may not reduce but rather shift from high-income countries to emerging economies (interviews, Barrie and Schröder 2021). These contradictory claims exhibit the uncertainty of the actual impact of a circular economy transition in the Netherlands and the EU more broadly on the extractives and manufacturing sectors in LMICs. This points to the need for better research and scenario modelling, which is discussed in more detail in section 3 of this paper.

2.2. Jobs and economic diversification

A potential fall in resource demand from the Netherlands and the EU more broadly may create incentives for LMICs to break away from a

dependence on raw material extraction and/or manufacturing-led exports. It could create opportunities for job creation and development in higher-value downstream processing, as well as in the emerging sectors of recycling, repurposing and reuse of materials (UNEP and IRP 2020, van der Ven 2020). This shift could also curb the harmful environmental impacts associated with resource extraction in LMICs, as well as promote circularity through greater investment in post-consumer processes (UNEP and IRP 2020, van der Ven 2020, interviews).

At the same time, countries that are unable to make such transitions would lose out. While global shifts towards a more circular economy can create jobs and development outcomes, the benefits may be limited to more developed countries. The International Labour Organisation (ILO) created a circular economy scenario, according to which worldwide employment is projected to grow by 0.1% by 2030, led by growth in services and waste management (ILO 2018). However the redistribution of jobs and economic activity is likely to be uneven. Higher income countries are expected to experience a growth in high value jobs in recycling, repurposing and repair sectors, while LICs may only benefit from an increase in low-value jobs in waste and scrap management (Barrie and Schröder 2021). In addition, as mentioned earlier, global employment gains may be offset by employment losses in mining and manufacturing. In essence, if no action is taken to promote economic diversification, net employment losses are expected in Asia and the Pacific, Africa and the Middle East, according to the ILO's circular economy scenario (ILO 2018).

Moreover, a transition towards a circular economy can have impacts on the gender distribution of jobs and economic activities in LMICs. According to ILO's circular economy scenario, the female share of employment, including in highly-skilled jobs would rise (ILO 2018). This is based on the fact that transition towards a more circular economy is expected to create jobs in services, which are generally female dominated. At the same time, it is relevant to recognise that the impact would vary between sectors and between countries. For instance, repair jobs in textiles may be more female dominated, while

electronic repair/refurbishment may have a higher participation of males (interviews). In addition, the use of digital technologies in the transition towards a more circular economy might hinder women's access to goods, services and employment in certain countries (IISD and SITRA 2020). In Africa, for example, only about 12% of women use such technologies, as compared to 18% of men (Colby and Bell 2016.). As such, gender-disaggregated data on the impact of a circular economy transition on the different sectors in LMICs is required.

2.3. Product design and production processes

The Sustainable Product Policy Initiative, announced in the new Circular Economy Action of the EU aims to make sustainable products the norm. As part of the initiatives, the EU will revise the Ecodesign Directive, including to widen its scope beyond energy-related products to encompass the “broadest possible range of products” (European Commission 2020). In the Netherlands, the Policy Programme for circular textiles 2020-2025 sets periodic targets for recycled/sustainable material use in textiles. For instance, by 2030 all textile products sold in the Netherlands should contain at least 50% of sustainable material, of which at least 30% should be recycled (Government of the Netherlands 2016).

These, along with other policy measures, will have implications for countries exporting to the EU, including LMICs. On the one hand, producers in LMICs may shift to more circular product design and production processes to facilitate exports to the EU, which promotes a global circular economy (OECD 2018). It can also offer environmental benefits to LMICs. For instance, circular textile production entails the use of renewable or recycled material inputs, including fibers and chemicals, which ultimately reduces demand for raw materials and decreases greenhouse gas emissions (PACE 2021a). On the other hand, stricter environmental legislation from the EU can create non-tariff barriers to trade as LMICs may lack the capacity to swiftly adapt to the changing requirements. The impact may vary depending on local contexts and product types. For cheap mass-

produced goods ‘razor-thin’ profit margins hinder the investments required to transition towards more circular production and design (interviews). Relatedly, it is challenging for businesses that work in and export to multiple countries to comply with the various regulations and standards mushrooming in various parts of the world, including the EU. This points to the need for more harmonisation of regulations and targeted capacity building in LMICs.

Finally, sustainable product policies in the EU can influence the competitive advantage of LMICs in dealing with secondary raw materials. As products are designed for easier repair, disassembly and recycling, Dutch/European companies may find it more economically viable to manage materials domestically (using digital and automatic technologies) (Barrie and Schröder 2021). More complex (or obsolete) goods that are more difficult to recycle/repair and lower in value may be shipped abroad. As such, closing loops by processing post-consumer materials within the EU can have consequences for labour-intensive waste and recycling industries in LMICs. This is discussed in more detail in the next subsection.

2.4. Trade in reusable goods and waste

With respect to end-of-life products, international trade can provide opportunities for value retention and extension, which can contribute towards slowing material loops by keeping products in use longer. International trade in reusable goods and waste can also potentially generate economic gains for LMICs. Upon reaching their end of life, products can be categorised into i) reusable components ii) recyclable waste – raw materials that have a secondary use iii) or final waste that cannot be recycled (Kettunen et al. 2019). Trade in reusable components, including second-hand products, allows products to have a second life abroad, provides people with access to affordable second-hand goods and creates employment opportunities (OECD 2020, interviews). A study from the Institute of Economic Affairs (IEA) in Kenya found that the used textile industry is crucial to Kenya's economy, creating direct jobs for about two million people, and providing good value clothing to

consumers on limited budgets (IEA 2021). The country imported 185,000 tonnes of second-hand clothing in 2019.

Similarly, channelling recyclable waste to countries with a comparative advantage in recycling and repair can create economies of scale and generate valuable resources for local industries. For instance, in 2014 India accounted for 13% of global secondary steel production despite limited domestic supplies of steel scrap, implying the important role of trade in recyclable waste for material recovery (OECD 2018). EU exports of recyclable waste have increased tremendously over the past few years. In 2018, more than 36 million tonnes of recyclable waste were exported to non-EU countries – an increase of 69% since 2004.³ Vice versa, EU imports of certain types of recyclable or recycled waste are increasing. Recycled PET is an example, with EU demand being on the rise as a result of recycled PET targets in packaging, and EU supply lagging behind, which drives imports.⁴

However, in order for trade in end-of-life materials to be beneficial, it is necessary for importing countries to have in place the relevant infrastructure, regulatory frameworks and capacity to process these materials. It is relevant here to note that while waste exported from the EU for recycling is categorised as recyclable waste, there is uncertainty about whether the waste is actually recycled and if so under which conditions (Kettunen et al. 2019, interviews). Newly-industrialised and non-industrialised countries have very high levels of activity in lower value repair/repurposing and remanufacturing processes, but often lack the formalised infrastructure to facilitate higher value processing (IRP 2018). This is extra concerning in case the EU increasingly exports complex and/or low-quality recyclable materials. The result could be undesirable downcycling and higher amounts of materials being landfilled or incinerated, which is detrimental to the environment and human health. The textile sector is a prime example with increasingly low-quality second-hand clothing exported to Africa. It is estimated that around 40% of the used clothes imported into Ghana are deemed worthless on arrival and end up in landfill sites.⁵

Ghana's waste crisis is fuelled by poor-quality clothes arriving in Accra, which is home to West Africa's biggest second-hand clothing market. Some stakeholders therefore prefer processing materials (and thus closing loops) within the EU until there are better conditions to do so in LMICs.

In addition, the waste economy in LMICs is predominantly informal and vulnerable to worker rights violations. Most of the estimated 20 million informal waste workers are located in middle-income countries (OECD 2016). These workers face serious 'decent work deficits', including low wages, long working hours and work-related hazards (ILO 2018). Given the overall uncertainty about the implications of the circular economy transition of the Netherlands and the EU more broadly on LMICs, it is difficult to ascertain exactly how workers' conditions would be impacted. Nevertheless, a just circular economy transition in LMICs requires support to the informal sectors and efforts to create more decent work opportunities.

It is because of these challenges and risks that several countries are now imposing bans on waste imports to prevent waste dumping that is harmful to the environment and does not add value to the economy. China's ban on waste imports for recycling in 2017 was followed by a number of countries, including Thailand's ban on imports of all plastic waste (Kettunen et al. 2019). Some LMICs are also restricting imports of second-hand products and reusable materials to protect local industries. In 2015, several East African countries proposed a ban on the import of used textiles in an attempt to protect domestic industry from large volumes of low-priced used second-hand garments (Preston et al. 2019). It should however be recognised that a ban on used products does not automatically protect the local industry from cheaper alternatives. An example is the textile industry in South Africa, which is in decline despite a long-term ban on import of used textiles (Watson et al. 2016). A key determinant of this has been the industry's inability to compete with the influx of cheap clothing from Asia. To illustrate, exports of new clothing from China to Sub-Saharan Africa as a whole increased by 471% between 2005 and 2017 (Lu 2018).

Banning waste imports altogether prevents the possibility of the earlier mentioned value creating processes. Instead, stakeholders agree on the critical need for clear definitions and distinctions between the different classifications of waste, to prevent the export of harmful materials while facilitating the trade of recyclable waste. It can be challenging for businesses to move waste materials from one country to another, given the varying definitions and regulatory procedures, which creates disincentives for trade in potentially valuable waste materials. In this regard, the revision of the EU's waste shipment regulation, as proposed by the European Commission in November 2021, presents a good opportunity to review the EU's rules on waste export as well as curb illegal waste (European Commission 2021a).⁶ While some stakeholders are wary of the European Commission's view that "the EU should stop exporting its waste outside of the EU" (European Commission 2019), others believe a stricter regulation is necessary until third countries can properly process exported waste (interviews). As part of its proposal, the European Commission specifically proposes to only authorise EU exports of 'green-listed' waste to non-OECD countries, in case these countries explicitly notify the EU of their willingness to receive EU waste exports and demonstrate their ability to treat this waste in an environmentally sustainable manner. Furthermore, it wants to oblige companies exporting waste outside the EU to conduct independent audits in the facilities to where they ship waste to ensure environmentally sound waste management. It remains to be seen what the final regulation that will be adopted by the Council of the EU and the European Parliament will look like exactly.

3. Policy recommendations

3.1. Circular economy standards

Stakeholders across the different types of organisations strongly emphasised the importance of developing and harmonising circular economy related standards. While product-based and principle-based standards are emerging at different levels, more harmonisation of the definitions and classification of

the different types of material streams is needed, such as waste, scrap, secondary raw materials and goods for refurbishment and remanufacturing. Not only can this prevent harmful dumping practices in LMICs, but it can also facilitate recycling/refurbishment processes as handlers of imported materials can more easily classify (and treat) different types of materials. This in turn may discourage protectionist measures by LMICs, allowing Dutch/European businesses access to a market for end-of-life material streams (interviews). The need for greater harmonisation is also relevant for standards related to product design and production processes. As products are part of global value chains, they are subject to different regulations and standards in each country. So while domestic policies, such as those on eco-design, are positive developments, a more global approach to circular product design and production is warranted (OECD 2020).

In this context, LMICs need to be included in the international processes of developing global standards, to ensure that their perspectives are reflected. The ISO (International Organization for Standardization) standard for the circular economy is an important development in this regard. It is an ongoing process, which is scheduled to be finalised by the beginning of 2023. ISO has committed to involving experts and stakeholders from developing countries in the process and is engaged in relevant capacity building efforts (OECD 2020). The Netherlands can support such initiatives to promote better inclusion of stakeholders from LMICs and share learnings from the EU's experience in developing such standards. In addition, the Netherlands, as well as the EU, can play a role in promoting international discussions on creating global standards that take into account the priorities and interests of LMICs. In parallel to establishing core global standards, bilateral cooperation between the Netherlands/the EU and governments of LMICs is necessary to align and mutually recognise each other's standards and regulations.

3.2. EU trade policy measures

Many interviewees argue for the EU to better use its trade policy for the circular economy transition, including in relation to trading partners that are

LMICs. This is in line with the new EU trade policy adopted in February 2021, which reflects the ambition “to ensure that trade tools accompany and support a global transition towards a climate neutral economy, including accelerating investments in clean energy and promote value chains that are circular, responsible and sustainable” (European Commission 2021b). Interviewees are keen for the EU to put this into practice in the years to come. The Netherlands and other EU member states can guide and support this process, not in the least in the context of the Council of the EU.

Bilateral trade agreements can be an important tool in this regard, as is recognised in the EU’s circular economy action plan, which includes the commitment to ensure that free trade agreements reflect the enhanced objectives of the circular economy (European Commission 2020). This builds on the trend in recent years of more encompassing environment-related provisions in EU trade agreements (Ashraf et al. 2020). Moving forward, there is a call to better mainstream sustainability throughout trade agreements rather than limiting the scope to the Trade and Sustainable Development Chapters that feature in EU trade agreements since 2011 (Kettunen et al. 2020). This can relate for instance to provisions on technical standards, removing subsidies for ‘linear’ activities such as fossil fuel extraction, and market access for trade in goods and services relevant to the circular economy (Barrie & Schröder 2021; UNEP & IRP 2021; van der Ven 2020). At the same time, there is a call to strengthen the dialogue on, and monitoring and enforcement of, sustainability-related provisions of EU trade agreements (UNEP & IRP 2021; Kettunen et al. 2020). Ex-post impact assessments and more effective stakeholder engagement through ‘domestic advisory committees’ can contribute to this (Ashraf & van Seters 2020). The supporting role member states can play is illustrated by the non-paper of the Dutch and French government that calls on the European Commission to further improve sustainable impact assessments (Ministry for Europe and Foreign Affairs France and Ministry for Foreign Affairs the Netherlands 2020).

Unilateral trade schemes can also play a role, in particular the EU’s Generalised Scheme of Preferences (GSP), which provides tariff preferences to various LMICs. While the first EU GSP scheme was introduced in 1971, the European Commission recently adopted a legislative proposal for the new scheme covering the period 2024-2034 (European Commission 2021c). The commission proposes to strengthen the scheme’s social, labour, environmental and climate dimension and expand the grounds for the withdrawal of preferences in case of serious and systematic violations. Criticism expressed by the Institute for European Environmental Policy (IEEP) on the proposal is that it does not foresee preferential tariffs to goods that promote environmental and climate protection goals, as the Commission considers that too complex.⁷ The Netherlands and other EU member states can influence the final shape of the new GSP, and thus the integration of dimensions related to circular economy, as the proposal is now subject to tripartite negotiations between the European Commission, the European Parliament and the Council.

The EU can also pursue the trade and circular economy agenda at the international level. Some stakeholders propose a revision of the World Customs Organization Harmonized System (HS) codes to better distinguish between different types of materials/products traded. For instance, HS-code 6309 titled ‘worn clothing and other worn articles’ covers very diverse products including all sorts of worn clothing, footwear, blankets and articles for interior furnishing. This very broad category makes it difficult to ascertain what is actually being shipped. It is also seen that collectors tend to report non-reusable textiles (textile waste intended for recycling) also under HS-code 6309 for used clothing (Watson et al. 2016). However, stakeholders acknowledge the difficulty of revising HS codes, which can be a cumbersome process and is only done every five years. For example, the new Harmonised System codes for e-waste coming into effect from 2022 took around two decades to develop (OECD 2020). Nevertheless, some actors believe that revising the codes to distinguish better between waste and non-waste materials is beneficial despite the extensive

process. In this regard, the EU could promote discussions around the feasibility of revising HS codes in multilateral fora, particularly in the World Trade Organization (WTO).

More broadly, the EU can contribute to ensuring that discussions about the circular economy at the World Trade Organization and other international fora take account of the interests and concerns of lower-income countries (UNEP & IRP 2020).

3.3. Private sector development support

Many interviewees pointed out that trade agreements and schemes alone are not sufficient. Aid for trade can help LMICs to seize circular economy-related trade opportunities and mitigate negative spillover effects resulting from a circular economy transition. There is therefore a strong call for circular economy considerations to be further integrated in Aid for Trade, and development cooperation more generally (Barrie & Schröder 2021; Kettunen et al. 2019; UNEP & IRP 2020). Trade and investment promotion instruments can also be better harnessed.

Enabling policy environment: Development co-operation funding can support policy reform dynamics in LMICs, to create an enabling policy environment for more circular and inclusive approaches and to avoid potential negative environmental, social and health consequences, for example due to poor waste management (Preston et al. 2019). This includes removing legal hurdles for more circular approaches (IRP 2018). A possible approach can be to support the development and implementation of national circular economy strategies or roadmaps, at the request of LMICs (WBCSD 2021; Barrie & Schröder 2021). An example is support provided by the European Commission to the implementation of Colombia's National Circular Economy Strategy⁸, through the SWITCH to Green Facility managed by the European Commission. Relatedly, the EU and its member states, including the Netherlands, can share lessons from the development and implementation of their own circular economy plans. The International Resource Panel (IRP) argues for a step-wise approach to supporting LMICs, with policy reform as a short-term

measure, while focusing medium- and long-term efforts on skills, technology and infrastructure (IRP 2018).

Skills development: This is highlighted by interviewees as another relevant area for support, especially given that knowledge and skills are challenges in moving to an inclusive circular economy, as noted in Section 2. First and foremost, this can cover the identification of the required skills, as many countries and regions lack that knowledge (IISD & SITRA 2020, ILO 2018, Circle Economy 2020). It merits to include economy-wide as well as sectoral perspectives (ILO 2018). Better information can feed into LMICs' skills development policies and their implementation, and support of the Netherlands and the EU in that context. The IISD (2017) has noted that the Netherlands is well placed, given its extensive experience in managing transition for workers, particularly as a result of its efforts for a fair and just transition of 50,000 affected workers who lost their jobs when 12 coal mines were closed in the 1960s and 1970s. There can also be a role for the private sector in skills development, as it can present economic opportunities to educate and train the workforce (WBCSD 2021). More generally, the ILO (2018) notes that it is important to involve social partners to match skills demand and supply, and equity outcomes, including gender equality. It can also be valuable to partner with academia to develop curricula focused on circular economy transitions (WBCSD 2021).

Infrastructure: Another area of potential support is the strengthening of collection, sorting and recycling infrastructure in LMICs (interviews; PACE 2021a,b,c). This can relate to the planning of, as well as the facilitation of investments in, these structures. Development banks can play a role by providing seed funding or engaging in blended finance, which combines grants and loans (PACE 2021a,b,c). An example of such an initiative is support provided by the Dutch Entrepreneurial Development Bank FMO and the European Investment Bank (EIB) for solid waste management in Morocco.⁹ When engaging in this field, it is crucial to keep in mind the long-term economic viability of waste management systems and infrastructures. This stands or falls with incentives of

stakeholders, such as potential investors and recycling companies. Policy measures can influence those incentives, for example through the establishment of an Extended Producer Responsibility Scheme (PACE 2021a,b,c). Regional approaches can be valuable to seize opportunities for economies of scale. In this light, PACE (2021b) calls on public and private actors to scope regional collaborations to develop sorting and recycling ecosystems, for example a regional e-waste hub.

Direct technical and financial support to companies for more circular approaches: Furthermore, interviewees mention direct support to companies in LMICs, particularly small and medium-sized enterprises (SMEs) to pilot more circular approaches while providing decent work. Technical support and access to finance can incentivise companies to adopt more circular business models (PACE 2021a,b,c). Think for example of the design and production of products with enhanced durability, reparability and recyclability. At the same time, it was noted in the interviews that learning from pilot experiences in private sector development support is important, to inform efforts to scale up.

Matchmaking: Support can also be provided to connect value chain actors. This can help suppliers and buyers to find each other, as well as enhance understanding and collaboration between actors along supply chains, for example between manufacturers and recyclers. A concrete suggestion by the World Business Council for Sustainable Development (WBCSD 2021) is for governments to support safe and transparent web-based platforms for secondary material suppliers and buyers to find each other. The Netherlands and the EU more broadly can support the creation of such platforms in LMICs and/or more global platforms to connect businesses across different countries. The Netherlands Circular Economy Hotspot provides this kind of service, albeit broader, as it supports countries in setting up circular economy hubs that facilitate networking, such as the Circular Business Platform Lagos launched in October 2021.¹⁰ A sectoral initiative supported by the Netherlands, which may also provide inspiration and lessons for replication in other countries and sectors, is the

Circular Fashion Partnership. It brings together fashion brands, manufacturers and recyclers to reuse and recycle textile waste in Bangladesh, with support of P4G.¹¹ The Denim Deal is another example that the Netherlands supports, and which brings together actors along the value chain, including production companies, brands and retailers, collectors, sorters, cutters and weavers.¹² At the EU level, the circular economy action plan announced that more circular economy missions will be organised, which in the past have also targeted LMICs, such as Colombia, India and Indonesia (Ashraf et al 2020). The Netherlands can facilitate the participation of Dutch companies in such future missions.

Several interviewees emphasised that these different types of support need to better integrate and advance decent work, not least in relation to informal workers. The informal sector often dominates circular economy-related activities in LMICs, such as waste picking, and is an important factor in LMICs' economies more generally, as noted in section 2. This could for example be tackled by including informal workers in the development of professional collection and recycling infrastructure by setting up informal-formal partnerships, protecting informal workers' safety and health and investing in up- and re-skilling programmes (PACE 2021a,b,c). Supporting workers to transition into formal employment can be part of this agenda, as a means to improve their precarious situation, not as an end in itself. It was also noted in one of the interviews that policy dialogues tend to be between formal actors, while the voice of informal workers should also be heard.

3.4. Dialogue and cooperation for knowledge and lessons sharing

Beyond matchmaking of different value chain actors discussed in the previous section, interviewees emphasise that the Netherlands and the EU more broadly can further enhance meaningful international dialogue and cooperation on the circular economy transition, for knowledge and lesson sharing. Roping in stakeholders from LMICs can contribute to a better understanding of their circular economy-related challenges and opportunities, and how these can be

taken into account in (international dimensions of) circular economy-related policies.

A promising development is the February 2021 launch of the Global Alliance on Circular Economy and Resource Efficiency (GACERE), initiated by the EU. By now fifteen countries have joined, including Colombia, Kenya, Nigeria, Rwanda and South Africa.¹³ The Netherlands and the EU can also engage with regional circular economy forums involving LMICs, such as the African Circular Economy Alliance, the Circular Economy Coalition for Latin America and the Caribbean, and the Regional 3R (reduce, reuse and recycle) Forum in Asia and the Pacific. The participation of the Netherlands in the 10th regional 3R and Circular Economy Forum in Asia and the Pacific in December 2020 is a good example of this.¹⁴

In a similar vein, interviewees pointed out that voices of people from LMICs can enrich discussions on (international dimensions of) circular economy-related policies in the Netherlands and the EU more broadly. First and foremost, there was a call to rope in private sector actors, including micro-, small and medium-sized enterprises (MSMEs) and the informal sector. While the latter can be challenging, associations uniting informal workers could play a role, such as national or local waste picker associations.¹⁵ Furthermore, interviewees highlighted strengthening private sector engagement more generally, not limited to LMICs. One interviewee from the private sector specified that circular economy frontrunners need to have a seat at the table more often. Another interviewee specified that a broader set of ambitious companies with circular economy-related ambitions merit to be involved, rather than the few usual suspects that regularly speak at circular economy-related events. A third interviewee specifically suggested more engagement with reuse operators and social enterprise incubators working to invent the business model(s) of tomorrow. Furthermore, several interviewees noted that workers (not least vulnerable workers in LMICs) need to be better involved in circular economy-related policy discussions, through engagement with trade unions for example. Local

governments, academia and other knowledge institutes were also mentioned.

3.5. Research on impacts on LMICs

As highlighted throughout the paper, there is a critical need to better understand the impact on and the role of LMICs in a circular economy transition in the Netherlands, and the EU more broadly. Current discourse on circular economy in the EU is mostly focused on improving the EU's economic resilience and international competitiveness through a more circular economy (interviews). Understanding of the linkages between countries is limited and largely empirical, with insufficient data to support claims. Stakeholders welcome an explicit commitment by the EU to explore the potential impacts of circular economy transition on other regions around the world.

More specifically, a better understanding of the impact on trade flows with LMICs can help identify ways in which these countries can leverage potential opportunities and mitigate challenges. As such, a 'participatory roadmapping' of potential winners and losers can help guide policy design and cooperation efforts of the Netherlands and the EU (UNEP and IRP 2021, Schröder, 2020). Since it is uncertain what a more circular economy in the Netherlands and the EU will look like exactly, and how that would land in specific contexts in different LMICs, trade and material flow modelling to test different assumptions and scenarios could be particularly useful (interviews, Barrie and Schröder 2021). Some progress in this regard has already been made. The computable general equilibrium (CGE) model ENV-Linkages developed by the Organisation for Economic Cooperation & Development (OECD) can be used to model the impact of circular economy policies on global trade flows (Dellink 2020), and the IRP uses multi-regional input-output analysis to develop a global material flow account (Mills et al. 2020). PBL Netherlands Environmental Assessment Agency is also developing a global CGE model for the assessment of circular economy policies that aims to link physical flows and stocks of the most relevant materials in the

global economy (kilotons) to the economic flows between countries and sectors (euros) (PBL 2021).

To complement trade flow modelling, further analysis on the impact of trade flows on the labour market in LMICs is also needed. Since social impacts of a circular economy transition have received little attention, there is a dearth of data on job losses and gains, including gender disaggregated outcomes (interviews). Research is often limited to specific sectors of interest, while broader systemic perspectives are limited (interviews, ILO 2018). For instance, Circle Economy has developed an accessible online tool – the Circular Jobs Monitor – that keeps track of the number and range of jobs that are part of the circular economy. This includes occupations that are directly involved in or indirectly support a circular economy strategy.¹⁶ Such models can be usefully extended to encompass other sectors that may be negatively affected by a circular economy transition.

Relatedly, to support the development and use of standards, stakeholders call for better data collection and availability. At present, companies have little information about what is happening along the value chain; particularly down the supply chain after products have been sold (interviews). Data on product characteristics at different points along the product life-cycle, as well as its flow in the global trading system is required. Stakeholders highlight the role that new technologies can play, especially to support the private sector in collecting relevant data. This includes for instance the use of product passports and blockchain technology for better supply chain traceability (PACE 2021a).

Governments can support tracking of material flows. A specific suggestion is for governments to have a national database with material flows (interviews). The more disaggregated the data, in terms of product types/material types, the more useful it can be for value chain actors, for example to base investment decisions on. As a starting point, the Netherlands could track the total volume of waste that is collected, with data on the proportion handled locally and the proportion that is exported. Efforts have already been made in this regard. A Materials Monitor for the

Netherlands that observes physical material flows from, to and within the economy was developed for 2010, 2016 and 2018.¹⁷ The aim is to monitor the government's progress towards achieving a fully circular economy by 2050. The Netherlands, or EU more broadly, could also collaborate with international organisations, businesses and governments in LMICs to find consensus on circularity measurements (WBCSD 2021).

4. Conclusion

The paper has presented the perspectives of different stakeholders on the role of low- and middle-income countries in the circular economy transition of the EU and the Netherlands. A clear message from all stakeholders is that the international dimensions of EU and Dutch circular economy strategies matter and merit to be considered more seriously. As such, creating a fully circular economy within the EU is considered a 'utopia' by several interviewees. Not only does a circular economy transition in the Netherlands and the EU impact LMICs, these countries can play an important role in furthering circular economy ambitions both in the EU and globally. Key international dimensions are:

- **Environmental implications:** Integrating external dimensions in Dutch and EU circular economy strategies can positively affect the environment, given certain conditions are in place. A potential fall in raw material demand from the EU can help curb the harmful environmental impacts associated with resource extraction in LMICs. Sustainable product policies in the EU can also encourage LMICs to shift to more circular product design and production processes. Moreover, products that are discarded in the EU can be exported for reuse, slowing down material loops. Furthermore, closing material loops by channelling specific recyclable waste streams to countries that have a comparative advantage in recycling and repair of that waste stream can create economies of scale. This can improve the economics of recycling and optimise recycling processes (while making sure CO₂ emissions from transportation

are brought into the environmental equation). On the other hand, in the absence of proper infrastructure, regulatory frameworks and capacity in LMICs, waste exported from the EU can be detrimental to the environment. The result could be undesirable downcycling and higher amounts of materials being landfilled or incinerated.

- **Socio-economic implications:** A transition towards a more circular economy in the Netherlands and the EU more broadly can create incentives for economic diversification in LMICs. A move away from raw materials extraction and manufacturing can create opportunities for job creation and development in higher-value downstream processing, as well as in the emerging sectors of recycling. Moreover, trade in reusable materials can provide people with access to affordable second-hand goods, while imported recyclable waste can be a valuable input for local industries. At the same time, countries that are unable to make such a transition would lose out. Redistribution of jobs and economic activity is likely to be uneven, with LMICs likely to experience job losses and fall in export earnings, at least in the short term. It can particularly put at risk workers employed in the informal waste management sector, which is already more vulnerable to worker rights violations.

These implications relate to different roles that LMICs can play in the Dutch/EU circular economy transition, namely as (1) suppliers of (primary and secondary) raw materials and more circular goods and services; (2) consumers (e.g. of used goods); and (3) waste managers.

It is relevant to note that among the stakeholders interviewed for this paper, there was broad consensus regarding the most critical implications of a circular economy transition in the EU/Netherlands for LMICs. While some issues received more attention from certain interviewees, there was little disagreement between actors. The private sector for instance pays particular attention to the economic potential of waste trade, while environmental institutes are more

cautious about the potential negative environmental impacts of waste. Some environmental institutes are particularly supportive of closing loops within the EU until waste management in LMICs is improved. As such, private sector actors consulted were supportive of a 'waste manager' role of LMICs, while environmental organisations found this more problematic, especially in the short term. Both parties however call for clearer waste definitions. Similarly, while the more socially-oriented organisations place greater importance on the decent work agenda, the issue is recognised by other actors as well.

In light of this, the paper has discussed stakeholder perspectives on relevant policy measures and actions that can be taken to better integrate international dimensions in the circular economy agendas of the Netherlands, and the EU more broadly, with particular attention for the Netherlands Ministry of Foreign Affairs and EU foreign policy actors. Key recommendations suggested by different stakeholders are:

- **Circular economy standards:** The Netherlands and the EU can promote the development and harmonisation of circular economy standards. They can play a role in supporting stakeholders in LMICs to be better included in international processes, and work with governments to harmonise data measurements methods.
- **EU trade policy measures:** The Netherlands and the EU can use trade policy measures, such as trade agreements and the unilateral Generalised System of Preferences, more for a circular economy transition in global value chains. This can relate to stronger provisions within and beyond Trade and Sustainable Development chapters, as well as enhanced implementation, monitoring and enforcement.
- **Private sector development support:** Development cooperation (particularly Aid for Trade) as well as trade and investment promotion tools, can help LMICs to seize circular economy-related trade opportunities and mitigate negative

spillover effects resulting from a circular economy transition. Support can relate to (1) a more enabling policy environment; (2) skills development; (3) strengthening collection, sorting and recycling infrastructure; (4) direct technical and financial support to companies; (5) matchmaking.

- **Dialogue and cooperation:** The Netherlands and the EU more broadly can further enhance meaningful international dialogue and cooperation on the circular economy transition, for knowledge and lesson sharing, including through GACERE.
- **Research on the impacts on LMICs:** Trade flow modelling to map the impacts of circular economy transition in the EU on different LMICs, including social implications, is important to better guide policy design and cooperation efforts.

Given that international, and in particular LMIC, dimensions of the circular economy transition relate to a broad range of policy areas, the Netherlands Ministry of Foreign Affairs and EU foreign policy actors more broadly can play a valuable role in engaging with other departments. It can highlight international dimensions that otherwise risk being overlooked, and provide guidance on how to deal with those.

The Netherlands' government-wide programme for a circular economy and the EU's circular economy action plan seeks to contribute to a more circular economy and the achievement of the Sustainable Development Goals. Taking international dimensions into account in circular economy-related policies will be crucial to deliver on these ambitions.

Annexe 1: Interviewee list

No.	Name, title	Organisation
1	Chris Whyte (South Africa chapter lead and part of the ACEN executive team)	African Circular Economy Network
2	Dr Aqueel Khan (Director)	Association for stimulation know-how (ASK)
3	Ross Bartley (Environmental & Technical Director)	Bureau of International Recycling
4	Patrick Schroeder (Research Fellow, Environment and Society Programme) Jack Barrie (Research Fellow, Environment and Society Programme)	Chatham House
5	Emily Macintosh (Policy Officer for Textiles) Stephane Arditi (Circular Economy, Product & Waste Policy Manager)	European Environmental Bureau (EEB)
6	Subindu Garkhel (Senior cotton and textiles lead)	Fairtrade Foundation
7	Eline Blot (Policy analyst, Global challenges and SDGs)	Institute for European Environmental Policy (IEEP)
8	Maria Beatriz Mello da Cunha (Specialist: textiles, clothing, leather, footwear) Shreya Goel (Junior technical officer)	International Labour Organisation (ILO)
9	Nabil Nasr (Director of Golisano Institute for Sustainability at Rochester Institute of Technology)	International Resources Panel (IRP)
10	Alberto Arroyo Schnell (Head of Policy & Programme)	International Union for Conservation of Nature (IUCN)
11	Shunta Yamaguchi (Policy Analyst, Environment and Economy Integration Division, Environment Directorate)	Organisation for Economic Cooperation & Development (OECD)
12	Ke Wang (Knowledge Lead)	Platform for Accelerating the Circular Economy (PACE)
13	Bart Devos (European Director) Daniel Reid (Director of Environment and Circularity)	Responsible Business Alliance (RBA)
14	Tamar Hoek (Senior Policy Advisor Sustainable Fashion)	Solidaridad
15	Sibbe Krol (Senior Program Manager)	Sustainable Trade Initiative (IDH)
16	Brendan Edgerton (Director, Circular Economy)	World Business Council for Sustainable Development (WBCSD)

Bibliography

- Ashraf, N., Knaepen, H., van Seters, J. and Mackie, J. 2020. [The integration of climate change and circular economy in foreign policies.](#) ECDPM Discussion Paper no. 274.
- Ashraf, N. & van Seters, J. 2020. [Making it count: civil society engagement in EU trade agreements.](#) ECDPM Discussion Paper 276. ECDPM: Maastricht.
- Barrie, J. and Schröder, P. 2021. [Circular economy and international trade: A systematic literature review.](#) Chatham House.
- Circle Economy. 2020. [Jobs and skills in the circular economy: state of play and future pathways.](#)
- Colby, C. and Bell, K. 2016. [The On-Demand Economy Is Growing, and Not Just for the Young and Wealthy.](#)
- de Jong, S. van der Gaast, M., Kraak, J., Bergema, R and Usanov, A. 2016. [The Circular Economy and Developing Countries. A data analysis of the impact of a circular economy on resource-dependent developing nations.](#) Centre Of Expertise on Resources.
- Dellink, R. 2020. [The Consequences of a more resource efficient and circular economy for international trade patterns: A modelling assessment.](#) OECD Environment Working Papers, No. 165, OECD Publishing, Paris.
- European Commission. 2021a. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. [Our waste, our responsibility: Waste shipments in a clean and more circular economy.](#) Brussels, 17.11.2021 COM(2021) 708 final.
- European Commission. 2021b. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. [Trade Policy Review – An Open, Sustainable and Assertive Trade Policy.](#) Brussels, 18.2.2021 COM(2021) 66 final.
- European Commission. 2021c. [Proposal for a regulation of the European Parliament and of the Council on applying a generalised scheme of tariff preferences and repealing Regulation \(EU\) No 978/2012 of the European Parliament and of the Council.](#) Brussels, 22.9.2021 COM(2021) 579 final.
- European Commission. 2020. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. [Circular Economy Action Plan. For a cleaner and more competitive Europe.](#) Brussels, 11.3.2020 COM(2020) 98 final.
- European Commission. 2019. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. [The European Green Deal.](#) Brussels, 11.12.2019 COM(2019) 640 final.
- Government of the Netherlands. 2020. Letter to the Parliament by the State-Secretary of Infrastructure and Water Management. [Policy programme for circular textile 2020-2025.](#) 14 April 2020.
- Government of the Netherlands. 2016. [A circular economy in the Netherlands by 2050: Government-wide programme for a Circular Economy.](#)
- International Energy Agency. 2021. [The Role of Critical World Energy Outlook Special Report Minerals in Clean Energy Transitions.](#)
- Institute of Economic Affairs (IEA). 2021. [The State of Second-Hand Clothes and Footwear Trade in Kenya.](#)
- IISD. 2017. [Fossil fuel subsidy reform and the just transition: integrating approaches for complementary outcomes.](#)
- IISD and SITRA. 2020. [Effects of the Circular Economy on Jobs.](#)
- ILO. 2018. [World Employment Social Outlook 2018: Greening with jobs.](#)
- IRP. 2018. [Re-defining Value – The Manufacturing Revolution. Remanufacturing, Refurbishment, Repair and Direct Reuse in the Circular Economy.](#) Nabil Nasr, Jennifer Russell, Stefan Bringezu, Stefanie Hellweg, Brian Hilton, Cory Kreiss, and Nadia von Gries. A Report of the International

- Resource Panel. United Nations Environment Programme, Nairobi, Kenya.
- Kettunen, M., Bodin, E., Gionfra S. & Charveriat, C. 2020. [An EU Green Deal for trade policy and the environment. Aligning trade with climate and sustainable development objectives](#). IEEP.
- Kettunen, M., Gionfra, S. and Monteville, M. 2019. [EU circular economy and trade: Improving policy coherence for sustainable development](#). IEEP.
- Leigh Mills, S. & van der Ven, C. 2020. [Sustainable trade in resources: Global material flows, circularity and trade](#). IRP.
- Lu, S. 2018. [Why is the used clothing trade such a hot-button issue?](#)
- Ministry for Europe and Foreign Affairs France and Ministry for Foreign Affairs the Netherlands. 2020. [Non- paper from the Netherlands and France on trade, social economic effects and sustainable development](#).
- OECD. 2020. [Workshop on International Trade and the Circular Economy Summary Report](#). 26-27 February 2020, Paris, France.
- OECD. 2018. [International Trade and the Transition to a Circular Economy. Policy Highlights](#).
- OECD. 2016. [Extended Producer Responsibility: Updated Guidance for Efficient Waste Management](#)
- Preston, F, Lehne, J., and Wellesley, L. 2019. [An Inclusive Circular Economy Priorities for Developing Countries](#). Chatham House.
- PACE. 2021a. [Circular Economy Action Agenda Textiles](#).
- PACE. 2021b. [Circular Economy Action Agenda Electronics](#).
- PACE. 2021c. [Circular Economy Action Agenda Plastics](#).
- PBL. 2021. *Werkprogramma Monitoring en Sturing Circulaire Economie 2021*.
- Schröder, P. 2020. [Promoting a Just Transition to an Inclusive Circular Economy](#). Chatham House.
- UNEP and IRP. 2021. [Trade, Resource Extraction and Circular Economy Report](#). #EUCircularTalks
- UNEP and IRP. 2020. [Sustainable Trade in Resources: Global Material Flows, Circularity and Trade](#). United Nations Environment Programme.
- Usman, Z. Abimbola, O. and Ituen, I. 2021. What Does the European Green Deal Mean for Africa? Carnegie Endowment for International Peace.
- van der Ven, C. 2020. [The Circular Economy, Trade, and Development: Addressing spillovers and leveraging opportunities](#). TULIP.
- Watson, D., Palm, D., Brix, L., Amstrup, M., Syversen, F. and Nielsen, R. 2016. *Exports of Nordic Used Textiles Fate, benefits and impacts*. Nordic Council of Ministers.
- World Business Council for Sustainable Development (WBCSD). 2021. Policy brief: driving the transition to a circular economy.

References

- ¹ See: [Transitioning to a circular global textiles industry](#), Expert Comment, Chatham House, 22 April 2021.
- ² See: [Where do our clothes come from?](#) Eurostat 2020, 24 April 2020.
- ³ See: [Trade in recyclable raw materials](#), Eurostat 2019, 4 March 2019.
- ⁴ See: [R-PET imports can bridge the Europe collection shortage - distributor](#), ICIS, 12 March 2019.
- ⁵ See: [Dead white man's clothes by Linton Besser](#), Foreign Correspondent, ABC News, 8 May 2020.
- ⁶ See: [Waste shipments – revision of EU rules](#), European Commission website.
- ⁷ See: [IEEP's assessment of the EC's proposal for a revised Generalised Scheme of Preferences](#), IEEP, 24 September 2021.
- ⁸ See: [European Commission at WRF2021: Circular Economy policy and business solutions to e-waste challenges in Africa](#), World Resources Forum 21, 1 September 2021.
- ⁹ See: [FMO and EIB support solid waste management for Morocco](#), FMO, 16 November 2016.
- ¹⁰ See: [Lagos Circular Business Community & Platform](#), Oxfam, September 2021.
- ¹¹ See: [Bangladesh apparel industry moving further into the circular economy](#), Textile Focus, 2 April 2021 and [Circular Fashion Partnership](#). P4G website.
- ¹² See: [Green Deal Circulaire Denim "Denim Deal"](#), Rijksoverheid, 29 October 2020.
- ¹³ See: [Global Alliance on Circular Economy and Resource Efficiency](#). European Commission website.
- ¹⁴ See: [Final Chair's Summary of the 10th Regional 3R and Circular Economy Forum in Asia and the Pacific](#).
- ¹⁵ See: [List of waste pickers around the world](#). Global Alliance of Waste Pickers.
- ¹⁶ The monitor currently provides data for several territories in Northern Europe and North America, and may be expanded to territories across the globe. See: [Circular Jobs Monitor](#), Circle Economy.
- ¹⁷ See: [Materials Monitor 2010, 2016 and 2018](#). CBS.

About ECDPM

The European Centre for Development Policy Management (ECDPM) is an independent ‘think and do tank’ working on international cooperation and development policy in Europe and Africa.

Since 1986 our staff members provide research and analysis, advice and practical support to policymakers and practitioners across Europe and Africa – to make policies work for sustainable and inclusive global development.

Our main areas of work include:

- European external affairs
- African institutions
- Security and resilience
- Migration
- Sustainable food systems
- Finance, trade and investment
- Regional integration
- Private sector engagement

For more information please visit www.ecdpm.org

In addition to structural support by ECDPM’s institutional partners: The Netherlands, Belgium, Estonia, Finland, Ireland, Luxembourg, Sweden, Denmark and Austria, this publication mainly benefits from funding by PBL Netherlands Environmental Assessment Agency.



PBL Netherlands Environmental
Assessment Agency

ISSN1571-7577

ecdpm

Making policies work

HEAD OFFICE
SIÈGE

Onze Lieve Vrouweplein 21
6211 HE Maastricht
The Netherlands *Pays Bas*
Tel +31 (0)43 350 29 00
Fax +31 (0)43 350 29 02

BRUSSELS OFFICE
BUREAU DE BRUXELLES

Rue Archimède 5
1000 Brussels *Bruxelles*
Belgium *Belgique*
Tel +32 (0)2 237 43 10
Fax +32 (0)2 237 43 19

info@ecdpm.org
www.ecdpm.org
KvK 41077447