HOW WILL EUROPE'S ECODESIGN MEASURES AFFECT THE CIRCULAR ECONOMY IN LOW-INCOME COUNTRIES?

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Tearfund is a Christian relief and development agency building a global network of local churches to help eradicate poverty.

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EXECUTIVE SUMMARY

- The European Commission's Ecodesign measures are intended to improve the resource efficiency of products sold in Europe. However, these design changes will have repercussions far beyond the EU, particularly in low-income countries (LICs), and European policy-makers must consider these impacts.
- In many LICs, the circular economy already makes a significant contribution to economic activity and employment. In Ghana, for example, 80 per cent of electronic products are refurbished, and more than 30,000 people work in this industry in Accra alone. There is also significant potential for growth.
- The design and implementation of Ecodesign policies in Europe could determine the success or failure of the circular economy in LICs. Many of these circular industries are fed by imports of waste and used products from European and other high-income nations. For example, estimates suggest that more than 90 per cent of discarded computers in high-income countries are exported to low- or middle-income countries.
- Ambitious, open design standards and greater transparency could create more value in LIC (re-) manufacturing and repair centres. Conversely, restrictive regulations which allow Original Equipment Manufacturers to exert a monopoly over repair and upgrade, or which create unintentional non-tariff barriers for LIC producers, could have a harmful effect on LIC circular businesses.
- At the same time, standards covering toxicity could reduce the harm associated with dumping e-waste and informal recycling operations. At present, about a third of electronic equipment imported by LICs cannot be repaired and ends up as e-waste. This is often recycled under hazardous conditions or left in landfill, contributing to water, soil and air contamination.
- Smart Ecodesign policies can have positive economic and environmental impacts not only in Europe but in LICs and around the world. The circular economy is a globally connected economy, and European policy-makers decisions should reflect this.

1 INTRODUCTION

The European Commission's Circular Economy Action Plan identifies Ecodesign standards as a key driver for Europe's transition to a circular economy.[1] Much of this plan focuses upon the benefits to Europe through greater resource efficiency. However, a more circular economy in Europe can also deliver clear benefits for low-income countries (LICs), as Tearfund and the Institute of Development Studies argue in their 2016 *Virtuous circle* report.[2] This paper follows up on that earlier analysis by examining the specific impact of European product design standards upon LICs.

We examine the relationship between European design standards and the circular economy in LICs, suggesting a range of benefits, and risks, to LICs that could flow from Europe adopting more circular design. Improvements to the resource efficiency of products marketed in Europe could have both

1 European Commission's Circular Economy Action Plan, COM (2015) 80 final

2 Gower R and Schroeder P (2016) *Virtuous circle: how the circular economy can create jobs and save lives in low- and middle-income countries*, Tearfund and the Institute of Development Studies

positive and negative impacts upon the circular economy in low-income countries. The paper sets out a typology to better understand this relationship and identify drivers within European policy-making that may increase benefits, and mitigate risks, for LICs.

2 BACKGROUND

The circular economy in low-income countries

The term 'circular economy' describes a new economic model which is defined by keeping resources in use for as long as possible. In contrast to the traditional 'take-make-use-dispose' linear economy, the circular economy focuses upon resource efficiency. By designing out waste at the start, and then reusing, repairing, remanufacturing and reintegrating secondary materials and biomass back into the cycle, it is possible to preserve the maximum value of resources. This delivers huge economic, social and environmental benefits, while minimising harmful waste and avoiding unnecessary exploitation of primary raw materials.

Circular economy activities generate both employment and improved quality of life in LICs (although recycling of hazardous waste is also a problem).[3] It is difficult, however, to measure the exact size of the circular economy in LICs, since much of the activity takes place within the informal economic sector.[4] Nevertheless, some specific examples illustrate the scale of the circular economy, and the extent to which resources are reused and recycled. In India, for example, up to 95 per cent of e-waste is processed in the informal sector based in urban slums.[5] In Mumbai, more than 30,000 waste pickers recover reusable and recyclable items from waste, creating an economic activity with an estimated annual value of between US$ 650 million and US$ 1 billion.[6]

IN GHANA 80 PER CENT OF ELECTRONIC PRODUCTS ARE SECOND-HAND, REPAIRED OR REFURBISHED

In Africa, reuse and repair are also highly significant. In Nigeria, 95 per cent of cars are second-hand vehicles, while in Ghana 80 per cent of electronic products are second-hand, repaired or refurbished.[7] This in turn also generates employment, with the e-waste refurbishing sector, for example, generating income for more than 30,000 people in both Accra (Ghana) and Lagos (Nigeria).[8] Similarly, in Buenos Aires there are more than 40,000 waste pickers who have an economic impact estimated at US$ 178 million a year; Jakarta has more than 37,000.[9] Remanufacturing is also growing in many developing countries, with products destined for both domestic and export markets.[10] Taken together, these findings suggest that the circular economy is already making a significant contribution to both economic activity and employment in many LICs, with the potential for further growth.

3 Ibid

4 Velis C et al (2012) 'An analytical framework and tool ('InteRa') for integrating the informal recycling sector in waste and resource management systems in developing countries', *Waste Management & Research* 30: 43

5 United Nations (2010) *Trends in sustainable development: chemicals, mining, transport, waste management*: https://sustainabledevelopment.un.org/content/documents/28Trends_chem_mining_transp_waste.pdf

6 Medina M (2008) *The informal recycling sector in developing countries: organizing waste pickers to enhance their impact*, World Bank https://openknowledge.worldbank.org/handle/10986/10586

7 'Can emerging countries benefit from the circular economy?', Circulate online news platform, 23 September 2015 http://circulatenews.org/2015/09/can-emerging-countries-benefit-from-the-circular-economy

8 Basel Convention (2001) *Where are the WEEE in Africa? Findings from the Basel Convention E-waste Africa Programme*, p 11 www.basel.int/Implementation/Ewaste/EwasteinAfrica/Overview/PublicationsReports/tabid/2553/Default.aspx

9 Medina M (2008) *The informal recycling sector in developing countries: organizing waste pickers to enhance their impact*, World Bank https://openknowledge.worldbank.org/handle/10986/10586

10 United Nations Environment Programme (2013) *Green economy and trade – trends, challenges and opportunities* www.unep.org/greeneconomy/sites/unep.org.greeneconomy/files/field/image/fullreport.pdf

There is an increasing demand domestically for processing used products and waste in developing countries, which is driving growth in circular economy activities. Domestic consumption in low-income countries is expected to continue growing rapidly. It is anticipated, for example, that the number of vehicles coming out of service each year in India will increase from 8.7 million in 2015 to 21.8 million units in 2025, and that most of these vehicles will be handled by the informal sector.[11]

One consequence of the informal nature of many circular economy activities is a lack of access to the technologies and investments necessary to make the transition from artisanal to industrial processes, which would deliver greater efficiencies. But there are moves to set up more formal circular economy facilities in some developing countries. Africa provides several examples. In Ivory Coast, the African Development Bank is financing the creation of plastic waste collection and recycling facilities to provide raw materials for local industries and support the reintegration of 2,000 ex-combatants. In Nigeria, the government is working with Japan's International Cooperation Agency to draft an end-of-life vehicle recycling law and to set up a vehicle recycling system. In Kenya, Hewlett Packard, Dell, Philips and Nokia have jointly set up a network of 50 collection points and an electronic waste recycling facility.[12]

Products and waste materials flow to low-income countries from higher-income countries in Europe

The developed world's consumption patterns are fed largely by manufacturing in developing countries. Three-quarters of the products sold in Europe are made in developing countries such as China and India.[13] But, as well as manufacturing the products that feed the markets of the North, the South imports discarded products and waste materials from developed nations.

For certain products, such as electrical and electronic equipment (EEE), low-income countries are major dumping grounds for waste from the North. Developed countries, especially in North America and Europe, produce the most e-waste. Europe generated 11.6 million tonnes of e-waste in 2014.[14] Much of this waste ends up back in developing countries, often via 'hidden flows' of waste.[15]

China processed about 70 per cent of the world's e-waste in 2012;[16] the rest goes to India and other countries in eastern Asia and in Africa, including Nigeria.[17] More than 90 per cent of discarded computers from the developed world are exported to developing countries such as Ghana, Pakistan and India.[18] West Africa is also becoming a hub for the import of used EEE, driven by rapidly increasing domestic demand, particularly for ICT and mobile phones.[19] Studies suggest that much of this used EEE exported to West Africa comes from Europe, often via the informal sector.[20]

MORE THAN 90 PER CENT OF DISCARDED COMPUTERS FROM THE DEVELOPED WORLD ARE EXPORTED TO DEVELOPING COUNTRIES

11 Ellen MacArthur Foundation (2016) *Circular economy in India: rethinking growth for long-term prosperity* www.ellenmacarthurfoundation.org/publications/india

12 'Can emerging countries benefit from the circular economy?', Circulate online news platform, 23 September 2015 http://circulatenews.org/2015/09/can-emerging-countries-benefit-from-the-circular-economy

13 'Take responsibility for electronic-waste disposal', *Nature* 3 August 2016 www.nature.com/news/take-responsibility-for-electronic-waste-disposal-1.20345

14 Ibid

15 Greenpeace (2008) *Toxic tech: not in our backyard* www.greenpeace.org/international/Global/international/planet-2/report/2008/2/not-in-our-backyard.pdf

16 Zhang K, Schnoor JL and Zeng EY (2012) 'E-waste recycling: where does it go from here?', *Environmental Science & Technology* 46 (20) pp 10861–10867

17 Breivik K, Armitage JM, Wania F and Jones KC (2014) 'Tracking the global generation and exports of e-waste. Do existing estimates add up?', *Environmental Science & Technology* 48 (15) pp 8735–8743

18 'Can emerging countries benefit from the circular economy?', Circulate online news platform, 23 September 2015: http://circulatenews.org/2015/09/can-emerging-countries-benefit-from-the-circular-economy/

19 Basel Convention (2001) *Where are the WEEE in Africa? Findings from the Basel Convention E-waste Africa Programme* p 10 www.basel.int/Implementation/Ewaste/EwasteinAfrica/Overview/PublicationsReports/tabid/2553/Default.aspx

20 Ibid, p 36

In total, an estimated 1.5 million tonnes of waste electrical and electronic equipment (WEEE), mainly steel-dominated consumer appliances, are exported from the EU each year. Only 200,000 tonnes are documented exports (as 'used products'); these devices typically have considerable reuse value and life left in them, and are commonly shipped by professional refurbishers and/or charity organisations donating well tested computers to educational institutions in Africa. The remaining 1.3 million tonnes are also predominantly used products, but this is frequently mixed with WEEE[21] and repairable items.[22]

Other materials that are consumed in Europe also often end up in the developing world. Used vehicles are frequently exported, and often serve as 'transport packaging' for used and end-of-life EEE. Germany and Belgium are the dominant exporting countries for vehicles, followed by the UK and the Netherlands. Nigeria is the main recipient of used vehicles, and used and obsolete EEE are commonly co-shipped in vehicles.[23] Plastic waste is also exported from Western countries with established collection systems. China dominates the international market, receiving about 56 per cent of global imports. Europe collectively exports almost half of the plastics collected for recycling (3.4 metric tonnes, worth about €1.7 billion), which equates to 12 per cent of post-consumer plastic waste.[24]

EUROPE COLLECTIVELY EXPORTS ALMOST HALF OF THE PLASTICS COLLECTED FOR RECYCLING

3 THE EU ECODESIGN STANDARD

Ecodesign is a regulatory tool that the European Union uses to improve product design in order to promote sustainability. It is governed by the Ecodesign Directive (2009/125/EC). Initially used to promote energy efficiency, Ecodesign has realised huge gains for European consumers, saving them an average of €490 per household and delivering energy savings amounting to 175 million tonnes of oil equivalent per year by 2020.[25]

Since the publication of the European Commission's Circular Economy Action Plan (COM [2015] 80 final), the objectives of Ecodesign have now been broadened to promote not only energy efficiency but also material efficiency of products. Other regulatory tools already exist to cut down on product waste in relation to specific products. These include end-of-life vehicles, governed by the ELV Directive (Directive 2000/53/EC). However, the move to extend Ecodesign to promote the circular economy provides a significant new opportunity for design changes.

The Commission announced a new working plan for Ecodesign in early 2017 (COM [2016] 773), targeting a number of products to examine whether design changes could improve their circularity, with specific objectives to increase the durability, repairability, upgradeability and recyclability of products and materials.[26]

The products to be covered under the new working plan (2016–2019) are as follows: building automation and control systems, electric kettles, hand dryers, lifts, solar panels and inverters, refrigerated containers and high-pressure cleaners. In addition to these products, the Commission will also examine the possibility of measures to improve the circular economy potential for ICT devices including smartphones.

21 Used products differ from WEEE in that some used products are repairable, and therefore not designated waste, whereas WEEE refers to end-of-life items that cannot be repair or refurbished.

22 CWIT (2015) *Countering WEEE illegal trade* www.cwitproject.eu/wp-content/uploads/2015/08/CWIT-Final-Summary1.pdf

23 United Nations (2010) *Trends in sustainable development: chemicals, mining, transport, waste management* https://sustainabledevelopment.un.org/content/documents/28Trends_chem_mining_transp_waste.pdf

24 ISWA (2014) *Global recycling markets: plastic waste. A story for one player – China* www.iswa.org/fileadmin/galleries/Task_Forces/TFGWM_Report_GRM_Plastic_China_LR.pdf

25 European Commission's Ecodesign Working Plan, 2016-2019, COM (2016) 773 p 1

26 Ibid, p 7

Introducing Ecodesign measures is a time-consuming process, involving research, stakeholder consultation and eventual regulation. The average time taken for measures to be adopted is about four years, although voluntary agreements from industry can speed things up considerably.[27]

The plans do not include any specific consideration of their impact upon developing countries, although the Commission does acknowledge its role in setting international standards, whether through market forces, international standardisation measures or as part of trade agreements (COM [2016] 773, p10).

4 TYPOLOGY OF CAUSE AND EFFECT BETWEEN DESIGN INTERVENTIONS AND CE OUTCOMES

What would be the likely impact of such measures upon developing countries? The following section outlines a typology of potential consequences linked to this new regulatory initiative and assesses current trends, to identify points for discussion and further research. The design interventions within the typology describe various approaches to improving the circularity of products and are based upon the Commission's own list of objectives for resource efficiency as set out in its Ecodesign working plan (COM [2016] 773, p9). The typology outlines potential benefits and risks for LICs according to each design intervention, as well as evaluating some measures that could be taken in response to mitigate risk.

DESIGN INTERVENTION	Benefits for low-income countries	Risks for low-income countries	Evaluation and mitigation measures
Durability *eg minimum service life for key parts; minimum warranty period*	• Better made, longer-lasting products should enable LIC households to access higher-quality goods at the same cost as new lower-quality ones. • Greater durability might lead to more cascading of products discarded for reasons of fashion, rather than functionality (seen, for example, with the reuse of old diesel Mercedes vehicles in sub-Saharan Africa).[28]	• Regulation could create non-tariff trade barriers for producers in LICs if they are badly designed. • Longer-lasting products could reduce the flow of second-hand goods to LICs.	• Outmoded, rather than non-functional, products can be given significant extra life in LICs.
Repairability *eg maximum time to remove and replace key components; availability of repair information and spare parts*	• Easier to repair products should boost profitability of SME repair businesses. • Could reduce illegal exports of waste sent for disposal as more viable to repair and export for reuse. • Remanufacturing offers new export opportunities, allowing LICs to differentiate their economies (and could meet criteria for new goods without additional quality and safety requirements).[29]	• Reducing time and therefore labour costs of repair reduces the competitive advantage of repairing goods in LICs. • If repair is only done by Original Equipment Manufacturers (OEMs) rather than third parties, SME repairers in LICs could be locked out of repair. • Reduced demand for primary raw materials might affect resource demand from LICs.[30] • Servitisation[31] might retain value in EU / UK, rather than cascading to LICs.	• Incorporating the existing informal repair sector can create benefits for both sector and OEMs. • Where possible, design should avoid the use of complex components (eg through 3D printing, since this might prevent repair/modularity). • Alternatively, if 3D printing is made more available in LICs, this may enhance repairability.

27 Ibid, p 8

28 See also this assessment of the impact of circular design of smartphones for India: Green Alliance (2015) *A circular economy for smart devices* www.green-alliance.org.uk/resources/A%20circular%20economy%20for%20smart%20devices.pdf

29 APEC agreed to avoid import restrictions on remanufactured goods, applying the same trade measures as for new goods. See United Nations Environment Programme (2013) *Green economy and trade – trends, challenges and opportunities* www.unep.org/greeneconomy/sites/unep.org.greeneconomy/files/field/image/fullreport.pdf

30 De Jong S, van der Gaast M, Kraak J, Bergema R and Usanov A (2016) *The circular economy and developing countries* The Hague Centre for Strategic Studies http://hcss.nl/report/circular-economy-and-developing-countries

31 A shift away from owning products and towards paying for the service the product provides. This is similar to leasing products rather than owning them, thus making manufacturers responsible for ongoing servicing requirements.

Upgradability *eg modularity and accessibility of key components for plug-in replacement*	• Lowers the cost of accessing the newest technology. • Increases the value of product flows to LICs if they can continue to be upgraded for future use.	• Risk of software obsolescence if hardware upgrades are not available and new software depends on them. • Risk that software upgrades are region-limited to the EU (cf DVDs) – because regulations would only cover EU countries. • Reduced demand for primary raw materials might affect resource demand from LIC. • Complex components (eg through 3D printing) might prevent repair / modularity.	• Need to ensure that upgradability requirements cover software upgradability, as this is often a source of problems – particularly for devices that may have insecure software which needs to be 'patched' in order to be safe.
Disassembly *eg maximum time to remove high-value parts or parts containing critical raw materials*	• Could increase the value recoverable in low-tech recycling operations by making it easier to separate into material streams.	• If compliance is delivered through automation, then there's a risk that LICs will not be able to afford the same technology.	• Many recycling operations in LICs are low technology, but investments would need to be scaled up rapidly, along the lines of some existing initiatives.[30]
Recyclability *eg labelling of parts and ease of reuse and recycling (avoiding incompatible plastics)*	• Could increase the viability of independent repair businesses. • Might provide additional revenue from waste exported to LICs. • Higher-value plastic (produced in LICs in response to high-income country policy) can promote informal sector recycling and reduce plastic leakage in LICs, with a positive impact on tourism and the fishing industry. • Reduce the negative health and environmental impacts associated with informal recycling operations of less recyclable products.	• If compliance is delivered through automation, then there is a risk that LIC will not be able to afford the same technology. • Greater use of secondary raw materials in high-income countries might affect resource demand from LICs. • If parts availability is only mandated in EU market, then it could lead to competitive advantage for repair businesses in EU. • It is unclear whether EU plastics standards in particular would induce policy or material use change for plastic products in LICs.	• Boosting the recyclability of products, for example by reducing the use of incompatible plastics, could increase the value of older products, increasing the quality of imported materials that low-tech recycling and re-processing sites in LICs rely on. Evidence from China suggests that domestic recycled plastics can be of lower quality (which may end up in lower-technology plants, as well as waste-to-energy incinerators) and manufacturers rely upon higher-grade imported plastic recyclate.[31] So, improving the quality of imported materials could in turn help manufacturers in LICs to produce higher-quality products. • Require spare part availability to follow the product rather than be tied to the market of first sale.
Reduced toxicity and greenhouse gas emissions *eg elimination of all Substances of Very High Concern (SHVCs)[32]; reduced CO_2 emissions*	• Reduce the harm associated with informal recycling operations and risks from products incorporating recycled materials in LICs.	• However, regulations could create non-tariff trade barriers for producers in LICs if they are badly designed / contain toxic chemicals.	• EU / UK policy will encourage LICs to align their design and chemicals policy, enabling higher-value and safer products to be produced in LICs.

32 'Can emerging countries benefit from the circular economy?', Circulate online news platform, 23 September 2015: http://circulatenews.org/2015/09/can-emerging-countries-benefit-from-the-circular-economy

33 ISWA (2014) *Global recycling markets: plastic waste. A story for one player – China* www.iswa.org/fileadmin/galleries/Task_Forces/TFGWM_Report_GRM_Plastic_China_LR.pdf

34 For more information, see the European Chemicals Agency's website: https://echa.europa.eu/addressing-chemicals-of-concern/authorisation/substances-of-very-high-concern-identification

5 RISKS AND REWARDS OF EUROPEAN CIRCULAR DESIGN FOR LICS

We can extrapolate a number of general arguments from the typology which are worthy of further consideration for their possible impacts upon LICs, both positive and negative.

One of the main positive impacts could be to increase the value of material flows into LICs from the EU and UK. As has been shown above, such flows are already high, sometimes illegal, and often of low-quality waste. It is estimated, for example, that about 30 per cent of undocumented export of used EEE is waste (rather than used equipment).[35] Improving the design of products sold in the EU / UK could improve the value of such flows, particularly of WEEE, thus turning them from low-grade waste into higher-value materials that can more easily be reused, repaired, remanufactured or recycled. This could have significant positive effects on informal recycling, repair and remanufacturing facilities in LICs, boosting both employment and productivity.[36] Greater availability of information about repairs and upgrades could also improve the ability of processors in LICs to prolong the lifecycles of consumer products. Reducing hazardous content within such products could also make them safer to handle, and reduce health and environmental risks for LICs processing such material and product flows.

IMPROVING THE DESIGN OF PRODUCTS SOLD IN THE EU/UK COULD HAVE SIGNIFICANT POSITIVE EFFECTS ON RECYCLING, REPAIR AND REMANUFACTURING IN LOW INCOME COUNTRIES

However, a secondary impact could be that the flow of secondary materials into LICs may be reduced, with more of the value being retained in the EU / UK. If products are designed to make them more durable and easier to repair, then this may result in repairs, reuse and upgrades being restricted to high-income countries, closer to the retail markets. This would, of course, have an impact upon secondary product flows to LICs. This may be magnified by the adoption of new business models in Europe that could reduce the flow of repairable products to LICs. If the coming years see a large uptake in leasing rather than purchase (ie servitisation), then the impact may be that UK / European companies retain products and then capture the repair value of products, rather than exporting them to developing countries and hence shutting out more informal sectors (both in Europe and LICs).[37] The same may be true of manufacturing. For smartphones, for example, most production takes place outside the EU, but resellers and recyclers tend to be within Europe, so that increased circularity could provide local economic benefits.[38] And the experience of O2 shows that cascading is less about old products moving from rich to poor countries and more about the flow from demanding customers to less demanding customers, regardless of geography. Seventy-three per cent of O2's second-hand phones are resold in Europe, so increasing this market by making phones last longer may boost supply in Europe and the UK, as much as in LICs.[39]

RESTRICTIVE REGULATIONS COULD BE SERIOUSLY HARMFUL TO LICS, WHEREAS OPEN STANDARDS, GREATER TRANSPARENCY AND CLEARER LABELLING COULD HAVE THE OPPOSITE EFFECT.

It is clear that the impacts of Ecodesign on LICs will be largely determined by how they are implemented. Restrictive regulations which allow OEMs to exert a monopoly upon repair and upgrade could be seriously harmful to LICs, whereas open standards, greater transparency and clearer labelling could have the opposite effect. Ambitious design standards that lead to, for example, the availability of higher-quality

35 CWIT (2015) *Countering WEEE illegal trade* www.cwitproject.eu/wp-content/uploads/2015/08/CWIT-Final-Summary1.pdf

36 Gower R and Schroeder P (2016) *Virtuous circle: how the circular economy can create jobs and save lives in low- and middle-income countries*, Tearfund and the Institute of Development Studies

37 'Is sharing the new buying?' Nielsen, 28 May 2014 www.nielsen.com/us/en/insights/news/2014/is-sharing-the-new-buying.html

38 The Ellen MacArthur Foundation estimates that circular business practices for the mobile phone market would have a positive USD 1–2 billion effect on Europe's trade balance surplus due to overall reduced imports of new phones and component and material inputs. See 'In-depth: mobile phones', Ellen MacArthur Foundation website, 2 August 2012 www.ellenmacarthurfoundation.org/circular-economy/interactive-diagram/in-depth-mobile-phones

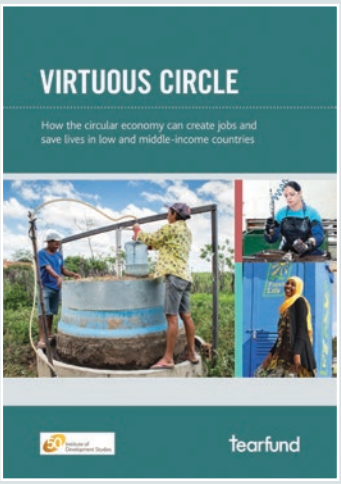
39 Green Alliance (2016) *The end of the upgrade? How O2 is adapting to a more circular mobile market* www.green-alliance.org.uk/end_of_the_upgrade.php

plastic recyclates could even create more value within the manufacturing facilities of some LICs, creating a virtuous circle whereby higher European design standards can act as a driver for more circular manufacturing around the world.

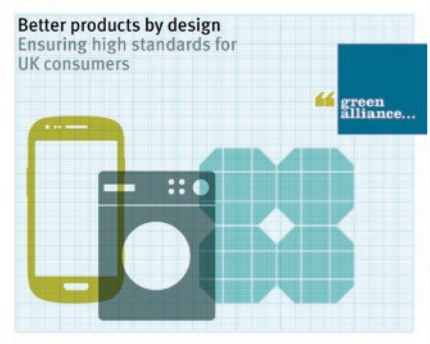
Adopting a more circular economy can play an important role in ensuring sustainable development. How circular economy approaches are adopted in Europe will have an impact across the world, so it is vital that European policy-makers consider these wider, global consequences of Ecodesign for resource efficiency.

FURTHER READING

Visit **www.tearfund.org/circular** to download *Virtuous Circle*, jointly published by Tearfund and the Institute of Development Studies, outlining the triple win that the circular economy offers for low and middle-income countries.



Visit **www.green-alliance.org.uk/ecodesign_products** to download *Better products by design: ensuring high standards for UK consumers*, for a more detailed look at the types of durability and repairability measures that the EU's Ecodesign standard could include.



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