UN environment programme | finance initiative

Principles for Responsible Banking

Guidance for banks

Guidance on Resource Efficiency and Circular Economy Target Setting

Principles for Responsible Banking

Annex 1: What is the circular economy and what does it mean for the banking sector?

Our current linear economy is based on a take-make-waste model which relies on resource extraction and generates a depletion of natural capital. The world's reliance on natural resources has continued to accelerate over the last two decades, with a 17.4% increase of global material footprint[1] between 2010 and 2017.[2] UNEP International Resource Panel[3] estimates that global material resource use is likely to more than double by 2050 based on the current linear economy trends and that our linear model aggravates the global challenges of climate change, biodiversity loss and pollution.

Sustainable consumption and production are thus at the heart of the Sustainable Development Goals (SDGs).[4]

1. What is the circular economy

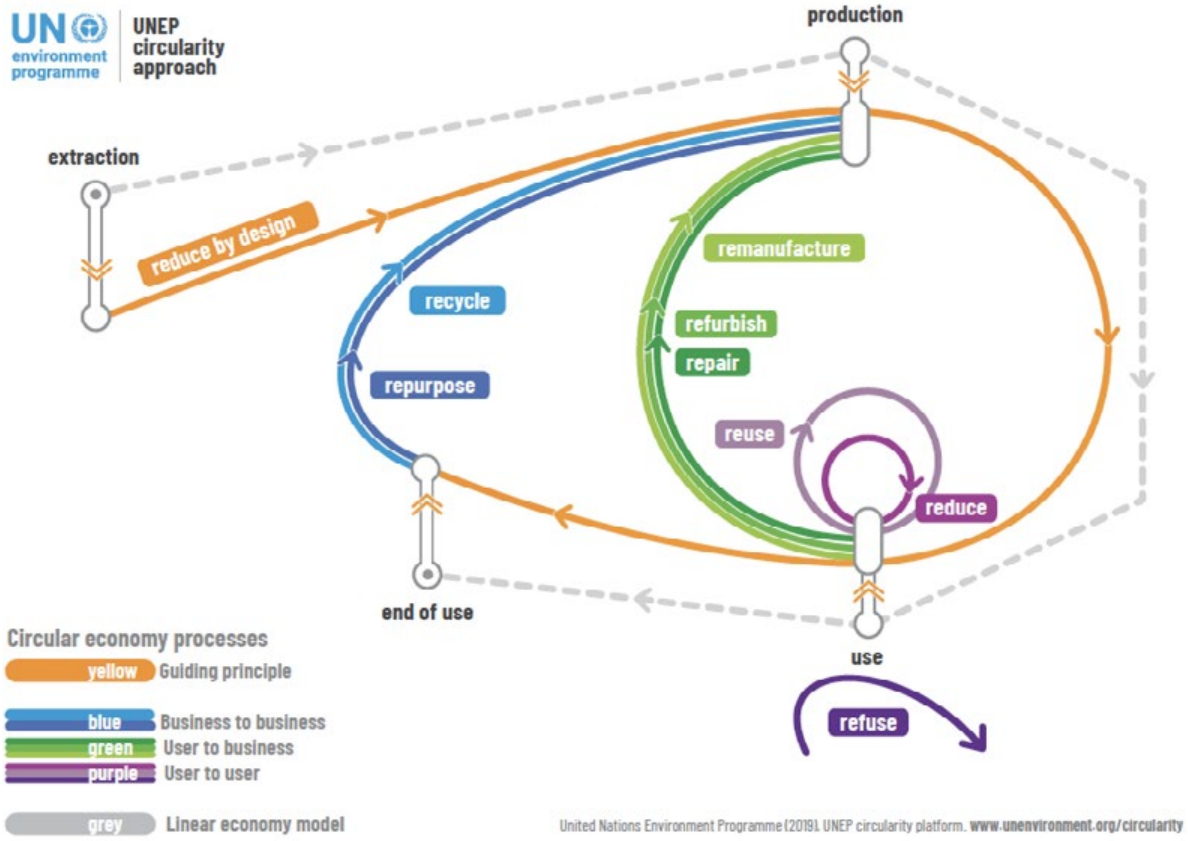
The circular economy is a model of sustainable production and consumption which entails a gradual decoupling of economic activity and use of finite resources. The circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.[5]

Circle Economy estimates in the "Circularity Gap Report 2023"[6] that our current economy is only 7.2% circular and, moreover, global circularity has decreased from 9.1% in 2018 due to rising material extraction. Over 90% of extracted resources are either wasted, lost or remain unavailable for reuse for years as they are locked into long-lasting stock such as buildings and machinery. Circular economy contributes to closing the emissions gap, however, this would require roughly a doubling of the circularity of our current economy. The circular economy contributes to controlling and reducing pollution, enhancing biodiversity and achieving goals related to social and governance topics, including the creation of local jobs, upskilling opportunities and tackling inequality as well as achieving a number of SDGs.[7]

Many definitions of the circular economy exist and there is not a globally accepted one. A widely utilised definition is that from Ellen MacArthur Foundation:[8] "A circular economy is a systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature. It is underpinned by a transition to renewable energy and materials. Transitioning to a circular economy entails decoupling economic activity from the consumption of finite resources. This represents a systemic shift that builds long-term resilience, generates business and economic opportunities, and provides environmental and societal benefits."

1 The material footprint is the amount of primary materials required to meet basic needs for food, clothing, water, shelter, infrastructure and other aspects of life. It is an indicator of the pressure put on the environment to support economic growth and to satisfy the material needs of people.
2 United Nations, Statistic Division
3 Global Resources Outlook 2019: Natural Resources for the Future We Want, UN International Resource Panel (IRP), 2019
4 Financing Circularity: Demystifying Finance for Circular Economies, UNEP FI, 2020
5 Ellen MacArthur Foundation
6 The Circularity Gap Report 2023, Circle Economy, 2023
7 Financing the circular economy. Capturing the opportunity, Ellen MacArthur Foundation, 2020
8 Ellen MacArthur Foundation, Glossary

A number of definitions of the circular economy, like the UNEP circularity approach,[9] rely on the 9Rs circular strategies presented in the table below and build upon value retention loops as described in figure below.



The table below also shows the hierarchy of circular strategies, from less preferred strategies—downstream solutions (such as R8 Recycle, R9 Recover)—to most preferred strategies—upstream solutions (such as R2 Reduce, R 3 Reuse).

9 Circularity, UNEP

Strategies		
Smarter product use and manufacture	R0 Refuse	Make product redundant by abandoning its function or by offering the same function with a radically different product
	R1 Rethink	Make product use more intensive (e.g. by sharing product)
	R2 Reduce	Increase efficiency in product manufacture or use by consuming fewer natural resources and materials
Extend lifespan of product and its parts	R3 Reuse	Reuse by another consumer or discarded product which is still in good condition and fufils its original function
	R4 Repair	Repair and maintenance of defective product so it can be used with its original function
	R5 Refurbish	Restore an old product and bring it up to date
	R6 Remanufacture	Use parts of discarded product in a new product with the same function
	R7 Repurpose	Use discarded product or its parts in a new product with a different function
Useful application of materials	R8 Recycle	Process materials to obtain the same (high grade) or lower (low grade) quality
	R9 Recover	Incineration of material with energy recovery

Source: MDPI[10]

The European Commission categorisation system for the circular economy also refers to the 9Rs circular strategies. The European Commission defines fourteen circular subcategories, all of which contribute to increasing resource efficiency and decreasing environmental impacts throughout value chains, by applying or enabling one or more of the 9Rs.[11]

The circular economy is an invitation to see value creation in a different way, one that functions within the planetary boundaries,[12] and which considers the whole life cycle of a product and a value chain approach; one that prioritises transition to renewable resources, efficient use of finite resources, and recovery of resources at the end of a product's useful life. Essentially, the circular economy describes an economic system designed to be regenerative.

Ideas key to value creation in the circular economy are based on keeping resources at the highest possible value during their lifetime, including sharing, leasing, reusing, repair-

10 The Relevance of the Circular Economy for Climate Change: An Exploration through the Theory of Change Approach, Khanna, M.; Gusmerotti, N.M.; Frey, M., MDPI, 2022
11 Categorisation system for the circular economy, European Commission, 2020
12 The Doughnut of social and planetary boundaries, Kate Raworth

ing, refurbishing and recycling existing materials and products as long as possible. In this way, the **life cycle of products is extended.** In practice, it implies **reducing waste** to a minimum. When a product reaches the end of its life, its materials are kept within the economy wherever possible. These can be productively used again and again, thereby **creating further value**.[13]

2. An alternative model beneficial to our economy, our planet and our people

The circular economy, which decouples economic activity and use of natural resources, offers an alternative model beneficial to our economy, our society and our planet through reduced risks, new business opportunities and improved impact on the environment and health.

Successful circular solutions will reduce risks intrinsically linked to our linear model, which are mostly overlooked,[14] by reducing dependence on dwindling natural resources and improving resource security and resilience to price volatility, supply shocks and global supply chain disruptions, and macroeconomic challenges resulting therefrom.[15] This especially applies to critical raw materials needed for the technologies that will help achieve the climate goals such as batteries. Circular economy strategies can lower investment risk and drive superior risk-adjusted returns. Analysis by Bocconi University of 200+ listed European companies across 14 industries has shown that the more circular a company is, the lower its risk of defaulting on debt, and the higher the risk-adjusted returns of its stock.[16,17]

Circular economy solutions can create value for companies, their stakeholders, and the finance sector and unlock a USD 4.5 trillion economic growth.[18] By adopting circular principles, companies can generate new sources of revenue and cost saving opportunities, and spur innovation.

Furthermore, the circular economy is expected to tackle the root causes of our three planetary crises, climate change, biodiversity loss and pollution, by eliminating waste and pollution, circulating products and materials and regenerating nature. As these crises become ever more immediate risks to businesses and our society across the globe, a systemic shift in our economy is necessary.

On the climate mitigation front, efforts to tackle the global warming crisis have mainly been focused on energy through a transition to renewable energy. The shift towards renewable energy is crucial but can only address 55% of global GHG emissions. The remaining 45% derives from the way we produce food and goods.[19] The circular econ-

13 Circular economy: definition, importance and benefits, European Parliament, 2023
14 Linear Risks, Circle Economy, PGGM, KPMG, EBRD, WBCSD, 2018
15 The role of international trade in realizing an inclusive circular economy, Chatham House, 2022
16 The circular economy as a de-risking strategy and driver of superior risk-adjusted returns, Bocconi University, Ellen MacArthur Foundation, Intesa Sanpaolo, 2021
17 Waste to Wealth, Accenture, 2015
18 The role of international trade in realizing an inclusive circular economy, Chatham House, 2022
19 Completing the Picture: how the circular economy tackles climate change, Ellen MacArthur Foundation, 2018

omy can help reduce GHG emissions across all economic sectors through actions that (i) reduce emissions across value chains, (ii) maintain energy in products, and (iii) sequester soil's carbon. Research shows that if circular economy principles were to be applied to four vital industries (aluminum, cement, plastic, and steel), emissions may be reduced by 40% by 2050 and if these principles were applied to food waste, emission reductions could reach up to 49%.[20]

Further, it is important to understand the strong interconnectedness of a circular economy with biodiversity. Biodiversity provides a significant economic value in the form of ecosystem services, estimated at more than USD 150 trillion annually,[21] about twice the world's GDP. The way we extract and consume natural resources in our current linear system generates more than 90% of biodiversity loss and water stress.[22] A circular economy plays a key role in curbing biodiversity loss, through the reduction of natural resources use and reduction of waste and pollution it allows. A circular economy tackles all five direct drivers of biodiversity loss identified by the IPBES:[23] (i) land use change by reducing the amount of land needed to provide resources to the economy, (ii) natural resource use and exploitation by managing renewable resources for the long term, (iii) climate change by reducing greenhouse gas emissions across the economy, (iv) pollution by designing out waste and pollution at every stage of a product's life cycle, (v) invasive species by designing out the waste on which invasive alien species can be transported to new ecosystems.[24]

Thus, research shows that circular economy approaches can reduce the impact on farm-level biodiversity by c. 50% (for three exemplary products, wheat, potatoes and dairy).[25] When applied to cities globally, it is expected that circular economy for food could reduce global food sector emissions by 49% in 2050,[26] decrease the health costs related to the current system, and generate annual benefits worth USD 2.7 trillion by 2050.[27]

This transition will have to be a Just Transition that will need to go hand in hand with equitably addressing socio-economic risks and opportunities.[28] UNEP FI and ILO are currently working on a step-by-step guidance on actions banks can take to fully embrace the social dimension of the low-carbon transition and climate adaptation, promote decent job creation and improve financial inclusion through financial decision-making.[29]

20 Completing the Picture: how the circular economy tackles climate change, Ellen MacArthur Foundation, 2018
21 The Biodiversity Crisis Is a Business Crisis, Torsten Kurth, Gerd Wübbels, Adrien Portafaix, Alexander Meyer zum Felde, Sophie Zielcke, BCG, 2021
22 Global Resources Outlook 2019: Natural Resources for the Future We Want, UN International Resource Panel (IRP), 2019
23 Models of drivers of biodiversity and ecosystem change, IPBES
24 The Nature Imperative: How the circular economy tackles biodiversity loss, Ellen MacArthur Foundation, 2021
25 The Nature Imperative: How the circular economy tackles biodiversity loss, Ellen MacArthur Foundation, 2021
26 Completing the picture: How the circular economy tackles climate change, Ellen MacArthur Foundation and Material Economics, 2019; in The Nature Imperative: How the circular economy tackles biodiversity loss, Ellen MacArthur Foundation, 2021
27 Cities and circular economy for food, Ellen MacArthur Foundation, 2019
28 Guidelines for a just transition towards environmentally sustainable economies and societies for all, ILO, 2016
29 Social and Human Rights Strategy, UNEP FI, 2022

The ILO estimates an additional six million jobs could be created globally through transitioning to a circular economy.[30]

Therefore, changing models to circular ones can help build social, economic, and natural capital, contributing to shareholder and stakeholder value, while tackling the root causes of climate change, biodiversity loss and pollution. This brings out the need for banks to work with their clients and support them in transitioning to a circular economy model.

3. A strong momentum on the circular economy, with significant implications for the finance sector

Incorporation of the transition to a circular economy in policies and regulatory frameworks, including in mandatory frameworks, is progressing. For example, transition to a circular economy is one of the 6 objectives of the European Union Taxonomy for sustainable activities[31] (the EU Taxonomy). The European Union is also shifting its circular economy scope from the environmental to industrial policy with its Green Deal Industrial Plan, and within it the Net-Zero Industry Act and the Critical Raw Materials Act rely on circular economy as a key actuator/driver of transition. The draft European Sustainability Reporting Standard (ESRS) E5 Resource use and circular economy sets out disclosure requirements under the Corporate Sustainability Reporting Directive (CSRD) on information about resource use and circular economy.[32] A legally binding international instrument to end plastic pollution is currently in negotiation, as per the mandate given to Member States by the UN Environmental Assembly[33] in March 2023. It explicitly requires that a full life cycle approach be taken to tackle the root causes of plastic pollution, including through resource efficiency and circular economy approaches.

There is a strong momentum in the market to develop tools and frameworks to assess circular opportunities, such as WBCSD's Circular Transition Indicators,[34] Ellen MacArthur Foundation's Circulytics,[35] Cradle to Cradle Certified® framework,[36] as well as IDB's study on Financing the Circular Economy in Colombia with proposed circular taxonomy.[37] More and more reporting frameworks are embedding circularity. It is the case for instance of SASB,[38] which has included in its framework performance indicators related to the circular economy, CDP[39] which has included some circularity concepts in its Water Security Questionnaire and is now developing a questionnaire on plastics,[40] GRI[41] which has included circularity and waste prevention concepts in its latest standard on waste

30 World Employment and Social Outlook 2018, ILO, 2018
31 EU Taxonomy
32 Draft ESRS E5 Resource use and circular economy, 2022
33 UN resolution to forge an international legally binding agreement by 2024 to end plastic pollution
34 Circular Transition Indicators v3.0 – Metrics for business, by business, WBCSD, 2022
35 Measure business circularity: Circulytics, Ellen MacArthur Foundation, 2021
36 Cradle to Cradle
37 Financing Circular Economy Investments – Colombia's Experience, IDB, 2022
38 SASB Standards
39 CDP Water Security 2021 Questionnaire
40 CDP Signposting & Feedback Opportunity: Introducing Plastics Into CDP Questionnaires
41 GRI 306: Waste 2020, GRI, 2020

(GRI 306) or ISO[42] which is currently developing a new standard on the circular economy (ISO/TC 323). Such tools and frameworks may be useful to banks looking to seize circular opportunities.

Transitioning to the circular economy represents a systemic shift relying on a profound change of our production and consumption models. This requires significant funding, directed to business models and activities which are often innovative. Insufficient financing is one of the most commonly cited barriers to transitioning to the circular economy.[43] The magnitude of this barrier is suggested by the proportion of official development assistance (ODA)[44] spending directed to SDG 12—the SDG which is the most closely related to the shift to the circular economy.[45] According to the OECD SDG Financing Lab,[46] this represented USD 2.6bn in 2019 and only 1.35% of all ODA spending between 2012 and 2019, which ranked SDG 12 number 16 out of the 17 SDGs.

Hence the financial sector has a pivotal role to play in achieving the transition to the circular economy.

There is some movement in the right direction, as banks and other financial institutions have started to take advantage of the opportunities the circular economy offers. Thus, between end of 2019 and end of November 2021, assets under management in public equity funds with a circular economy focus grew 28-fold. Between end of 2019 and end of 2021, the number of outstanding corporate and sovereign bonds with a circular economy focus increased 5-fold.[47] This Guidance also includes examples of approaches to the circular economy that banks are already taking (please see Annex 2).

The market is showing a rise in the adoption of circular principles by financial institutions through different private financial mechanisms, including circular economy themed green bonds and other financial instruments, as well as the use by investment fund managers of the circular economy.[48] In 2022 Global Plastic Action Partnership (GPAP) has developed a toolkit to facilitate investment in a circular economy for plastics, which highlights voluntary corporate action, supportive policy frameworks, and relevant finance mechanisms as ways to addressing the overarching problem of plastic waste. The toolkit also aims to identify barriers to investment and to highlight emerging opportunities, while delivering solutions in partnership with global and local stakeholders.[49]

UNEP FI's publication, "*Financing Circularity: Demystifying Finance for Circular Economies*" identifies a number of strategies and actions that financial institutions can take to accelerate financing of the transition towards the circular economy. It highlights ways in

42 ISO/TC 323 Circular economy

43 Identified by cities and regions in the OECD, OECD Survey on Circular Economy in Cities and Regions, OECD, 2020

44 Official Development Assistance is defined by the OECD Development Assistance Committee (DAC) as government aid that promotes and specifically targets the economic development and welfare of developing countries.

45 Financing an inclusive circular economy: De-risking investments for circular business models and the SDGs, Chatham House, 2021

46 SDG Financing Lab, OECD

47 Ellen MacArthur Foundation

48 Financing an inclusive circular economy: De-risking investments for circular business models and the SDGs, Chatham House, 2021

49 Unlocking the Plastics Circular Economy: A Toolkit for Investment, Global Plastic Action Partnership, 2022

which financial institutions can scale up innovation and opportunities related to products, services and financial instruments or investments in circular activities and projects.

Recommendations for banks, insurers and investors to accelerate financing circularity include:

1. Integrate the transition into the organisation's strategy.
2. Manage linear and circular risks and opportunities by applying the circularity or 9Rs concept in the financial institution's risk policies, product development and client engagement.
3. Develop sectoral competences in the financial institution and integrate with commercial activity.
4. Monitor job creation and destruction from the transition.
5. Raise awareness of the implications of resource efficiency and material flows in the organisation and among clients.
6. Evaluate how the institution can contribute to financing the transition under key financial industry frameworks
7. Measure circular economy finance on the balance sheet and grow the circular economy finance footprint of lending, investment and insurance activities.
8. Contribute to standardisation of circular economy metrics and financial instruments.

The global financial system has a crucial role to play and a tremendous opportunity to scale up financing of circular solutions to tackle society's critical challenges, while managing downside risks from changes in business models and economies. Financial institutions that take risks and opportunities related to resource use, scarcity and effects on pollution and people into account in their financial decisions will be well-positioned to be part of an economy fit for the future.

UN environment programme

finance initiative

UNEP Finance Initiative brings together a large network of banks, insurers and investors that collectively catalyses action across the financial system to deliver more sustainable global economies. For more than 30 years the initiative has been connecting the UN with financial institutions from around the world to shape the sustainable finance agenda. We've established the world's foremost sustainability frameworks that help the finance industry address global environmental, social and governance (ESG) challenges.

unepfi.org

unepfi.org

info@unepfi.org

/UNEPFinanceInitiative

UN Environment Programme Finance Initiative

@UNEP_FI