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## WCEF2023 MEDIA KIT

### Contents

<b>1 The circular economy – an introduction for journalists .....</b>	<b>2</b>
<b>2 The WCEF2023 in Helsinki .....</b>	<b>4</b>
<b>3 Media activities around WCEF2023 .....</b>	<b>5</b>
3.1 Press Releases .....	6
3.2 Releases of reports and briefings related to the WCEF2023 (updating) .....	6
3.3 Questions & Answers .....	8
<b>4 Facts &amp; Figures .....</b>	<b>13</b>
4.1 The circular economy, youth and job creation .....	13
4.2 Financing the circular economy .....	13
4.3 Circular economy policies .....	14
4.4 The circular economy and climate change .....	14
4.5 The circular economy and biodiversity .....	15
4.6 The circular economy and waste .....	15
<b>5 Recommended readings.....</b>	<b>16</b>
<b>6 Circular economy story ideas .....</b>	<b>19</b>
<b>7 Circular Economy experts for your interviews .....</b>	<b>20</b>
<b>8 The WCEF2023 and the circular economy in pictures.....</b>	<b>21</b>
<b>9 Media contacts .....</b>	<b>21</b>

Dear reader,

*This media kit invites you to explore the origins, opportunities and benefits of a circular economy, why it is growing in popularity and what it actually means for people, businesses, governments and other players. This kit has been compiled to introduce you to the topic and provide a variety of components to inspire you and your reporting on circularity and the transition from a linear to a circular economy.*

*Welcome to report how the world is striving for prosperity in new ways!*

- WCEF2023 media team

## 1 The circular economy – an introduction for journalists

So, what is the circular economy? What are the benefits and how can we get there? These are questions which many journalists and others often ask. The answers often depend on who replies.

That is because the “circular economy” is an umbrella term which is formed by various existing concepts and schools of thought including cradle-to-cradle, biomimicry, industrial symbiosis and others; and there is no standard definition accepted by all. Different stakeholders describe the emerging paradigm of a circular economy by using their respective preferences.

Let us therefore reflect and explain what the circular economy is not. For this purpose, we first have a look at our current linear economic model.

According to the [Circularity gap reports](#) by the Dutch non-profit organisation Circle Economy, we live in a world which is roughly over 90% linear and less than 8% circular. By combining the agendas of circular economy and climate mitigation we can double the current global circularity rate and thereby cut 39% of total global emissions and 28% of virgin resource use.

In other words, over 90% of all materials ever extracted and used around the globe are wasted, and less than 10% of those materials make it back into and are kept in the global economy. To a large extent, the linear economy, paraphrased as the “take-make-use-waste” economy, is at the origin of this situation as it dominates how we run our companies, supply chains and production systems. It does not sufficiently consider the value of the different kinds of “waste” embedded in our products.

It is estimated that our global economy already consumes 100 billion tonnes of materials a year, a level of extraction of resources and raw materials which continues to grow due to global production and consumption patterns.

This is where the circular economy comes in: this emerging paradigm addresses these linear challenges and proposes an alternative model. It does so with the intention of maintaining the value of resources and products at the highest possible level, reducing waste and keeping materials in a loop.

[The Finnish Innovation Fund Sitra summarises](#) the idea of the circular economy by describing it as “*an economic model that aims to optimise the system as a whole and*

*tackle the root causes of biodiversity loss, climate change and the depletion of natural resources. Rather than producing more and more goods, in a circular economy we get more value from what we have, and we keep that value in the economy for as long as possible through smarter design, digital solutions and a shift from owning products to using services.”*

[The Ellen MacArthur Foundation](#) says that “*the circular economy tackles climate change and other global challenges like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources. The circular economy is based on three principles, driven by design: 1) Eliminate waste and pollution; 2) Circulate products and materials (at their highest value), and 3) Regenerate nature.*”

### **R strategies or circular economy how-tos**

A further way of describing the circular economy is by looking at what companies, consumers and product designers should do to act in a circular manner. This is done by the “how-tos” of a circular economy, also referred to as “R strategies” because they all start with an R: Reduce, Reuse and Recycle might be the three most prominent amongst them while Rethink, Redesign, Repurpose and many other such terms are also part of them. Various organisations have already started using 10 agreed R’s – starting with Refuse and ending with Recycle – while researchers have identified well over 35 R words that are used in the literature to describe the circular economy.

### **Role of the Nordic countries in the transformation towards circularity**

The Nordic countries have unique positions of strength, a wide range of biological resources from land and water, high technological knowledge, competitive industries, and a well-educated population, to take a leading role towards a circular economy. These strengths can be utilised to ensure rapid adaptability, improve our global market opportunities and competitiveness, as well as greening our industry and moving to a circular nature-positive economy.

The Nordic countries have set ambitious goals to reduce CO<sub>2</sub> emissions and achieve to our 2030 commitments, including reducing energy-related emissions, increasing energy efficiency and reducing the use of fossil fuels. More efficient resource use by industries and final consumers are necessary to reduce CO<sub>2</sub> emissions and live up to the Paris Agreement. Circularity must therefore be a tangible and accessible option for consumption and a competitive business strategy for companies.

Circular business models and improved resource efficiency keep resources in the region, enhancing emissions abatement, reducing extraction, improving biodiversity, restoring nature and improving security. Circular business models are a necessity for building resilience of the Nordic region.

Building on the single market and the potential of digital technologies, the circular economy can strengthen the Nordic’s industrial base and foster business creation and entrepreneurship among SMEs. Innovative business models based on a closer relationship with customers, mass customisation, the sharing and collaborative economy, and powered by digital technologies – such as the internet of things, big

data, blockchain and artificial intelligence – will not only accelerate circularity but also the dematerialisation of our economy and make the Nordic less dependent on primary materials.

Five Nordic ministers of trade and industry have launched The Circular Business Model programme. Its aim is to accelerate the transition to a circular economy in the Nordics and to develop the Nordics further as agile frontrunners within circular economy and circular business models.

Read more: [Circular Business Models by Nordic Innovation](#)

## 2 The WCEF2023 in Helsinki

The World Circular Economy Forum (WCEF) is a global initiative of Finland and Sitra, the Finnish Innovation Fund. WCEF creates a new economy, businesses and jobs by leveraging circular solutions to solve the planetary crises. The Forum is one of the world's leading events on the circular economy.

WCEF brings together leaders from business, government, academia and civil society to discuss global issues and to find circular solutions to the challenges facing the world. It provides a platform for sharing knowledge and expertise, building networks and partnerships, and advancing the transition to a circular economy. The Forum, held since 2017, has previously been hosted in Africa (Rwanda), Asia (Japan), Europe (Finland and the Netherlands) and North America (Canada).

Finland will host the World Circular Economy Forum 2023 from 30 May to 2 June, co-organised by Nordic Innovation and the Finnish Innovation Fund Sitra, with partners from around the world.

### **Circular solutions for nature and the economy**

Hosted in Messukeskus, Helsinki, WCEF2023 will provide a unique opportunity to create momentum for a nature-positive future. It will present a focused agenda and harness our collective energies on accelerating the needed transition over the coming years. WCEF2023 will mark the seventh iteration of the Forum and occurs at a pivotal moment for economies, societies and our planet.

We already know why the circular economy is a must, but the world needs examples of how to get there. WCEF2023 will focus on the how, inviting especially businesses, financiers and youth to pinpoint the potential and bottle necks of advancing circular solutions.

### **Programme**

The main programme on 30–31 May will consist of four plenary sessions and 16 parallel sessions. The plenaries will explore cross-cutting themes for a diverse, global audience. They raise questions on circularity's role for the well-being of nature and the economy, youth's role in the transition, circularity on financial markets, and future trends for a regenerative and resilient economy.

The parallel sessions will bring the themes to life by sharing inspiring and scalable examples of the circular economy. These sessions will cover a variety of topics such as: finance, accounting and metrics, everyday life and health, future skills, regenerative agriculture, regenerative forestry, finite materials and mining, energy, trade, strategies and roadmaps, fashion and textiles, food, construction and built environment, plastics and packaging, electronics, and hydrogen in the circular economy.

In addition, the participants will also have access to networking and expo areas as well as a mobile app throughout the Forum. The expo is a curated space for Forum attendees to engage with innovative and inspiring circular economy solutions demonstrated by leading organisations and businesses from around the world. For example, Aalto University is demonstrating in their exhibition what we will be wearing in the future.

Accelerator sessions organised by WCEF2023 partners will occur on 1-2 June in the Helsinki region and online. These sessions bridge the Forum's themes with the daily work needed for a circular transition by focusing on the implementation of existing action agendas. They will be outcome-oriented and pose an opportunity for deeper audience engagement.

To enable participation from around the world, WCEF2023 will be live-streamed online, open to all and free of charge. Attendance in person is by invitation only.

[Read more about this year's Forum concept and content.](#)

The detailed programme will be available at [wcef2023.com](https://wcef2023.com).

### 3 Media activities around WCEF2023

To help the media, co-hosts Sitra and Nordic Innovation will host an online press briefing on 23 May 15:00 (EEST; UTC+3). The briefing is limited to representatives of the media and will take place on Microsoft Teams. The speakers at the press briefing include:

- **Kari Herlevi**, Head of Global Collaboration Unit for Sustainability Solutions, The Finnish Innovation Fund Sitra
- **Svein Berg**, Managing Director, Nordic Innovation

Media representatives are required to register for the briefing by 22 May 16:00 (EEST; UTC+3) at [https://www.lyyti.fi/req/WCEF2023\\_Online\\_press\\_briefing\\_0547](https://www.lyyti.fi/req/WCEF2023_Online_press_briefing_0547). Registered journalists will be provided with the link to join the Microsoft Teams meeting.

Co-hosts of the WCEF2023 will also:

- Manage the press room at the Conference venue in Helsinki.
- Support journalists in liaising with interview partners.
- Organise a media tour to explore circular economy solutions.
- Share press photos and WCEF2023 logo at [Sitra's material bank](#).

### 3.1 Press Releases

So far, the following official press releases and announcements on the WCEF2023 have been issued:

- 17 May 2023: [Top circular economy event calls for future-proofing of investment portfolios](#)
- 7 December 2022: [World Circular Economy Forum 2023 takes place in Helsinki in May 2023](#)

### 3.2 Releases of reports and briefings related to the WCEF2023 (updating)

*Mon 29 May 02:00 EEST*

#### **[Launch] Memorandum: Putting nature at the heart of the European Green Deal**

Sitra proposes to the next European Commission that it should continue and update the European Green Deal. The European Union can tackle the ecological crisis, strengthen its resilience and create new markets by putting nature at the heart of decision-making. This could be achieved by making the value of nature visible, by mainstreaming nature into key policies and by strengthening the circular economy transition in the EU's single market. The memorandum includes a set of policy recommendations for the next Commission. More information: [antti.koistinen@sitra.fi](mailto:antti.koistinen@sitra.fi) and [www.sitra.fi/en](http://www.sitra.fi/en)

*Tue 30 May 12:15 EEST at the [Opening session](#) of WCEF2023*

#### **Sitra's call for applications for nature-positive circular businesses in Europe**

Sitra is looking for the leading European companies with circular economy solutions for nature. The call for applications is open until 30 September 2023. The selected companies will be presented in next year's forum WCEF2024. Read more in [Sitra's news](#).

*Tue 30 May 13:30 EEST at the session "[Consumers in a circular economy](#)"*

#### **[Launch] YouGov study for Nordic Innovation and Sitra: Nordic Consumer perceptions on the circular economy**

To support this year's World Circular Economy Forum, YouGov carried out a survey via the internet on representative panels in Denmark, Finland, Norway and Sweden to respondents aged 18+. Awareness and knowledge about the concept of a circular economy is significantly higher in Finland than in the other Nordic countries. However, in general, the share of the population in each Nordic country that has taken part in circular economy activities in the past 12 months is of a similar size. Overall, the Nordic countries show the same type of circular economy habits and the

top 3 most common activities are the same in Sweden, Denmark, Norway and Finland.

Read more in [Sitra's blog](#) and download the survey.

*Tue 30 May 15:15 EEST at session “[How companies should measure their impact on nature](#)”*

**[Launch] Circular Transition Indicators v4.0 (CTI)**

Developed by the World Business Council for Sustainable Development in collaboration with over 30 companies, CTI v4.0 provides an updated approach to measuring how circular strategies impact a company's greenhouse gas (GHG) emissions. Along with assessing their climate impact, companies can now also use CTI v4.0 to understand how their circular performance affects nature.

Land use is the biggest driver of nature loss. Companies can help halt nature loss by switching to circular sourcing strategies. With the new CTI version, companies can compare different sourcing strategies and find the best circular actions to reduce their land use impact.

*Tue 30 May 15:15 EEST at session “[A more diverse role for forests](#)”*

**Study on student entrepreneurship**

According to a recent survey by the European Forest Institute targeting life science students in Europe, nearly 30% of respondents are very interested in becoming entrepreneurs in the field of bioeconomy. However, there are barriers that prevent students from pursuing business opportunities.

*Wed 31 May 10:30 EEST at session “[Wardrobe of the future: how to change the textiles and fashion industry](#)”*

**[Launch] Sustainability and Circularity in the Textile Value Chain. A Global Roadmap.**

UNEP's new report sets out what each stakeholder group can do individually and collectively to reach the shared destination of a circular textile sector. To do so, the report identifies the three core changes that must happen: 1) a shift in consumption patterns and business models to make more circular textiles available, desirable, and accessible; 2) an improvement of practices when it comes to production processes, product design and care, and a just transition; and 3) a significant investment in infrastructure such as renewable energy and technology to remove pollutants such as microfibres and hazardous chemicals. These three priorities depend on each other and will require significant work. Therefore, the Roadmap breaks this work down into 9 building blocks that each stakeholder can focus on, with priority actions for each stakeholder group.

The roadmap will be available here:

<http://www.unep.org/resources/publication/sustainability-and-circularity-textile-value-chain-global-roadmap>

Wed 31 May 15:00 EEST at [Closing plenary](#) of WCEF2023  
**Announcing the WCEF2024 country and co-hosts**

Thu 1 June 13:00 EEST at Accelerator Session "[The role of scrap in steel sector decarbonisation](#)"  
**[Launch] Outokumpu Inner Circle Initiative**

The new circularity initiative of steel producer Outokumpu brings together stainless steel users and scrap suppliers to bring more transparency to supply chains and smoothen the path from scrap to a more sustainable stainless steel production – ultimately creating a closed loop for steel scrap. The Inner Circle initiative is a first of its kind for the industry. More information: [heidi.haila@outokumpu.com](mailto:heidi.haila@outokumpu.com)

### 3.3 Questions & Answers

#### **What is wrong with the linear economy?**

The linear economy is often paraphrased as the take-make-use-waste economic model. Linear consumption and production processes lead to the waste of natural resources. Some of these resources are not renewable and those that are, cannot keep up with the rate of human consumption.

Nordic Innovation writes:

*“There is only one planet Earth, yet by 2050 on the current trajectory the world will be consuming as if there were three. Global consumption of materials such as biomass, fossil fuels, metals and minerals are expected to double in the next forty years, while annual waste generation is projected to increase by 70% by 2050. According to the international Circularity Gap Report 2023, by combining the agendas of circular economy and climate mitigation we can double the current global circularity rate of 7.2% and thereby cut 39% of total global emissions and 28% of virgin resource use.”*

#### **What is the circular economy?**

The answer to this question depends very much on who you ask. Sitra, the Finnish Innovation Fund, provides the following definition and description:

*“The Finnish Innovation Fund Sitra defines the circular economy as an economic model that aims to optimise the system as a whole and tackle the root causes of biodiversity loss, climate change and depletion of natural resources. Rather than producing more and more goods, in a circular economy we get more value from what we have, and we keep that value in the economy for as long as possible through smarter design, digital solutions and a shift from owning products to using services.*



*“Despite the increasing interest in the circular economy, there does not exist a single, widely accepted definition of it. However, there are clear overlaps between conceptions of the main principles, which emphasise a shift from linear use of materials to circular flows by maximising both the value and utility of resources across the value chain. Of the 114 studied circular economy definitions, 38% included aspects of environmental quality in their definition, compared to 46% and 20% for economic prosperity and social equity respectively (Kirchherr et al. 2017). For many, the concept is closely associated with the Ellen MacArthur Foundation’s ‘butterfly diagram’, which through different tiers illustrates the continuous flow of both biological and technical materials that underpin the circular economy (Ellen MacArthur Foundation 2022a).”*

Source: [Tackling root causes - Sitra](#)

### **What are the economic benefits of a circular economy?**

According to research from Accenture, the circular economy could generate 4.5 USD trillion of additional economic output by 2030. The research identifies circular business models that will help decouple economic growth from natural resource consumption while driving greater competitiveness and creating jobs.

### **What are the environmental benefits of a circular economy?**

The circular economy protects the environment and biodiversity, reduces greenhouse gas emissions, increases resource efficiency and reduces waste. More detail on individual benefits can be found below.

### **What is the role of recycling in a circular economy?**

Recycling is often referred to as “the last resort” in a circular economy. This is because recycling is an activity at the very end of a product’s life cycle, the so-called end-of-life. In most recycling processes, products and materials lose some of their value and are therefore referred to as downcycling. Upcycling, on the other hand, is when value is added to a product.

One can therefore state that recycling is part of a circular economy while it usually results in the loss of value and should be avoided. Other Value Retention Options are preferable, such as redesigning or entirely reimagining products so that they can be repaired or repurposed in a way that recycling does not become necessary.

### **What is the role of the circular economy in achieving the Sustainable Development Goals (SDGs)?**

The UK-based think-tank Chatham House writes:

*“The circular economy, a model for eliminating waste and maximising the value of resources, has the potential to contribute to achieving the Sustainable Development Goals (SDGs) ... The circular economy is a holistic approach which cuts across a*

*range of sectors including agriculture, energy, climate change, water and sanitation. Indeed, utilising circular economy practices across these areas, combined with social justice considerations, provides a unique framework for achieving the SDGs.*

*Circular economy practices such as reduce, redesign, reuse, repair, remanufacturing and recycling are directly aligned with achieving SDG 12 (Sustainable Production and Consumption) by employing new technologies and business models, reducing the amount of unsustainable products that is produced and bought, sharing and repairing, designing out waste and safely managing toxic substances. As a result, resource efficiency can be improved and pressure reduced on the natural environment. ...”*

Source: [How the circular economy can help realize the Sustainable Development Goals](#)

### **How can a circular economy help reduce Greenhouse Gas Emissions?**

Half of global emissions come from the extraction and processing of materials. Circular economy strategies reduce the demand for raw materials and new products, reducing emissions from production. Shifting consumption patterns and material-efficient product design will deliver the highest emission reduction potential. The built environment, transport and food offer the highest potential to reduce emissions through circular economy strategies.

Source:

[Platform for accelerating the circular economy \(pacecircular.org\)](#)

### **How can a circular economy help avert the climate crisis?**

A recent paper launched at COP27, “Circular economy as a climate strategy”, outlines nine calls-to-action that decision makers and researchers must heed to maximise the potential of the circular economy to help limit warming to 1.5 degrees Celsius and avoid the worst impacts of climate breakdown:

1. Shift consumption patterns.
2. Stimulate product circularity from the design phase.
3. Incorporate circularity across clean energy value chains.
4. Integrate circular economy strategies into national climate policies and plans.
5. Incentivise cross-border greenhouse gas emission reduction.
6. Connect circular economy metrics with climate change impacts.
7. Increase transparency and comparability in modelling methodologies.
8. Apply systemic and context-specific impact assessment to inform decision-making.
9. Investigate the role of the circular economy in climate change adaptation.

Sources:

## [9 ways the circular economy can help avert the climate crisis](#)

### **How can a circular economy help protect biodiversity?**

#### Background

Biodiversity refers to the diversity and abundance of life on Earth. The Convention on Biological Diversity (CBD) defines biodiversity as: *“the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”* (CBD 2006).

The terms “biodiversity” and “nature” are often used interchangeably, although they differ in that biodiversity refers to a characteristic of life, its diversity, rather than to the life itself, which can be called nature or wildlife.

Global biodiversity is in decline and is projected to continue to decline in the absence of efforts to reduce pressures from human activities. Species extinction is currently estimated to be occurring at up to 1,000 times the “natural” background rate (Pimm et al. 1996).

#### Possible approach and solutions

The circular economy redefines how we produce, consume and manage materials and products. It gives us more value from what we have and leaves room for nature.

The circular economy can halt and partly reverse biodiversity loss by 2035, through policy- and business-led interventions in the food and agriculture, buildings and construction, fibres and textiles, and forest (forestry and the forest industry) sectors. These interventions are focused on regenerative production principles, as well as on business models that extend product lifetimes, increase use rates and cut waste to reduce our extraction of resources and in turn tackle the key drivers of biodiversity loss: land-use change, climate change, pollution, direct exploitation and invasive alien species.

The Facts & Figures section presents more concrete data and figures on the circular economy and biodiversity.

Source: [Tackling root causes – Halting biodiversity loss through the circular economy - Sitra](#)

### **What makes a company “circular” and what kind of circular business models exist?**

The Finnish Innovation Fund Sitra identifies five circular economy business models:

1. **Circular inputs:** Using recycled, bio-based materials and renewable energy in production. Creating sustainable, repairable and recyclable products.

2. **Sharing platforms:** Digital platforms make it possible to increase the use rates of goods and resources through, for example, renting and sharing.
3. **Product as a service:** Offering clients access to products instead of owning products, through services such as leasing and renting.
4. **Product life extension:** Making products last longer such as through repair, maintenance, upgrade and resale services.
5. **Resource recovery:** Recovering materials and resources from products that are no longer functional in their current application.

The use of circular strategies can give companies competitive benefits.

Sitra has compiled a list of the most interesting companies in Finland applying circular economy business models: [Most interesting companies in the circular economy in Finland 2.1 - Sitra](#)

### **What is eco-economic decoupling, and what does it have to do with a circular economy?**

Decoupling refers to the idea of an economy that can grow without increasing pressure on the environment. In many economies, increasing production (measured by GDP) currently raises pressure on the environment. An economy that would be able to grow while reducing the use of resources and environmental deterioration would be said to be decoupled.

When it comes to the circular economy, two groups of proponents can be distinguished: those who believe that economic growth can be decoupled from environmental pressure, and those who believe that economic growth cannot be decoupled from environmental pressure. Both groups may be advocates for a circular economy, while they advance different preferences and objectives.

### **What is Sitra, the Finnish Innovation Fund?**

Owned by the Republic of Finland, Sitra is an independent future fund that collaborates with partners from different sectors to research, trial and implement bold new ideas that shape the future. It is a nationally and internationally influential think-do-and-connect tank, a promoter of experimentation and new operating models, and a facilitator of collaboration.

Sitra's aim is a Finland that succeeds as a pioneer in sustainable well-being. The organisation was named the number one public-sector circular economy accelerator in the world by the World Economic Forum when Sitra won the public-sector category of the Circulars Awards 2018 for its pioneering work to accelerate the world's transition to a circular economy.

More: [Facts about Sitra](#)

## 4 Facts & Figures

### 4.1 The circular economy, youth and job creation

Please note: Estimates about the impacts of a circular economy on employment depend on the kind of definition applied to the circular economy, as seen by the following differing evaluations. Please also check the Questions & Answers section on this topic.

- According to the International Labour Organization (ILO), changes in energy production – including the generation of renewable energy, greater efficiency, adoption of electric vehicles and increasing efficiency in buildings – can create a net gain of 18 million jobs throughout the world economy.

Of 163 economic sectors analysed by the ILO, 14 show employment losses of more than 10,000 jobs worldwide, and only two (petroleum refining and the extraction of crude petroleum) show losses of one million jobs or more.

According to the Club of Rome, a full adoption of a circular economy would create more than 75,000 jobs in Finland, 100,000 in Sweden, 200,000 in the Netherlands, 400,000 in Spain and 500,000 in France by 2030.

The Global Climate Action Summit estimates the creation of over 65 million new low-carbon jobs by 2030.

Sources:

- IISD report: [Effects of the circular economy on jobs](#)
- Sitra article: [What do we know about the effects of a circular economy on jobs?](#)

### 4.2 Financing the circular economy

- In July 2018, several Dutch banks and other stakeholders came together to develop the first “Circular economy finance guidelines” as “voluntary process guidelines that recommend transparency and disclosure and promote integrity in the debt and equity market for the circular economy”. They suggest the following definition for circular economy finance: “Circular economy finance is any type of instrument where the investments will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible companies or projects in the circular economy”.

Source: [ABN AMRO, ING and Rabobank launch finance guidelines for circular economy](#)

- A broad number of banks, financial institutions, consultancy companies and others continue to develop analyses, reports and studies about the challenges and opportunities of financing the circular economy. The UNEP Finance Initiative published “Financing circularity: demystifying finance for circular economies” in October 2020, stating:

*“Redesigning economies to embed circularity can change the way we produce*

*and consume, addressing issues ranging from greenhouse gas emissions to plastics, resource scarcity, waste management and use of hazardous chemicals, while increasing resilience. This report offers emerging evidence of the potential to scale up finance to accelerate the shift away from a take-make-waste model of resource use and pollution to a circular economy, and practical steps to embed circularity into financing. The insights in this report can guide financial institutions to address the opportunities and threats offered by the transition, providing recommendations for policymakers for frameworks to accelerate financing for a circular economy, with examples of measures that have proven effective around the world.”*

### 4.3 Circular economy policies

Finland was the first country in the world to create [a national road map to a circular economy](#). The road map, published in 2016 and subsequently [updated in 2019](#), outlines the circular economy measures to which Finnish state administration, municipalities and businesses have already committed themselves.

Since then, many countries and regions all over the globe have created their own road maps and started implementing them. An up-to-date overview of circular policies in different countries can be found on the Chatham House website: [Policies | circulareconomy.earth | Chatham House](#)

Sitra has compiled [a guide based on what has been learned from Finland’s circular economy road map process](#). The guide features tools, guidelines and inspiration for countries that want to move towards or are already taking their first steps towards a circular economy.

### 4.4 The circular economy and climate change

- According to the Ellen MacArthur Foundation, energy efficiency and switching to renewable energy is only half the story of mitigating climate change. By adopting a circular economy approach in the products, services and systems we design, we can also start to tackle the remaining 45% of emissions associated with industry, agriculture and land use that the energy transition can’t address.
- According to a Material Economics study commissioned by Sitra, switching to the circular use of the four largest materials in terms of emissions – steel, plastics, aluminium and cement – is indispensable to cutting global greenhouse gas emissions and achieving the Paris Agreement. A more circular economy could cut EU industrial emissions by more than half by 2050.
- The study explores a broad range of opportunities for steel, plastics, aluminium and cement and two large use segments for these materials (passenger cars and buildings). The measures identified could reduce EU industrial emissions by 56% (300 Mt) annually by 2050, more than half of what is necessary to achieve net zero emissions. Globally, the reductions could be 3.6 billion tonnes per year in the same period.

Source: [“Re-configure: The circular economy – a powerful force for climate mitigation”](#)

#### 4.5 The circular economy and biodiversity

- Circular economy interventions in four key sectors – agriculture, construction, textiles and forestry – can halt global biodiversity loss and help the world’s biodiversity recover to the same levels as in the year 2000 by 2035, according to a study by Sitra.
- The world’s biodiversity can recover to 2000 levels by 2035, if the circular interventions are implemented.
- Circular interventions can have the largest positive impact in food and agriculture. Merely by shifting to more alternative proteins and regenerative agriculture, and by reducing food waste by half, biodiversity loss could be halted by 2035.
- In practice, the transition to a circular economy in the food and agriculture sector will make it possible to produce the food humanity consumes on a much smaller area of agricultural land and with fewer inputs such as fertilisers, leaving more room for nature to thrive. According to the study, which captures the impacts on biodiversity from changes in land use, the circular interventions examined could for example free up agricultural land corresponding to as much as 1.5 times the size of the European Union for other uses by 2050.
- Many circular interventions that tackle biodiversity loss also reduce greenhouse gas emissions, not least those solutions that give us more value from our biomass. Substituting alternative proteins for meat and reducing food waste are the two solutions in the study with the most impact and are also practices that people can easily adopt. In the food and agriculture sector, the transition to a circular economy would reduce methane emissions from agriculture by as much as 90% by 2050.

Source: [Tackling root causes – Halting biodiversity loss through the circular economy](#)

#### 4.6 The circular economy and waste

The world generates 49 Mt of electronic waste worth 63 USD billion per year; only 20% is collected and recycled under appropriate conditions. (Source: <https://ellenmacarthurfoundation.org/topics/cities/overview> )

##### Surprising facts about the circular economy

- Today, our economies are using about 1.6 Earths; this means that we’re using about 60% more of the earth’s resources than it can regenerate every year. By 2050, with an increased global population and a resulting rise in consumption, that “overshoot” could get to 3-4 Earths, which is clearly unsustainable.
- Today, the world produces over 2 billion tonnes of solid waste, and that’s expected to grow to 3.4 billion tonnes by 2050. About one-third of that waste is

not managed properly. By volume, global waste includes 44% food and organics, 17% paper and 12% plastic – all valuable commodities.

- We're throwing away over 50 million tonnes of electronic and electric goods, worth 63 USD billion, every year, including rare earth minerals, gold and copper.
- Why are landfills especially insidious? In addition to taking up otherwise productive land, this explanation from Waste Dive is especially helpful: "When trash is packed into a pile, the oxygen-free environment supports bacteria that thrive in those conditions. As the microbes degrade the waste, they release carbon dioxide and methane. The latter is... 84 times more potent of a global warming agent than carbon dioxide in the first 20 years of its release."
- 
- Many of us waste food every day. 22% of global emissions and 30% of energy consumption come from the food sector. At the same time, nearly one-third of all food produced is wasted, and food waste continues to be the top product found in landfills.
- Humanity will throw away 148 million tonnes of clothing each year by 2030. 500 USD billion in value is at stake by adopting circular fashion solutions, keeping valuable materials out of landfills and reducing our reliance on virgin commodities.

Source: [the World Economic Forum \(WEF\)](#)

## 5 Recommended readings

This section provides links to already published articles and relevant reports, articles and tools by Sitra and partners for inspiration and further investigations:

### Reports by Sitra

- Putting the nature at the heart of the European Green Deal (Sitra 2023; to be published 29 May 2023)
- [The impact of the circular economy on jobs and skills](#) (Sitra 2023)
- [Sustainable growth with circular economy business models](#) (Sitra 2022)
- [Tackling root causes – Halting biodiversity loss through the circular economy](#) (Sitra 2022)
- [Circular innovation and ecodesign in the textiles sector](#) (Sitra 2022)
- [Inspiring circular economy solutions from around the globe](#) (Sitra 2021)
- [Guide: How to create a national circular economy road map](#) (Sitra 2020)
- [Tools to go circular: the Nordic circular economy playbook and toolkit](#) (Nordic Innovation, Sitra and Accenture 2020)
- [Rethinking ownership – Producer ownership in a circular economy \(Sitra 2020\).](#)



- [The circular economy – a powerful force for climate mitigation](#) (Material Economics, Sitra et al. 2018)
- [Catalyse action: Lifestyle test](#) and Shift 1.5 Method book (Sitra 2021)
- [PSLifestyle](#) is an EU Green Deal project to create an inspiring online tool European citizens can use to test their carbon footprint and build sustainable lifestyles. The project will launch a locally customisable service in eight different countries. The tool will be launched in June 2023 and can be tested at the Sitra stand at WCEF2023.

### Reports by Nordic Innovation

- The [Nordic circular economy playbook 2.0](#) is a step-by-step toolkit for companies on how to successfully transform and scale their circular business. Tailored to manufacturing companies, the playbook is your guide to circular business models.
- The report [Circular business models in the Nordic manufacturing industry – Current status and development](#) provides a status update, definitions of the circular economy and an assessment of the maturity level of today's circular business models. It also highlights the barriers of scaling circular business models and unfolds a set of recommendations for inspiring policy levels and organisations to continue and improve the framework and efforts around circular business models in the Nordic countries.
- [Data sharing for a circular economy in the Nordics](#) maps out the current landscape of data sharing for the circular economy in the Nordics, as well as the future potential and opportunities that follow. Based on insights from interviews and survey responses from Nordic organisations, the report identifies barriers and enablers to an accelerated transition towards the use of data sharing for circularity, and the role Nordic and international policies can play in this. It also presents recommendations for the implementation of pilot projects.

### Reports by Circle Economy

The Amsterdam-based non-profit organisation has developed the concept of the “Circularity Gap” and produces, amongst others, a series of Circularity Gap Reports on various countries as well as global reports at [the Circularity Gap Reporting Initiative](#). Here the concept is explained and the gap between the linear and the circular economy is presented.

### Articles by Sitra

- [Five reasons why companies should set science-based targets for nature](#)
- [Nordic circular solutions tackle biodiversity loss](#) (Sitra)
- [9 ways the circular economy can help avert the climate crisis \(PACE\)](#)
- [Finland is moving towards a happier future built on a circular economy](#)

- [What makes a successful circular economy solution?](#)

### Podcasts by Nordic Innovation

[The Nordic Innovation podcast series](#) is dedicated to sustainable innovation and growth in the Nordic region. The four episodes looking into the circular economy in the Nordics are created with Nordic experts.

### Events and projects by Nordic Innovation

- [Nordic Blockchain Alliance](#)  
Exploring the potential and the preconditions of a joint Nordic blockchain in the lifestyle industries.
- [Nordic VC Challenge](#)  
New Nordic initiative to support the development of new venture capital funds in the Nordic region, to help funds become green and encourage them to have gender diversity in their partnership structure.
- [Nordic Circular Arena](#)  
Enhancing collaboration and knowledge sharing across Nordics – Your dashboard for the circular transition in the Nordic region.
- [Nordic Circular Hubs](#)  
Accelerating circular economy in Nordic industrial symbioses by building a resilient community of practice.
- [PROACTIVE](#)  
Towards a process of efficient and safe electric vehicle battery handling in the island Nordic countries.
- [SATIN -Towards a sustainable textile circular system in the Nordic region](#)  
Collection solutions achieving an increased collection rate of used textile.
- [CATALY\(C\)ST](#)  
Youth Change makers as catalysts for a transition to a sustainable circular economy.
- [NSRS - Nordic standard sustainability reporting for SMEs](#)  
Joining forces to guide SMEs to build resilience and mitigate to the sustainability transition.
- [Nordic Transition Partnership for climate neutral cities 2030 \(NTP\)](#)  
The project is looking to establish an operational Nordic partnership that accelerates the transition in small- and medium-sized municipalities to climate neutrality by 2030.
- [Metal waste reduction in tinsmith workshops in the Nordic countries](#)  
Pioneering project for 30% metal waste reduction from 1,600 Nordic Tinsmith Workshops.
- [Circular City Week](#)  
The biggest circular economy festival in the US.
- [LOOP Ventures for the circular economy](#)  
LOOP Ventures collects the world's best circular economy ventures and pushes them to market for maximum impact.
- [Nordic Circular Hotspot](#)  
Coalition to accelerate Nordic circular economy.
- [Circular business models in the Nordic manufacturing industry – Ecosystem perspective](#)

The project aimed to enable the creation of unique Nordic value chains, competence building in ecosystems and collaboration between Nordic companies.

- [Building a Nordic innovation ecosystem around technology infrastructures and testbeds](#)  
A feasibility study of Nordic testbed collaborations.
- [LOOP Ventures pilot | Nordic Innovation](#)
- [High-value products from lignin | Nordic Innovation](#)  
Using lignin as an alternate renewable material source.
- [CIRCit – Circular economy integration in the Nordic industry for enhanced sustainability and competitiveness | Nordic Innovation](#)

## 6 Circular economy story ideas

The circular economy is a paradigm or a concept that is applicable to many different industries and sectors. This section provides journalists with some food for thought on circular economy related topics and a series of questions that journalists could ask for their investigations.

- a) What is my country doing compared to frontrunners in terms of the circular economy?
- b) The most interesting circular economy companies in your country or on your continent.
- c) What companies in my country are already using certain kinds of waste for their business?
- d) Who is driving the circular economy in your country or on your continent? An investigation into local / regional circular economy organisations.
- e) Underused resources – success stories of companies turning underused resources into top-selling products.
- f) Service models you might not have thought about.
- g) Towards resilience: How the circular economy can help your business innovate.
- h) The EU is banning single-use plastics – what next and what does it mean for us?
- i) What can the circular economy do to help achieve the UN Sustainable Development Goals?
- j) Kunming/Montreal framework and EU market regulations are pushing companies towards circular business models.
- k) Circular solutions that tackle biodiversity loss.
- l) How does our economy destroy our biodiversity? An investigation into ...
- m) Feeding the world: How can the circular economy help, and who is already doing it?
- n) Leading solutions for reducing virgin material use in the food sector.
- o) How can we transition to a circular food system by 2050?

- p) Is it possible to decouple economic growth from material use?
- q) The construction industry is hungry and may soon run out of resources – how can the circular economy help?
- r) If recycling does not do the trick, how can we avoid so much waste in the first place?
- s) The waste hierarchy and how industries can feed each other with their waste.
- t) Waste management, recycling, circular economy: what are the differences?
- u) Designing out waste: How product design can reduce the generation of waste before it even exists
- v) New materials are always fun – linkages to the biodiversity loss (e.g., Fluff Stuff).
- w) Cool design solutions (e.g., pouches instead of bottles by Algramo).

## 7 Circular Economy experts for your interviews

- **Kari Herlevi** ([kari.herlevi@sitra.fi](mailto:kari.herlevi@sitra.fi)), Head of Global Collaboration unit for sustainability solutions, Finnish Innovation Fund Sitra. A multi-skilled circular economy and sustainability expert, who has been a key player in Finland's journey to a circular economy. Kari is also a member of many international circular economy networks and institutions.
- **Mika Sulkinoja** ([mika.sulkinoja@sitra.fi](mailto:mika.sulkinoja@sitra.fi)), Senior Specialist, the Circular Economy, Finnish Innovation Fund Sitra. Mika has been leading the planning and organising of [the World Circular Economy Forum](#) and Sitra's other international work for many years. He has a solid understanding of circular economy trends and developments.
- **Tim Forslund** ([tim.forslund@sitra.fi](mailto:tim.forslund@sitra.fi)), Specialist, Sustainability Solutions, Finnish Innovation Fund Sitra. Tim is a visionary circular economy specialist who has lately focused on the potential of a circular economy to halt biodiversity loss.
- **Peter Munch-Madsen** ([peter.munch-madsen@nordicinnovation.org](mailto:peter.munch-madsen@nordicinnovation.org)), Senior Innovation Adviser, Circular Business Models, Nordic Innovation. Peter has 20 years of experience in global public affairs and business development from financial services, pharma and renewable energy.
- **Taina Nikula** ([taina.nikula@gov.fi](mailto:taina.nikula@gov.fi)), Senior counsellor, Ministry of the Environment, Finland. Taina has vast experience in creating and implementing national circular economy road maps, strategies and other policy measures in Finland.
- **Malena Sell-Mylyoja** ([malena.sell@formin.fi](mailto:malena.sell@formin.fi)), Specialist, Ministry for Foreign Affairs, Finland. She is a leading specialist in circular trade and foreign policies including the international trade regime.
- **Mira Jarkko** ([mira.jarkko@hel.fi](mailto:mira.jarkko@hel.fi)), Project Manager, Cluster programme for Circular Economy, City of Helsinki. As a representative of the city, Mira is working with companies, research institutes, universities and other organisations interested in developing the circular economy.
- **Kimmo Tiilikainen** ([kimmo.tiilikainen@gtk.fi](mailto:kimmo.tiilikainen@gtk.fi)), Director General, Geological Survey of Finland. Kimmo has previously acted e.g. as a minister of energy as well as a minister of environment. Combining environment and the economy is

one of his guidelines, key elements being sustainability and circular economy. He was one of the facilitators in the negotiations on adaptation to climate change when the Paris Rule Book was finalised.

## 8 The WCEF2023 and the circular economy in pictures

- The WCEF2023 logo and press photos are available at [Sitra's material bank](#).

## 9 Media contacts

### **The Finnish Innovation Fund Sitra**

Samuli Laita, [samuli.laita@sitra.fi](mailto:samuli.laita@sitra.fi), phone +358 40 536 8650

### **Nordic Innovation**

Lena Henriksson, [l.henriksson@nordicinnovation.org](mailto:l.henriksson@nordicinnovation.org), phone +47 91 138 654