

What Is A Circular Economy?

Here's why circular economy model is a better sustainable alternative

The Circular economy is an economic model that is based on making humanity self-sustainable through the following 3 principles:

1. **Eliminate** waste and pollution
2. **Circulate** products and materials
3. **Regenerate** nature

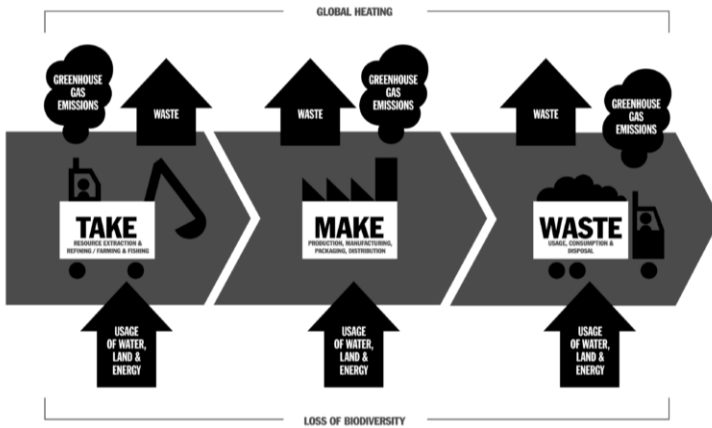
"Today we have economies that need to grow, whether or not they make us thrive. What we need are economies that make us thrive, whether or not they grow." — Kate Raworth, author of Doughnut Economics (2017)

Read further to find out more!

The Problem: Our Current System Is Unsustainable

Current society functions on a linear economy model. In this system, industries acquire and process raw materials into products, which are then used and simply discarded as waste.

This *'Take-Make-Waste'* economy rapidly exhausts Earth's limited resources, and accumulates harmful waste, as can be seen below

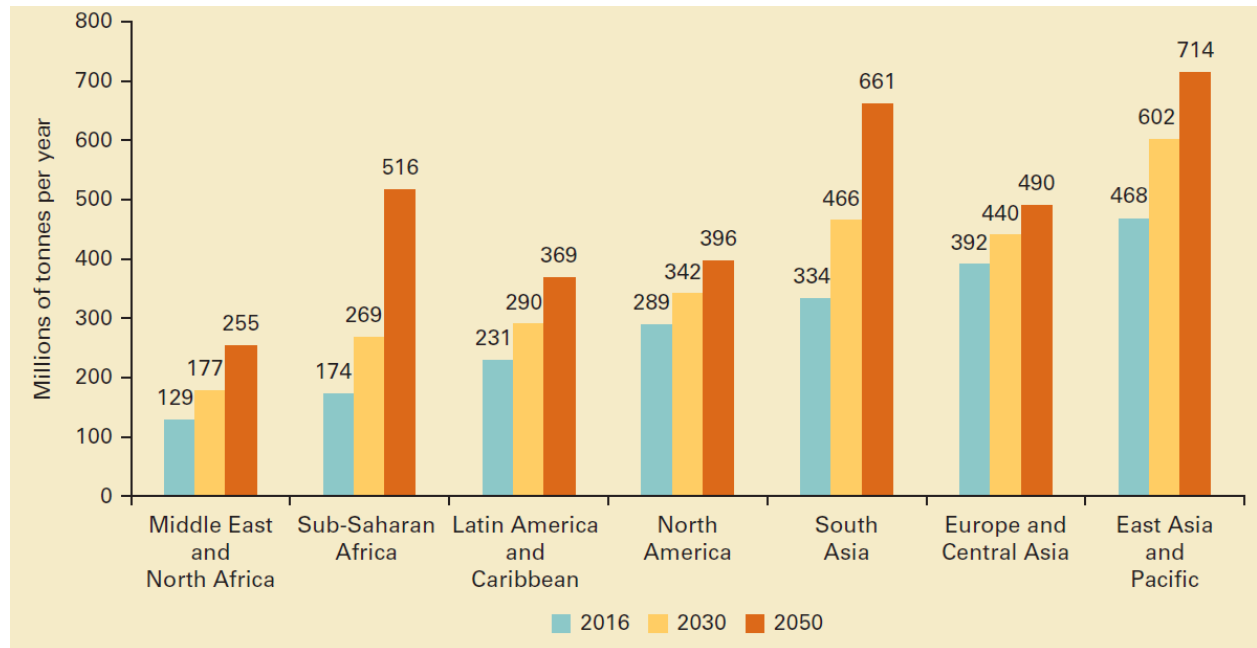


Why Is A Linear Economy Unsustainable?

Waste is the final destination in this system; the full stop. This accumulated trash poses a threat to our environment. Such types of waste are plastic waste, textile waste, food waste, computer waste, and construction waste, to name a few.

Each year, **over 2 billion tonnes of waste are added to our landfills**. If all this waste was loaded onto trucks, they would circle the globe twenty-four times.

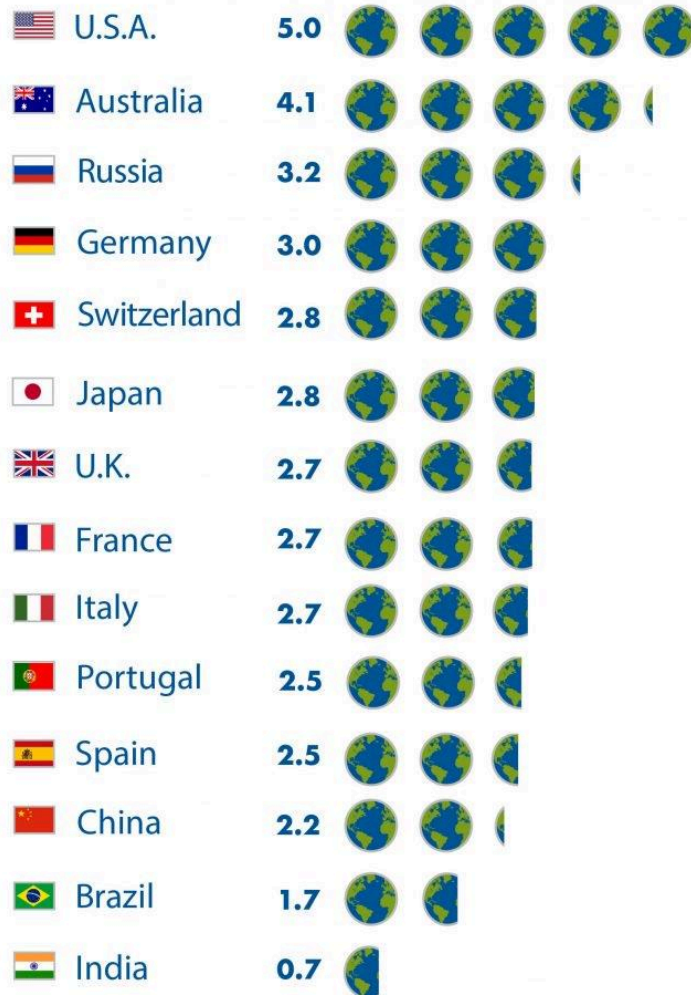
Meanwhile, **one-third of all food produced for human use is thrown away**, and **8 million tonnes of plastic** enters our oceans per year, due to a lack of plastic segregation and recycling .



As a consequence, this generates huge quantities of greenhouse gases such as carbon, methane, and nitrous oxide prior to reaching the consumer. In fact, the **extraction and processing of raw materials accounts for half of all global greenhouse gas emissions right now.**

In this process, water and land are also exploited, resulting in worrying rates of habitat and biodiversity loss. According to the Global Footprint Network, **humans are already consuming 75% more resources than the planet can tolerate.**

How many Earths do we need if the world's population lived like...



 World	1.75	 
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Source: Global Footprint Network National Footprint Accounts 2019



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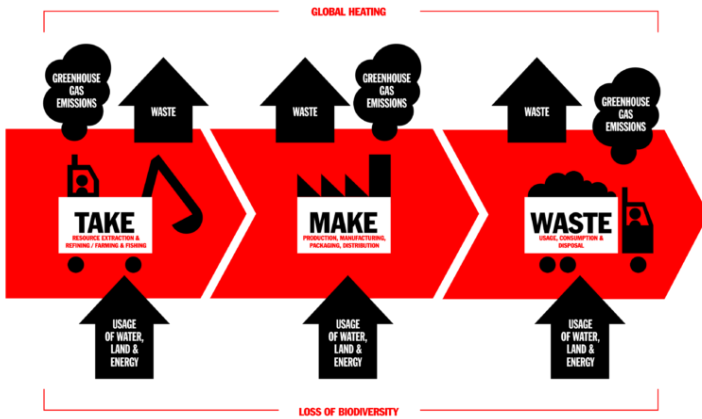
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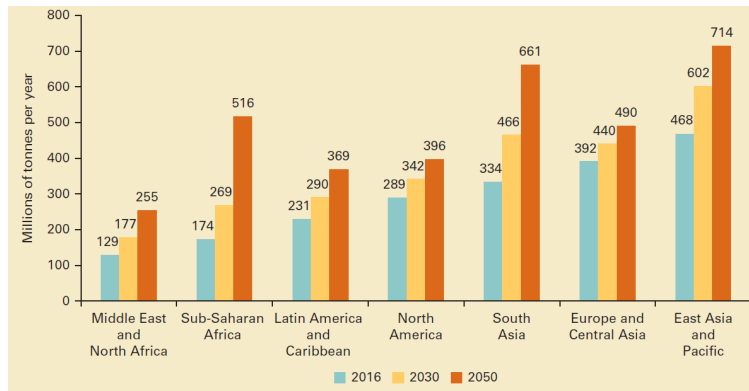


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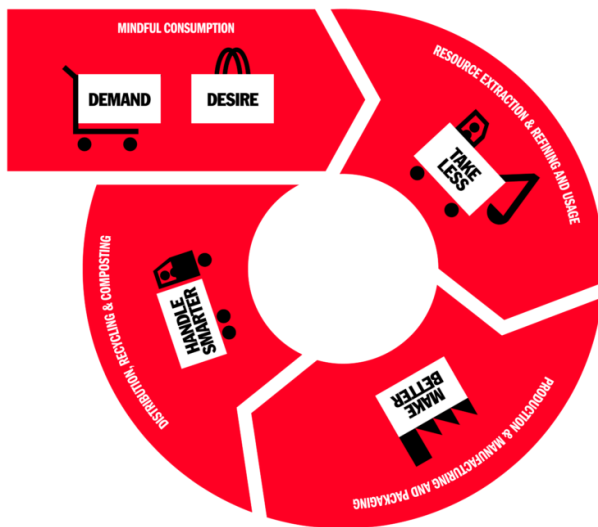


Circular Economy: A Way To Transform Our Flawed System

How can we turn our throwaway economy into one where waste is eliminated, resources are recycled, and nature is regenerated?

Circular economy equips us with the means to simultaneously combat climate change and biodiversity loss while meeting critical socioeconomic needs.

The system uses resources into a cycle as shown below,



This is a dynamic and complicated system that requires real transformation in practically every industry. To do this, we need to achieve the following three goals:

1. Eliminate waste and pollution



The problem (and the solution) starts with design.

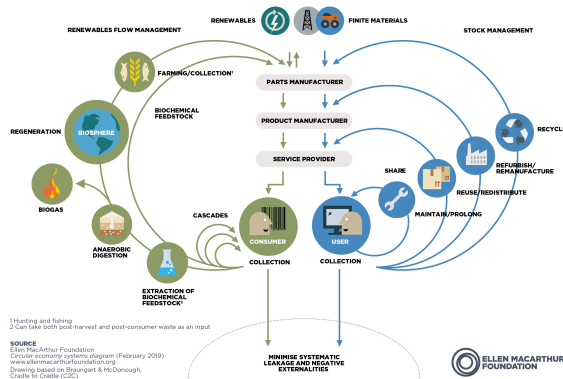
Everything around us has been designed, including the clothes we wear, the houses in which we live , and even the services that provide us with food and transportation. However, since the industrial revolution, a vast majority of objects have been constructed to correspond to the linear economy model, in which life cycles are brief and materials are practically difficult to recover.

In order to use waste as a resource rather than a source of pollution, we need to purposefully design materials in a way that they can be recycled and/or degraded.

"Designers today have an amazing opportunity to be part of building a restorative, regenerative future. A future where we can recover materials and feed them back into the economy." — Ellen MacArthur

By prioritising design, we can eliminate the concept of waste.

2. Circulate products and materials



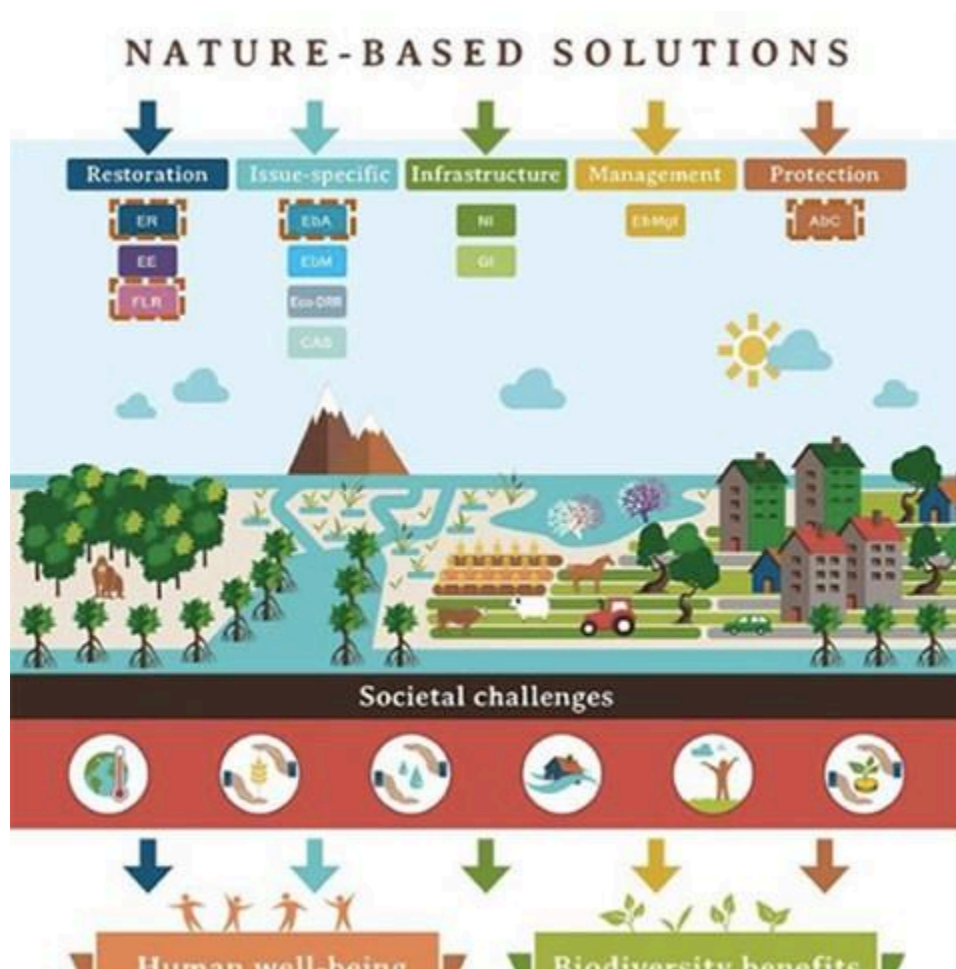
We must reuse anything and everything, circulating back into the cycle of manufacturing.

Materials should never be discarded, but reused. Every single product should be kept in use for as long as possible, and once its life ends, the components should be utilised as efficiently as possible

The best way to keep a product's value is to maintain its functionality, repair when needed, and keep using it as much as possible. For example, a phone is much more valuable as a gadget overall than its components. So, we need to take part in a cycle of maintenance, repair, and refurbishment.

When the product can no longer be used, its parts are recycled. Recycling is very important because it is the last step that keeps materials in the circular economy and keeps them from going to waste.

3. Regenerate nature



Restore Nature To Take Action On The Global Climate Crisis

Biodegradable materials cannot be reused. By composting or anaerobically digesting such organic materials, we can use their valuable nutrients, like nitrogen, phosphorus, potassium, and micronutrients, which can be used to help regenerate soil, so we can grow more food or renewable materials like cotton and wood.

By producing our food regeneratively, the focus is on improving soil health. Regenerative farming practices can significantly reduce greenhouse gas emissions from food production and waste.

Biodegradable products like clothes made of cotton or furniture made of wood, can go through both the technical cycle and the biological cycle. They can be kept up, used again, fixed, and sometimes even recycled; in the end, they can be put back into the biological cycle where they came from. If they are composted or broken down without air, they can feed the soil so that it can grow new cotton or wood.

Through keeping products and materials in use, less land is required for sourcing virgin raw materials, e.g. from mines. If we gradually decouple economic activity from material extraction by keeping materials in circulation after use, more and more land can be returned to nature for reforestation.

Conclusion

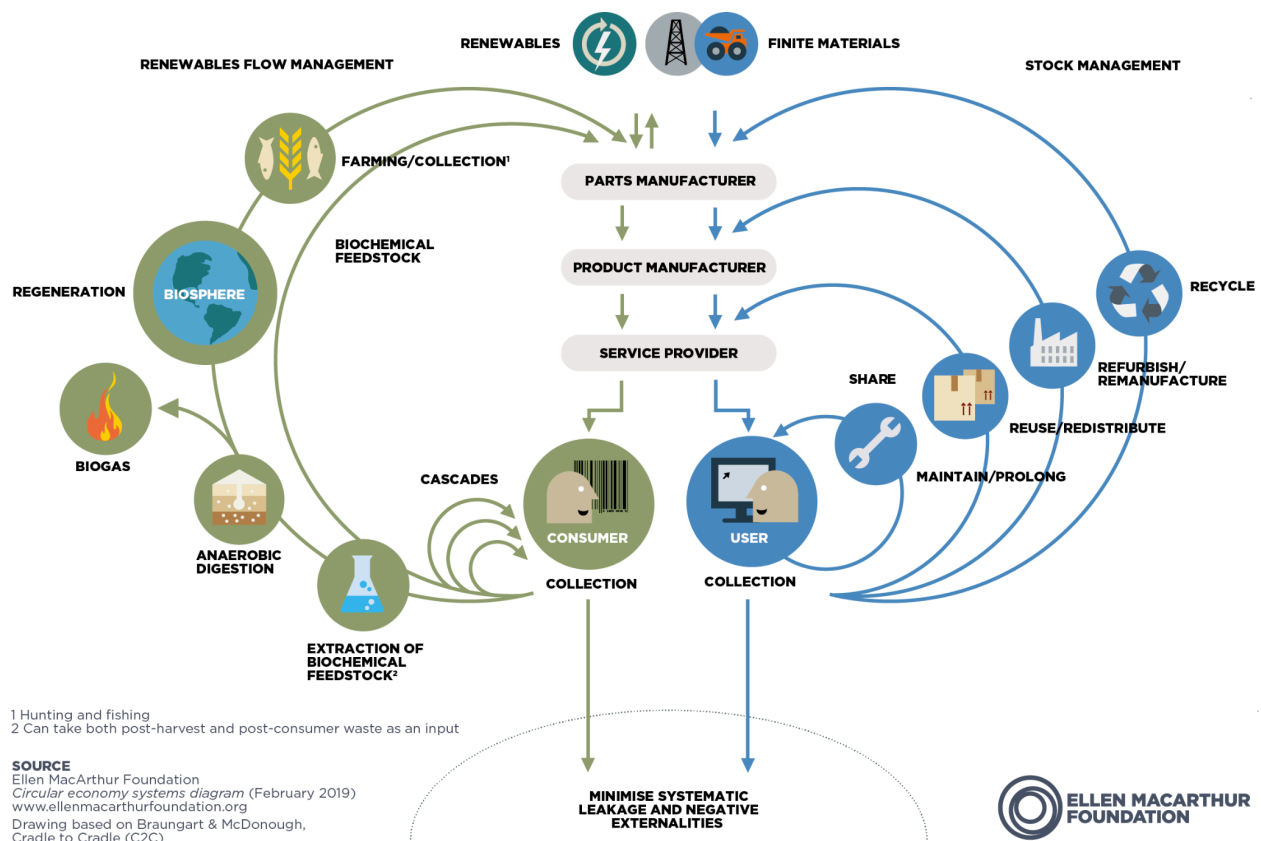
This is how we can achieve a circular economy which will

- Stop global warming
- Conserve biodiversity
- End the climate crisis

References

- “Towards The Circular Economy” – Journal Of Industrial Ecology
- “Circular Economy” – UNEP

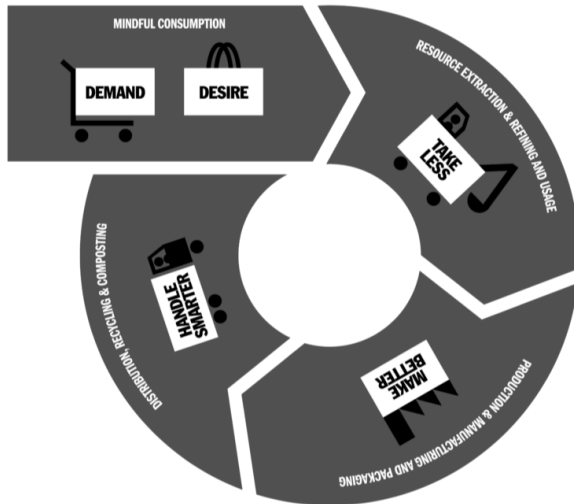
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