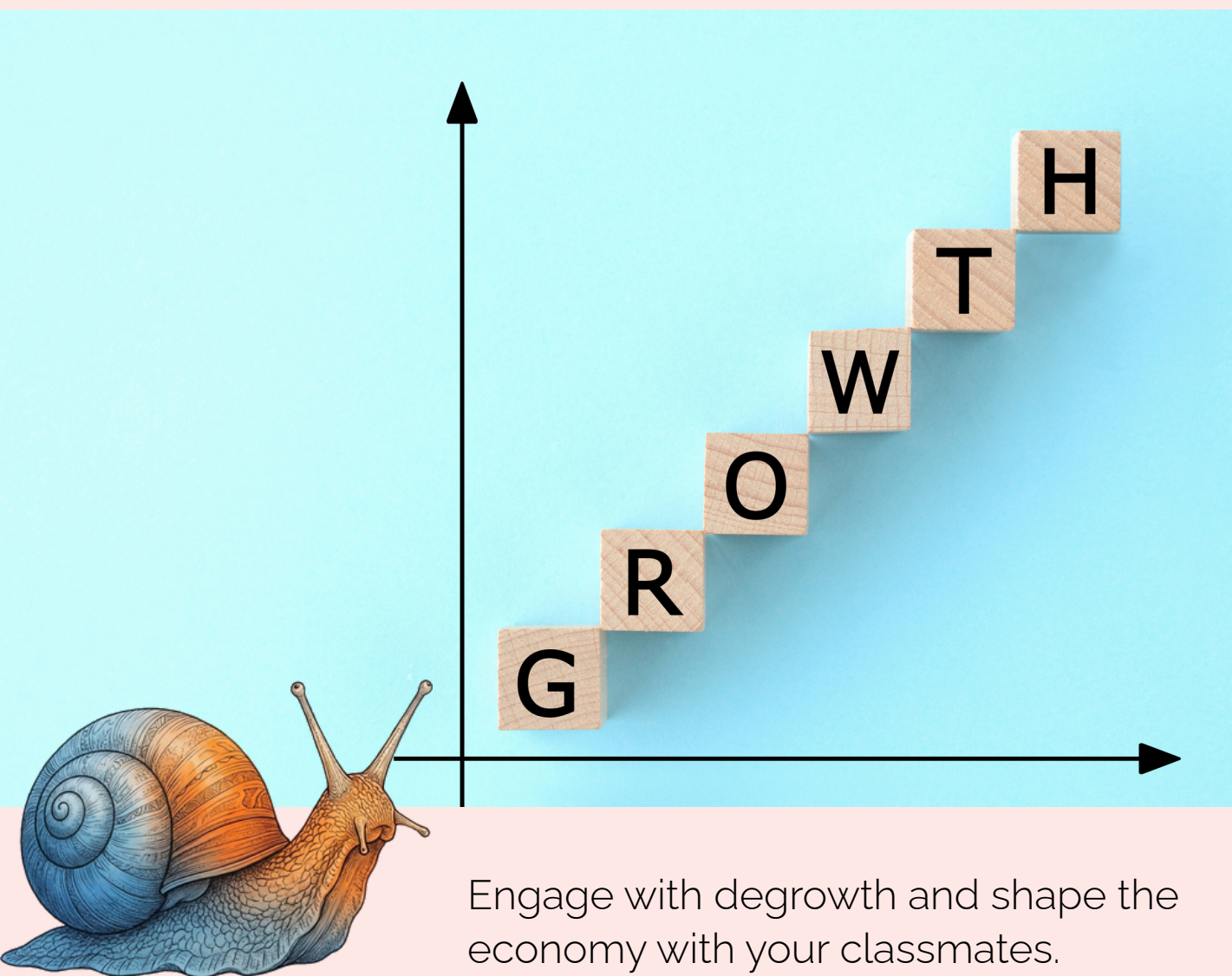


Exploring Degrowth



Engage with degrowth and shape the economy with your classmates.

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The purpose of these educational materials is to help young people understand the climate crisis on a systems level through engaging with the topics and foster agency through the skills and techniques of journalism.

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We cannot be held liable for how these materials are used in practice.

These educational resources have been developed to the best of our knowledge, using reliable and widely-recognised sources. While every effort has been made to ensure accuracy and clarity, we cannot guarantee that the materials are free from errors or omissions. Climate change is a field of knowledge that continues to evolve, and teachers and learners are encouraged to consult up-to-date scientific sources (e.g. IPCC, IPBES or national agencies) to complement and enrich these activities.

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Learning objectives

1. Understand what GDP measures and explain its limitations in relation to wellbeing, inequality, and environmental sustainability.
2. Explain the concepts of relative and absolute decoupling, and evaluate the debate between green growth and degrowth using evidence.
3. Assess how different economic pathways (grow, shrink, transform) could operate within planetary boundaries.

✓ GreenComp alignment:

- Systems thinking
- Critical thinking
- Supporting fairness

Unit guide

This unit works well after Doughnut Economics, so that students can compare the two economic approaches. We strongly encourage you to pair this unit up with the Green Extractivism one.

Begin with the “Growth on a finite planet?” opening activity to get students to think about the feasibility and desirability of economic growth, and for you to see where the group stands. You should end the session with the same activity, to get students to reflect on whether they've changed their minds. The 'Learn: Exploring Degrowth' section should be completed before moving to the 'Shrink - Transform - Grow' activity. You can either deliver the Learn section to your students, assign it as home reading, or read it together in the classroom. Make sure to check the 'Shrink - Transform - Grow' activity in advance, as it requires a bit of preparation prior to the lesson.





1. Why growth matters: the finite planet

1.1 What is GDP?

Economic growth is an increase in a country's production of goods and services in a given period.

Economic growth is measured through Gross Domestic Product or GDP.

Gross Domestic Product (GDP) is a measure of the total market value of all the final goods and services produced in a country in a given period, often annually.

GDP growth then means more production, and thereby more consumption of goods and services. In most economies today, continuous growth is expected and seen as necessary. Governments aim to increase GDP every year, linking it to progress, jobs, and better living standards.

Instructions for educators: Ask students the following questions, then provide some insights for each of the questions:

- **Does cleaning up after an oil spill increase GDP?**

Answer: Yes, it does! Any activity is accounted for in GDP – whether it's beneficial for people and/or the planet or not – as long as it is monetized, or paid for.

GDP was designed to measure the value at which something is sold, and not its social benefits. GDP doesn't differentiate between which sectors of the economy should grow and which sectors should shrink.¹

- **Do unpaid activities like care work count for GDP?**

No, they don't. Again, activity is accounted for in GDP – whether it's beneficial for people and/or the planet or not – only as long as it is monetized, or paid for.

If your health improves as a result of doing more exercise with your friends, that's not counted for in GDP. If you volunteer at your local community center and organise a meal for people in your neighborhood, that's not counted for in GDP either.

All the meals that your parents cook for the family are not accounted for in GDP, although they fuel the whole family to be able to conduct your daily activities and do your work.

- **Is inequality accounted for in GDP?**

No, it's not, and we live in a society that is deeply unequal: according to the 2026 World Inequality Report, the wealthiest 10% own 75% of global wealth, while the bottom 50% own only 2%.²

And due to these socio-economic inequalities, a bigger pie (GDP increasing) does not mean bigger slices for everyone. It instead usually means just a few big slices, continuing to grow, distributed among only the wealthiest.³





1.2 GDP and wellbeing

Does increasing GDP automatically translate into increased social wellbeing?

Since WWII, economic growth has become synonymous with progress and development, and therefore most governments' main goal. We assume that a country and its population will do better if the economy grows (measured by GDP).⁴

But is this always the case?

Studies show that, after a certain level of GDP per capita (which most Global North countries reached in the 1970-80s) the quality of life in fact stagnates or even starts to decline despite an increasing GDP.⁵

This is referred to as the **Easterlin Paradox**. The paradox observes that while, at a given point in time, individuals with higher incomes tend to report greater happiness, over extended periods, increases in a country's average income do not necessarily correlate with increased average happiness among its citizens.⁷

In other words, beyond a certain income threshold, the increases in happiness from additional income diminish.

This does not mean that income doesn't matter. For people living in poverty, higher income strongly improves wellbeing. The Easterlin Paradox mainly applies once basic needs are already met.

Instructions for educators: Ask students what else might matter for happiness besides income, once basic needs are met?

Answers could be: free time, health, relationships, a healthy environment, equality, strong democracy, strong social protection.

1.3 The embedded economy

Over the past 200 years, the global economy has increased dramatically, especially since the Industrial Revolution. This growth has been accompanied by major improvements in life expectancy, education, and technology. However, this growth has also led to increased resource extraction, fossil fuel use, and environmental degradation all around the world.

Planetary boundaries show the impact of human activity on natural systems. All 9 planetary boundaries mapped out are impacted by human activity, meaning that we are putting pressure on Earth's life-support systems. Among the 9 planetary boundaries mapped out, research shows that we have now crossed 7 of them.⁶

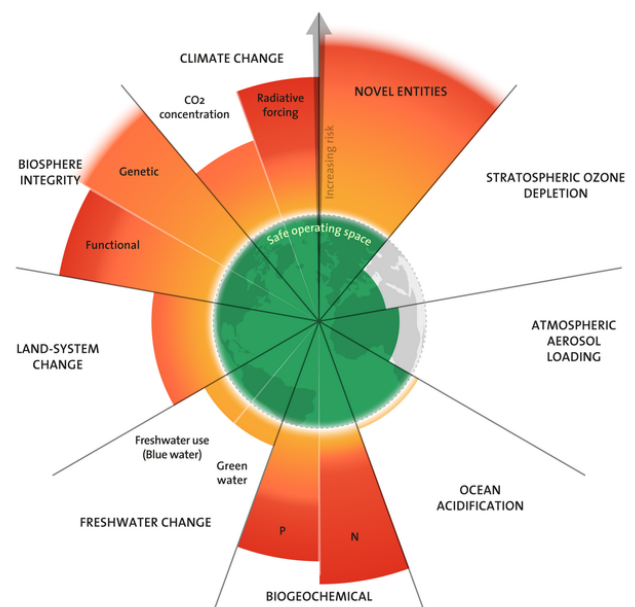


Figure 1: Azote for Stockholm Resilience Centre, based on analysis in Sakschewski and Caesar et al. 2025.



Global material consumption is also growing across all categories of materials.

Instructions for educators: Ask your students to analyse the chart below:

- What do you notice? What is increasing?
- What might be driving this?

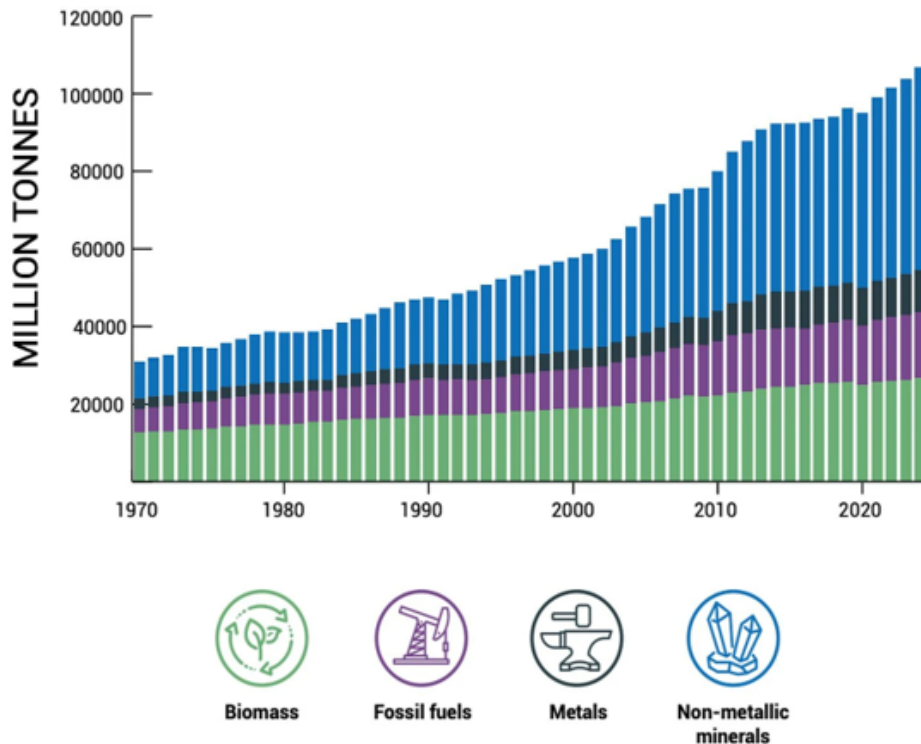


Figure 2: Global Resources Outlook 2024. | UNEP - UN Environment Programme.

Global material consumption is growing across all categories of materials.

The economy is part of society, which is part of nature.



In mainstream economics, the economy is often represented as a circular flow between households and firms, with money and goods flowing between them. Nature is often shown as outside this model or treated as an “external factor”.

In ecological economics, the economy is seen as embedded within society, which itself is embedded within the natural world. This means the economy depends on natural resources and ecosystems, and cannot expand beyond ecological limits.

What does this graph tell us?

Growth means increased production, which, as you can see, has been historically linked to increased resource use and energy. That means social and environmental impact, that we will further explore in the next section.

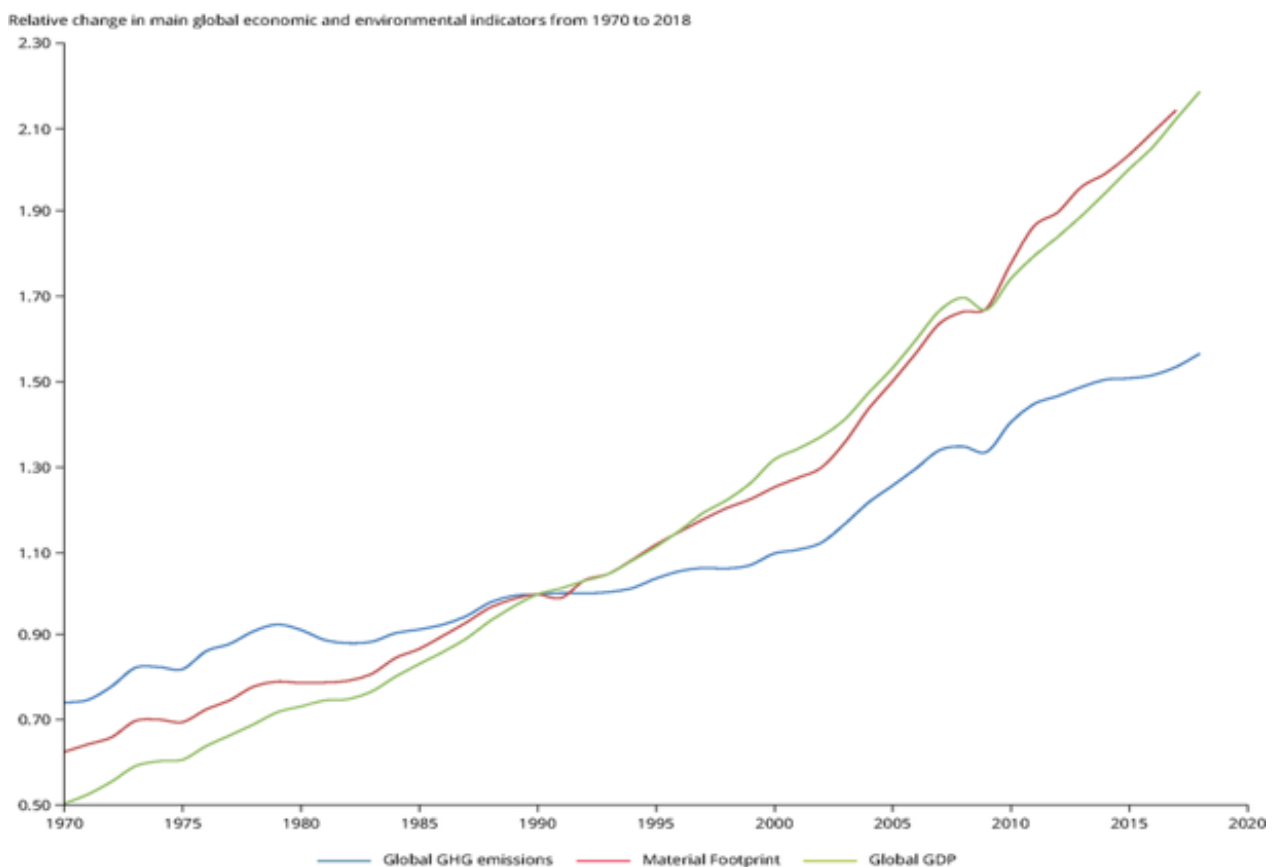


Figure 3: Relative change in main global economic and environmental indicators from 1970 to 2018. While greenhouse gas emissions have relatively decoupled, the material footprint is tightly linked to GDP. Source: [EEA, 2021](#).



2. Green growth vs. Degrowth debate

2.1 Decoupling growth from its environmental pressure

Now that you're familiar with what economic growth or GDP growth is, and what the environmental impact of GDP growth is, you should be better equipped to make up your own mind on the green growth vs degrowth debate.

Green growth proponents argue that we can decouple environmental pressure from economic growth through producing more goods and services at a lower environmental cost.⁷

What does this mean?

Decoupling refers in general to one variable going up, whilst the other goes down. In an ideal scenario, GDP would go up and environmental pressures would go down.

Environmental pressure relates to all the consequences that economic activity has on the environment.

Environmental pressure can be split into two categories:⁸

1. **Resource use:** resources extracted from the environment to produce a good or a service. Resources can be: materials, land, water, energy.

2. **Environmental impacts:** harm to the environment in the process of producing a good or a service.

Environmental impacts can be: greenhouse gas emissions such as carbon dioxide (CO₂) emissions, plastic waste pollution in ecosystems, pollutants affecting human health, loss of biodiversity.

Resource use and environmental impacts are linked. For example, an increase in land use (resource) for large-scale agriculture can lead to loss of biodiversity (environmental impact).

Two decoupling scenarios may happen between economic growth and environmental pressures (here, we'll take resource use as an example):

The first decoupling scenario is **relative decoupling**. Relative decoupling occurs when both increase, but resources use increases less than GDP per capita (Figure 4). This means that resource use grew relatively less than the economy (but they both increased).

Relative decoupling

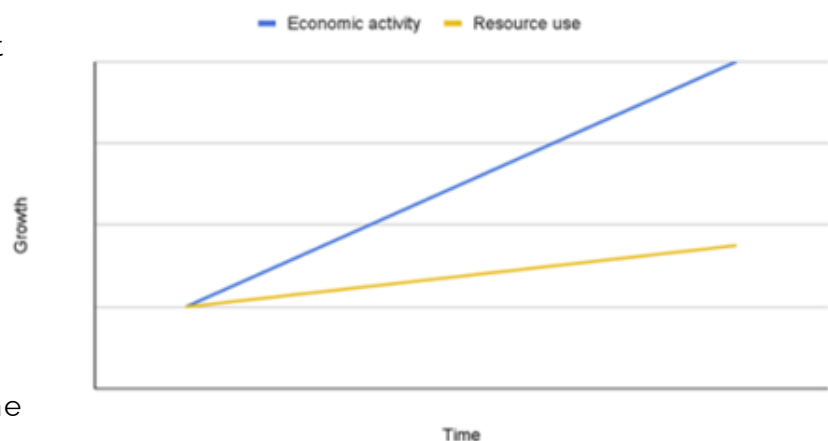


Figure 4 : A visual representation of relative decoupling. Source: [beeco](#).



The second decoupling scenario is **absolute decoupling**. Absolute decoupling occurs when GDP per capita increases, whilst resource use decreases.

In this situation, the economy grows without an increase in resource use compared to the previous year. This doesn't mean that resource use is at 0, resources are still being used, but the volume has decreased compared to the previous year (Figure 5).

Absolute decoupling

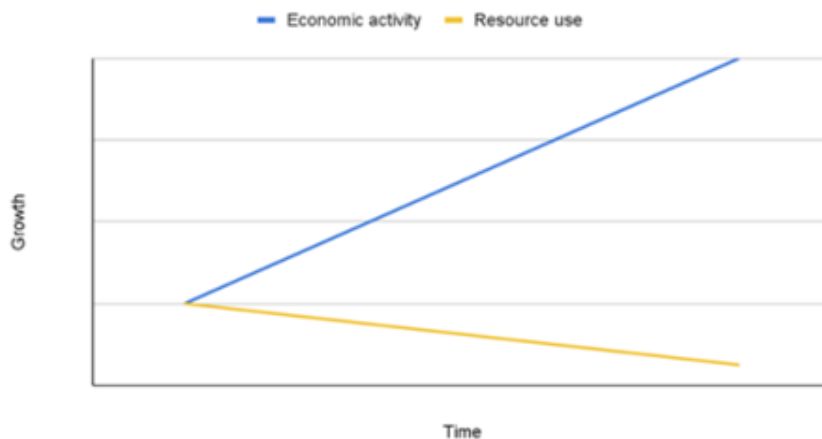


Figure 5 : A visual representation of absolute decoupling.
Source: [beeco](#).

Why are we talking about decoupling?

As a reminder from the start of this section, green growth contends that we can decouple environmental pressure from economic growth.⁹ So green growth proponents argue that the economy can continue to grow while we decrease resource use and CO₂ emissions at the same time.

Here comes **degrowth**. Degrowth is a school of thought which argues that in high-income countries, reducing overall energy and resource use is necessary to remain within planetary boundaries.

Supporters of green growth, on the other hand, argue that technological innovation and renewable energy can allow economies to grow while reducing environmental impact.

The evidence suggests that absolute decoupling at a global scale has not occurred at the speed or scale required to meet international climate targets. Long-term examples of GDP growing while emissions or resource use decline significantly and sustainably are rare. Some industrialized countries have reduced territorial CO₂ emissions while growing GDP. However, when emissions from imported goods are included (consumption-based emissions), reductions are weaker. The authors of the study conclude that the reductions observed so far are not large or fast enough to meet ambitious climate targets.¹⁰



2.2 What is degrowth about?

For degrowth, societies should not focus on economic growth for its own sake, but on improving people's lives and protecting the environment.

Degrowth argues that the main goal of the economic system should not be growth as measured by GDP. Degrowth suggests that energy and resource use in Global North countries should be reduced, to bring the economy back into equilibrium with planetary boundaries, by shrinking those industries that people consider to not be beneficial for their wellbeing or for the environment.

Principles of Degrowth

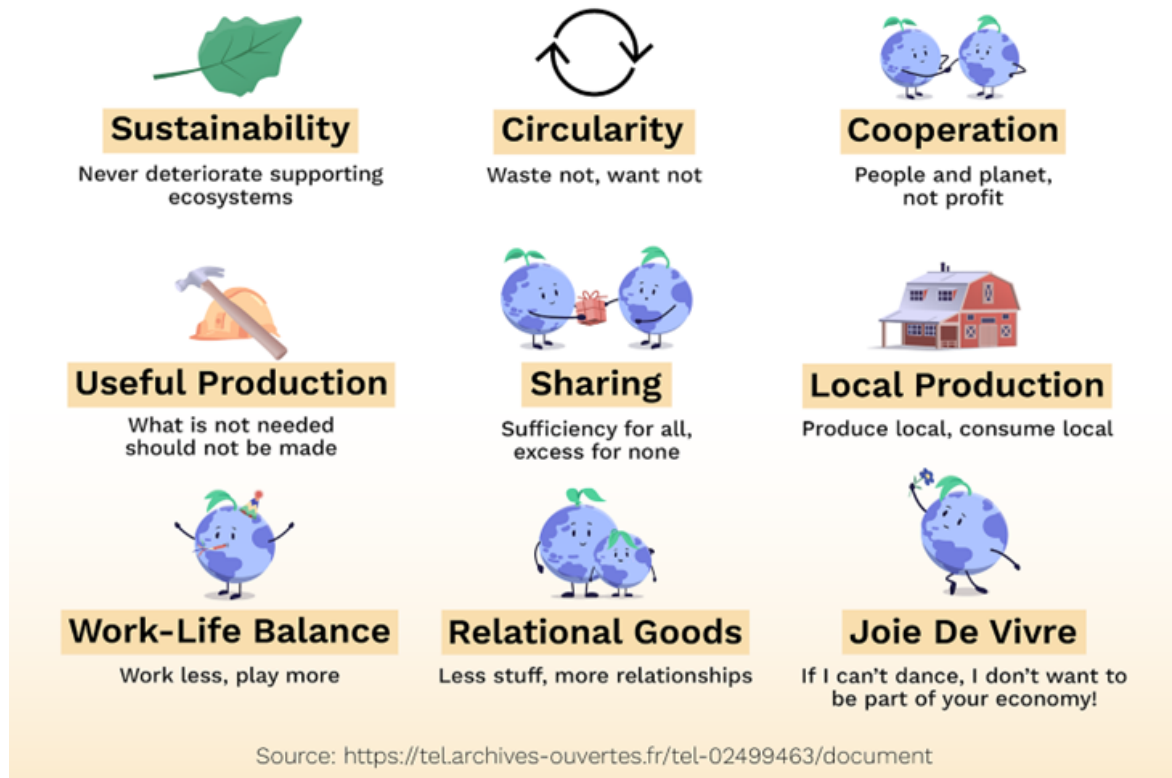


Figure 6: The Principles of Degrowth. Source: [Arellano, J.P.¹](#)

Instructions for educators: Ask your students:

- Which of these principles put forward by degrowth speak to you?
- Which of the principles illustrated here is made difficult in our current economy?



Degrowth is specifically aimed at reducing excess energy and resource consumption in Global North countries as "the vast majority of ecological breakdown is being driven by excess consumption in the global North".¹¹

Many countries in the Global South still need to increase their use of energy and resources in order to meet their populations' needs.¹² Supporters of degrowth argue that if high-income countries reduced their consumption, lower-income countries would have more freedom to use their resources to improve living standards for their own populations.¹³

But let's look more closely at green growth arguments as to how we could decouple economic growth from environmental pressures, and what degrowth has to say about it. Green growth is confident that absolute decoupling can be achieved.

How? Through renewable energy and efficiency improvements.

2.3 Renewable energy and critical minerals

Renewable energy technology requires a lot of **rare earth minerals**, which have been named 'critical minerals' because of their role in the energy transition and modern technology.

The demand for critical minerals is surging in the context of an accelerated energy transition, which is needed if we want to meet our climate targets as set in the Paris Agreement. According to the International Energy Agency, to meet the climate goals set in the Paris Agreement by 2040, mineral demand would rise by a minimum of four times compared with 2020.¹⁴

Currently, the extraction, production and end-of-life disposal of the minerals required by renewable energy technologies has important social and environmental impacts on populations and places where these operations take place.

For more insights into the environmental justice aspects of renewable energy, please see the [EYES Green Extractivism Unit](#).





2.4 Efficiency improvements

Another way in which green growth contends that decoupling can be achieved is through efficiency improvements.

Efficiency refers to a process which can achieve the largest amount of results using as little energy, fuel, effort, etc. as possible (Cambridge Dictionary).

For instance, retrofitting buildings to make them energy-efficient so that they do not lose heat during cold periods, or trap heat during warm periods. Similarly, household appliances have very much improved in terms of energy consumption over the last years.

Efficiency improvements seek to reduce CO₂ emissions, but also to reduce the scale of the global energy demand to make a rapid and just transition to renewable energy possible.

Will simply improving energy efficiency reduce energy consumption at a global scale enough to tackle the climate crisis?

Imagine someone buys a freezer which is energy efficient, so doesn't use a lot of electricity. If as a result of the energy and money they save, they decide to get a second freezer to store even more ice-cream than they already do in their first freezer, the energy that was saved on the first energy-efficient freezer is offset by having a second freezer. With the money saved, the person could of course have done something else than buying a second freezer - like buying a bike, or nothing at all.

However, what we notice at the level of national economies framed around the pursuit of economic growth - as Global North economies are - it is more likely that the second freezer will be bought than not.¹⁵

Paradoxically, at a systems level, energy efficiency does not always lead to a reduction of energy demand, but rather can lead to an increase in energy demand, because companies use the achieved efficiency gains to produce more goods and services at the same costs.

This paradoxical increase in energy demand at a systems level despite energy efficiency gains is referred to in economics as the **rebound effect**, or the **Jevons Paradox**. Increased energy (and material) efficiency does not automatically decrease but often increases energy (and material) use.

This is why degrowthers think that simply improving efficiency won't address the issue of increasing environmental pressures coming from GDP growth. Yes, improving efficiency is important, but we can't rely on it heavily to decrease CO₂ emissions as fast and as much as we need to avoid the worst effects of climate change.

Degrowth proposes that while we work on improving energy efficiency, we should also ask ourselves - how much energy use is sufficient for everyone to lead a comfortable life? Which sectors are beneficial for us, and we should grow, and which aren't, and therefore we could shrink?



Small group discussion (10 min)

Pair students up randomly. Ask each pair to discuss:
Which pathway sounds more:

- evidence-based?
- just?
- fun?

3. From excess to sufficiency

While green growth proponents argue that increases in energy sufficiency and investing in renewable energy will be sufficient to tackle the climate crisis, degrowth has a different view. Degrowth emphasises a reduction in excess use of energy where it does not contribute to people's wellbeing, or to preserving nature, alongside the transition to renewable energy.

Degrowth asks: how much energy do we need to have a good and comfortable life? What does leading a good and comfortable life even mean for a given community? And at what levels, increasing energy use no longer contributes to wellbeing?

To achieve an energy transition fast enough as well as to reduce the adverse social and environmental impacts associated with critical mineral mining and large-scale renewable energy deployment, it is very important to reduce excess energy demand.¹⁶

As mentioned, one key way to reduce the energy demand as well as CO₂ emissions is through energy efficiency improvements. In addition to their potential to reduce CO₂ emissions, energy efficiency improvements can also reduce people's energy bills when so many people experience energy poverty.

Governments can mandate energy efficiency improvements through laws and policies, as well as support their implementation through direct investment, whilst companies developing technologies for energy efficiency improvements can actively share their knowledge to contribute to a global effort to reduce total energy demand.



Degrowth also promotes a vision of energy sufficiency where people's real needs are met through public services, guaranteed jobs, well-insulated homes, accessible public transport, nutritious organic food, and shorter working hours, rather than ever expanding production, consumption and waste.

The degrowth vision invites us to examine the relationship between energy use and human wellbeing, and makes it possible to account for, and hopefully balance, the extreme inequalities in energy use across the world.

This transition would mean freeing up resources and carbon emissions currently used for unnecessary growth, especially by the world's wealthiest individuals and countries, and redirecting them toward global equity and care, to maximise wellbeing of the general public.

In this view, it is those who consume the most who would have to change their lifestyles the most, not only because they have the greatest responsibility, but also because they have the room to do so without reducing their quality of life.

4. **Reimagining the future starts with you**

The climate and ecological crises can often feel overwhelming - as though there is nothing we can do about them. This might be especially the case when we look at how deeply the environmental crises are tied to our economic system - which, in turn, seems impossible to change. But it's important to remember: this system was made by people, and it can be changed by people. That includes you.

Change can be scary. However, changing the economic system could also mean rethinking what we value. It could mean ensuring that there is space for things that truly matter: clean air, strong communities and ecosystems, high quality education and healthcare, meaningful work, more free time to pursue our hobbies and enjoy life, and a future that's liveable for everyone.

Whether you are a student, journalist, artist, electrician, farmer, scientist, activist, or educator: your voice matters. By questioning what we've been told is 'normal', by sharing stories of resistance and possibility, and by imagining a better way forward, you are already part of the change.

Growth on a finite planet?

(10 minute activity)

Instructions for educators: Repeat the activity from the start of the lesson. For each of the following questions, ask students to stand up if their answer has changed since the start of the lesson, and remain seated if their answer hasn't changed since the start.

- Is infinite economic growth possible?
- Is infinite economic growth desirable?

Leave space for a short reflection, by asking students what made them change their mind (for those who did).



GROW - SHRINK - TRANSFORM

Students get into groups of 3-5, each group receives a poster divided into 3 columns, with the following headers: Grow, Shrink, Transform. The activity also requires post-it notes, but it can also be done using pen or pencil directly on the poster if post-its are unavailable.

The prompt for the activity is:

We are in 2050... we live in a society where citizens have a say in how the economy is organized, to ensure everyone's wellbeing, whilst staying within planetary boundaries.

How do we organise the economy to take care of our communities and the environment? Place your post-its on your poster in the appropriate column, depending on whether you think each sector should:

- Grow
- Shrink
- Transform

Once you have distributed the sectors within different columns, get into the details:

- How would each sector be organized differently?
- Who would be impacted? How to ensure those people's needs are still met?
- How would a day in such a future look like?
- What would be lost compared to today's world, and what would be gained?

Discuss as a team for around 20 minutes and try to reach a common vision. Remember, the goal you should achieve is collective wellbeing within planetary boundaries.





Half of the groups works on the following sectors:

- Renewable energy
- Fast fashion
- Public transport
- Pedestrian infrastructure
- Festivals and cultural events
- Organic farming
- Advertising
- City breaks by plane
- Urban green spaces
- Large-scale intensive farming
- Medical services and public health
- SUVs
- Protection and restoration of ecosystems

The other half of the groups works on the following sectors:

- More participation in decision-making that affects your community
- Synthetic fertilizers and pesticides
- Art and museums
- Food delivery
- Planned obsolescence
- Home insulation
- Electric vehicles
- Bicycle lanes
- Carbonated drinks and ultra-processed foods
- Repair and reuse workshops
- Local farmers' markets
- Education
- Tourism



After around 20 minutes, each group reports to the rest of the class and the teacher:

- How did it feel to make decisions about the economy?
- Are you familiar with such a practice? Why, why not?
- What was one sector it was easy to agree on, and one sector where you had disagreements? Why?

Instructions for educators: At the end of the session on degrowth, add a short reflective writing prompt:

"In 200 words, explain which pathway (green growth or degrowth) you currently find more convincing and why."



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