



Economic growth and natural resource use *Breaking-up with 'Business as Usual'*

Natural resources are at the foundation of our socioeconomic systems. Consequently, natural resources are at the core of all our development needs. We rely on natural resources for the goods, services and infrastructure required for sustained, inclusive and sustainable economic growth. We rely on natural resources to provide employment and decent work. Sustainable Development Goal (SDG) target 8.4 “decoupling economic growth from environmental degradation, in accordance with the 10YFP” is evidence of a call to change current unsustainable dynamics. SDG target 8.4 introduces the notion of decoupling, calling attention to the need to increase human wellbeing and decrease environmental pressures and impacts as fundamental components of economic growth. So far, both indicators under target 8.4 – material footprint and domestic material consumption – are continuing to rise at the global level. Yet within SDG target 8.4 lies an inherent assumption that a new economic model is possible.

Breaking Up With 'Business as Usual'

It is a relationship as old as time. Economic growth and natural resource use have gone hand in hand for the entirety of humanity’s history. This is an ‘old couple’ that has existed for so long, imagining a different configuration might almost seem impossible. How can a nation possibly be prosperous without the depletion of the globe’s natural resources?

Economic growth and social development require the production of goods and services – and this unavoidably requires the use of natural resources. Over the past five decades, the global population has doubled while global Gross Domestic Product (GDP) has grown fourfold, requiring large and increasing amounts of natural resources to fuel economic development. The use of natural resources has more than tripled, with increasingly negative impacts on human health and the environment (IRP, 2019).



Figure 1: Trends associated with resource use 1970-2017 (IRP, 2019)

To illustrate these dynamics from a different perspective, in 2018 the world reached Earth Overshoot Day on the 1st of August¹, earlier than any time before. That is to say that for the final five months of the

¹ Created by the Global Footprint Network the [Earth Overshoot Day](#) estimates the point in the year when humanity has consumed more natural resources and created more waste than Earth can replace or safely absorb in a year. It estimates Earth’s total biocapacity by estimating the productive land and sea area, grazing land, cropland and fishing grounds expressed in global hectares.



year we overdraw natural resources and that it would take 1.7 Earths to supply the resources needed to sustain our annual global needs.

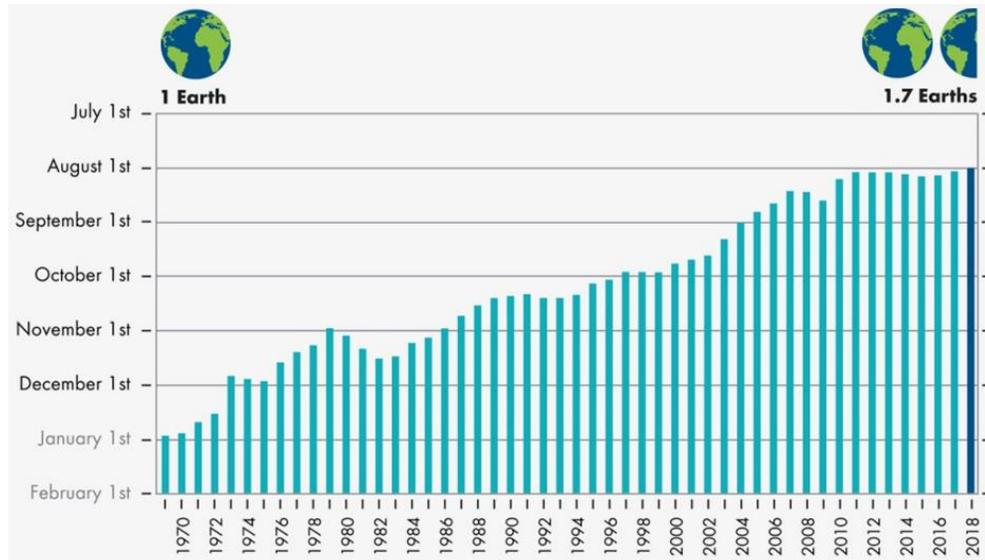


Figure 2: Earth Overshoot Day 1969-2018 (Global Footprint Network, 2018)

This is clearly beyond the limits of the Earth’s capacity and very far from achieving the target on sustainable management and efficient use of natural resources by 2030 (SDG target 12.2 and 8.4). These trends highlight the shortcomings of the ‘old couple,’ our current economic model. There is a dangerous assumption at the heart of the relationship: that an endless supply of materials that are extracted, processed, and disposed of as waste or emissions are the only path to increased economic growth and human well-being. The traditional model requires a never-ending and ever-increasing use of natural resources, jeopardising our collective socioeconomic growth and development. The old relationship needs to be broken.

The Cost of Inaction

In the absence of urgent and concerted action and rapid growth, the use of natural resources will continue to grow unsustainably. According to the International Resource Panel’s (IRP) Global Resource Outlook, under current ‘business as usual’ trends, GDP will continue to grow at an average rate of 2.2% per year to reach 216 trillion USD by 2060. This would require a 110% increase in global resource extraction (190 billion tonnes), and an increase in greenhouse gas (GHG) emissions by 43% (70GT CO₂e).

However, if measures were taken to improve resource efficiency and complemented by well-designed and concerted sustainability actions, the IRP projects a substantial opportunity for sustained economic prosperity while remaining within our planetary boundaries. Net economic benefits indicate a global GDP 8 per cent above Historical Trends, reaching 233 trillion USD by 2060, and including a more equal distribution of GDP per capita. This comes with a 25% reduction in global resource extraction to 143 billion tonnes, which contributes to a 90% decrease in GHG emissions to 4.8GT CO₂e (IRP, 2019).

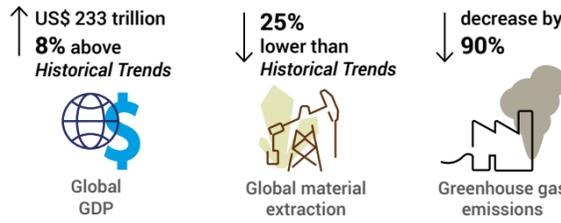


Figure 3: Decoupling potential as projected by the IRP's Sustainability Scenario Model (IRP, 2019)

Assuming a 25% reduction in resource extraction as a basis to ensure future socio-economic development, sectors that are notably resource intensive can seem particularly relevant as effective entry points². For example, on average, the sectors of agriculture, food and construction, accounted for nearly 70% of the world's total material footprint³ in 2015 (SCP-HAT, 2019). Changing the way in which we produce and consume food, or the way in which we build, are potential game changers that can significantly contribute to decoupling.

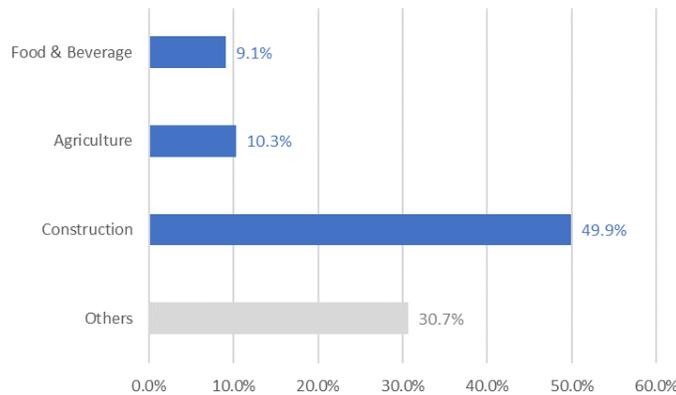


Figure 4: Global material footprint per economic sector as percentage share of the 2015 total (SCP-HAT, 2019)

Decoupling economic growth from natural resource use

Decoupling, in its simplest form, is precisely breaking the link between natural resource use and environmental impacts from increased economic activity and human well-being. This is to say that a new relationship must be forged where improved human well-being and increased economic activity are achieved while simultaneously mitigating natural resource depletion. As such, decoupling is an essential element in the transition to a sustainable future and to achieving the SDGs.

² In this case, a 25% decrease is not a target but an outcome of the IRP's Sustainability Scenario model. Integrated planning from a systems perspective is needed, sectors are only indicated as possible entry points, implicating that attention should be placed to burden shift between industries.

³ Material footprint attributes all resources mobilized globally to the final consumer (IRP, 2019).

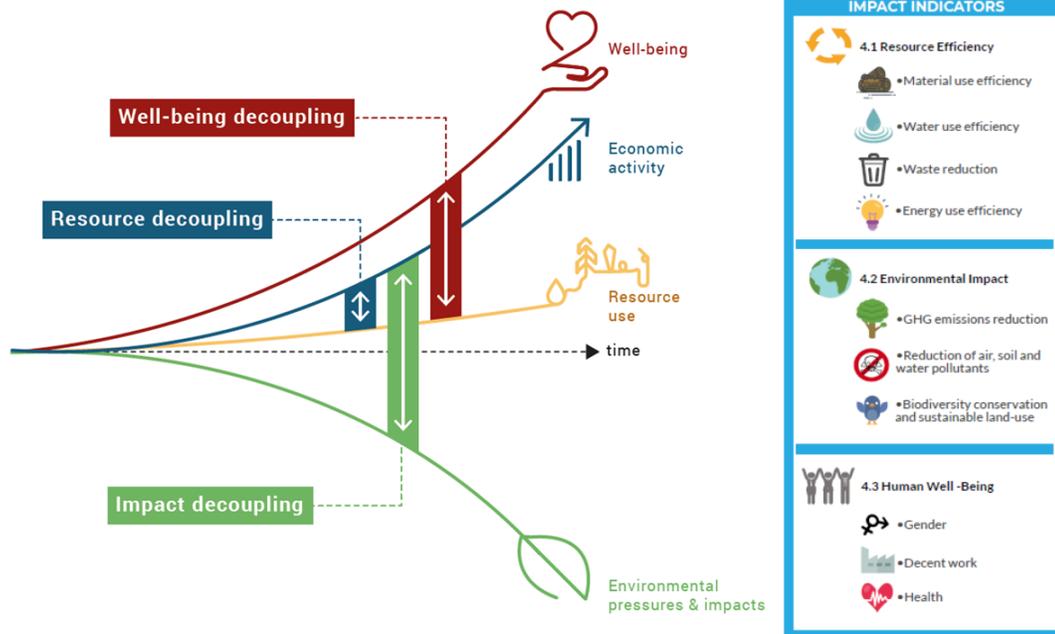


Figure 4: The decoupling concept (IRP, 2019) and the SCP impact indicators (One Planet network, 2017)

Improving the well-being of people while minimising resource use and mitigating environmental deterioration is further understood and measured through key impact indicators. These are categorised accordingly in economic (GDP), resource use, environmental impact and human well-being dimensions, and aggregate the key challenges that need to be addressed in practice for decoupling to materialise (Figure 4). The systematic collection of information under the three sustainability dimensions provides an indication of the evolution of the scale of efforts towards decoupling, indicating trends and high impact practices that can be replicated or scaled-up.

Decoupling will only happen through a profound transformation of our economic systems that implies, among others, changing the way we value the things that we consume and the practices we use to produce them. Decoupling forces us to look at the true cost of development. Decoupling implores us to find the most efficient and sustainable way forward.

Sustainable Consumption and Production as an approach to decoupling economic growth from natural resource use

Sustainable Consumption and Production (SCP) is a key driver of transformation. SCP considers the entire life cycle of economic activities, from the extraction of resources, processing these resources into materials and products, the use of these products, and finally their disposal as wastes or emissions. By doing so, SCP helps to identify and develop solutions for improving natural resource use that achieve multiple sustainability objectives simultaneously or “win-win” gains that occur when economic, social and environmental aspects are jointly addressed. Based on a systems approach SCP manages burden shift and delivers an overall net benefit on sustainability. It also helps, to link activities across time and scale to provide a long-term perspective on their impacts.



SCP materialises as a process to refine and reconcile responses across government bodies and different actors across value chains, and society at large. In this sense, SCP is an enabler of coordinated action towards policy coherence and strong multi-stakeholder partnerships, and thus has the power to harness transformations at scale.

There are numerous ways to approach this transformation. Buildings currently use approximately 40% of our resources, 25% of water and 40% of energy – while producing up to 40% of solid waste in developed countries. However, with over 60% of the urban infrastructure expected to exist by 2050 still yet to be built there is an irrefutable opportunity (IRP, 2017). With changes in practice such as the application of specific innovations and technologies, including the network’s [BAMB](#) (Buildings as Material Banks) and [SHERPA](#) (a Personal Guide to Sustainable Housing) proving that up to 50% of building materials can be salvaged from previous structures and reused in the construction of new buildings, a clear point is made. If the construction sector shifted to reusing as many materials as possible, it stands to reason that the demand for further extraction of materials (and the associated water and energy use required) would be reduced. By rewriting the relationship between new material extraction and the demand for new infrastructure, buildings can be constructed, jobs can be created, and raw materials can remain in the earth for future generations to access.

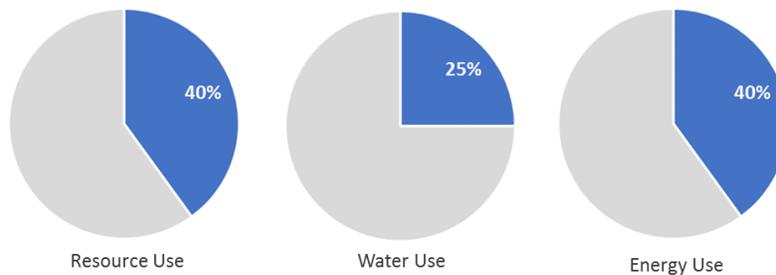


Figure 5: Usage by the buildings and construction sector as percentage of the total global use (IRP, 2017)

The world produces enough food to nourish its entire population, however, almost 800 million go hungry while 2 billion are malnourished. Meanwhile, 30% of the food currently produced worldwide is lost or wasted every year (FAO, 2018). With changes in practice such as the improved measurement and management of food waste, the results are inspiring. In the case of the hospitality industry, these changes in practice can also help businesses improve their profitability. Sustainable Tourism programme partner, WRAP released [a study](#) in 2018. Their investigation of 42 hotels in 15 countries demonstrated that for every \$1 invested to reduce kitchen food waste, an average of \$7 can be saved. Meanwhile, Costa Cruises halved their food waste on a ship that piloted a food waste reduction initiative and nine hotels in the [BUFFET](#) project (Building an Understanding for Food Excess in Tourism) saved \$200,000 USD and 70,000 kg in the first half of 2018. By rewriting the relationship between food loss and waste and tourism industry’s commitment to provide the best guest experience possible, tourists can enjoy their trip, hospitality budgets can benefit and additional pressures on the environment can be avoided.

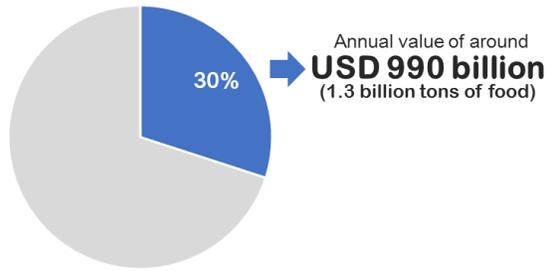


Figure 6: Food loss and waste as a percentage of total global food production (FAO, 2018)

Natural resources are at the foundation of our socioeconomic systems. We rely on natural resources to provide employment and decent work. SCP is necessary for sustainable, equitable growth, and furthermore, “achieving the Sustainable Development Goals (SDGs) could unlock \$12 trillion in market opportunities across just four sectors: food and agriculture; cities; energy and materials; and health and well-being” (Business and Sustainable Development Commission, 2017).

Natural resources are social. For example, the misuse of resources can affect human health: “People get sick because: 1) they work under unhealthy conditions; 2) they are exposed to contaminants in the water, soil, and air; 3) they eat certain unsafe or contaminated foods; 4) they have unhealthy diets; and, 5) they can’t access adequate and acceptable food at all times”(IPES-Food, 2017).

Resources are located in the environment, which is why they are often interpreted as an environmental issue. In fact, SCP is an approach. SCP is the systems approach to sustainable development. SDG 12 has been included as a stand-alone goal, but moreover, it should be seen as an enabler for the implementation of a range of other goals and many of their targets. SCP is a key driver in breaking the link between economic growth and increased resource use, while still providing improved human wellbeing, as such SCP can trigger transformations toward sustainability as envisaged in international obligations . Decoupling is at the foundation of Agenda 2030. SCP provides an integrated and systemic approach towards decoupling.



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