Natural capital: the coming market disruption you haven't heard about

By Matt Orsagh

THE Economics of Biodiversity by Partha Dasgupta, a Cambridge University professor, is a report you should read. He focuses the narrative on an obvious point that is almost always taken for granted – that we exist within nature.

Of course we do, but we often do not see it or at least do not think about it because individually, we account for an insignificant speck in the earth's natural cycles. We exist in nature, and our economies, markets, companies, products and services all exist in and depend on nature as well. It takes natural capital to survive and thrive. If we pretend this is not so, or to forget that this is so, we do it at our peril.

The author starts with a summary of how we got here, providing a brief description of humankind's infinitesimal time on earth in the geological scale. We meet everyone's favourite 18th-century killjoy economist, Thomas Malthus.

Mr Malthus felt that humankind was doomed to repeat an unending cycle of population growth followed by famine as a result of the geometric growth of human populations that land management – growing food – could not keep up with.

But human ingenuity and technology intervene to turn Malthusian economics on its head, triggering geometric growth in not only population but also global standards of living which, of course, are not evenly distributed.

You can see where this is going.

Geometric growth has continued, but it has come at a price. That kind of growth since the Industrial Revolution has severely taxed the biosphere – the part of earth where we live.

Prof Dasgupta cites recent research by Mathis Wackernagel and Bert Beyers in their book *Ecological Footprint* (2019), which shows that humankind's current ecological footprint is a demand that can only be met by about 1.6 earths. The good news is that number is down from 1.7 in 2019 because of Covid-19 – so, you know, progress.

The report does not sugarcoat the current state of affairs. Prof Dasgupta even warns against magical thinking that we can solve big problems like climate change and enjoy indefinite growth with only a small investment in clean energy in the near term (say, 2 per cent of world gross domestic product, or GDP).

He posits that we need to understand the limits of our biosphere and to accept that certain possibilities are bounded by the simple math of the resources we have to work with, as well as the physics and chemistry of how we use them.

Our ecological footprint as of late in human history has exceeded the rate at which the biosphere can regenerate (trees and fish stocks) and, in some cases, cannot regenerate (there is only so much copper in the ground).

The report suggests that perhaps we should be a bit more humble about the promises we make ourselves about how technology and ingenuity can save us.

He writes: "No amount of technological progress can make economic growth as conventionally measured an indefinite possibility. Ours is inevitably a finite economy, as is the biosphere of which we are a part."

Prof Dasgupta refers to the excess of impact (I) over the biosphere's regenerative rate (G), as impact inequality. Over time, the biosphere has shrunk while our demands on it continue to grow.

The author and simple arithmetic show that we need to better balance the supplying power of the biosphere, which is limited, and our demands on it. The report looks to enumerate some actions and policies that could bring about this balance and convert that impact inequality into impact equality.

The report cautions that hard choices will have to be made and will need to go beyond a tax here and a policy there.

More negatives

Prof Dasgupta sees three main challenges or barriers to private investment as having a positive impact on natural capital and the biosphere:

- A profitable financial return is not always possible.
- Typical conservation and restoration projects are often too small to attract investment.
- A lack of standardised data on financial instruments contributes to a lack of proof-of-concept, making it difficult for investors to assess risk.

Don't just complain, find solutions

The report shows that current estimates of financial investments in natural capital suggest that they are small, at only about 0.1 per cent of global GDP (about US$78 billion to US$143 billion per year).

At the same time, global governments spend around US$500 billion on activities, such as subsidies and investment, that are harmful to biodiversity.

Private finance has a role to play, but the ratio of private finance devoted to biodiversity ranges from about US$6.6 billion to US$13.6 billion, whereas financing for activities that are harmful to natural assets totalled about US$2.6 trillion in 2019.

It is important to realise that although finance has a role to play in addressing the challenges of increasing and protecting natural capital, that role is limited by the governmental and regulatory policies in which finance operates.

Therefore, one of the main issues that finance must address is engagement with policy-makers to ensure that we have data and price signals around natural capital to help us efficiently allocate capital that can increase natural capital.

The report shows that biodiversity-related taxes are infinitesimal in scope, compared with subsidies and spending on activities that are harmful to the biosphere.

Currently, only about US$7.5 billion a year globally is focused on biodiversity-related taxes or fees. This is only about 1 per cent of total annual revenue from environmentally relevant taxes.

On the other side of this equation, when accounting for the negative externalities of fossil fuel subsidies, the cost is about US$5.2 trillion annually.

Expect to see growth in the market of payments for ecosystem services (PES) in the coming years, which are now only between US$36 billion and US$42 billion in annual transactions, and usually cover things such as carbon storage, conservation and watershed services.

Other tools gaining popularity are biodiversity offsets, which increasingly are being written into law to mitigate or reverse the impact of projects (a construction project, for example) by offsetting the impact with a project beneficial to the biosphere.

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Green bonds are already familiar to many in the financial world and, indeed, will have a role to play in earmarking funds for projects that can reverse or mitigate the impacts of biosphere depredation.

Environmental, social and governance (ESG) integration of the biosphere in the investment process is in its early stages. ESG integration already has begun to consider how the environment affects a company. This is gaining currency in the investment world and is something we have written on a great deal in recent years.

Not much scholarship or analysis, however, has been devoted to the impact a company has on the environment or biosphere. This concept of "double materiality" will only grow in importance as it becomes clear to more investors that we do not exist outside the biosphere, and doing irreparable damage to our environmental systems will have deleterious long-term effects on markets and our way of life.

ESG investing is in its early stages as well, and while growing in popularity, it still lacks a definition and faces issues of green-washing. These issues will need to be resolved for natural capital-based investments as well.

The challenges of managing and mending our biosphere can be daunting, but we should be honest with ourselves about the challenges that lie ahead. The impact of natural capital on our planet and our financial markets will only grow in the coming years.

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