

Briefing Growing nature markets in the UK

February 2024



Summary

Nature's value is not included in our economic system. It is invisible in economics, and, as there is no incentive to preserve its value, most economic activity is depleting natural capital at an unsustainable rate. However, the economy relies on nature. Nature is a form of economic capital. The Office for National Statistics (ONS) puts the total asset value of nature at over £1.5 trillion. As we continue to deplete it, we are losing economic value.

To reverse this, investment in nature restoration is needed. But public money alone is unlikely to pay for the scale of restoration required. The finance gap to meet the UK's nature targets is estimated to be at least £44 billion over the next ten years.¹ Private finance is needed to fill the gap.

When the value of nature is recognised, new economic opportunities emerge. For example, flood risk can be managed by investing in nature-based solutions, like tree planting and peat restoration, offering more cost effective alternatives than traditional 'grey' infrastructure solutions, with the added benefit of biodiversity gain.

Several small government schemes aim to support nature markets in the UK. But these are piecemeal and are not delivering the scale of private investment or nature restoration required to meet legally binding climate and nature targets. To deliver on both fronts the government needs to create and shape nature markets to get private finance flowing alongside public investment.

Markets need supply and demand to function, and government has a vital role to play in both for nature markets. On the supply side, the priorities are:

- 1) Use the existing Environmental Land Management scheme budget to create an initial pipeline of high quality nature projects that appeal to investors.
- 2) Invest public money based on outcomes, rather than activities, to create market information for potential private investors.
- 3) Build confidence and trust in the market by developing strong standards and an independent body to verify business claims.

Nature underpins the economy

The economy depends on nature for food, fuel and the other resources we use to build homes, to maintain oxygen in the air we breathe, protect us from extreme weather and enrich our cultural and spiritual lives.² This was highlighted by a board member of the European Central Bank who said, “the economy relies on the services of nature”, and that if you “destroy nature and you destroy the economy”.³

Nature is a form of economic capital, which the UK economy relies on. Thirteen out of the 18 sectors that made up the FTSE 100 in 2018 were highly dependent on natural capital. Over 50 per cent of UK GDP and 72 per cent of UK lending depends on ecosystem services, according to the Bank of England.^{4,5} For example, metal mining and processing, such as lithium extraction from geothermal waters in Cornwall, relies on groundwater and crop harvests are highly dependent on insects for pollination.⁶

Putting a number on this economic value is a challenge. The UK Treasury commissioned a review on the economic value of nature and how to incorporate that value into our economic system. *The economics of biodiversity: the Dasgupta review* was published in 2021 and describes how the current economic system does not recognise nature’s value, which is why the natural world is being destroyed faster than it can regenerate. The solution it proposes is to recognise not just flows through the economy, as measured by metrics like GDP, but assets too, to create a measure of wealth that includes natural as well as human, social and manufactured capital.⁷

Natural capital is an invisible asset that we must make visible on our national accounting book. The first step is measuring its value. The UK is a leader in developing natural capital accounts, but these are still not incorporated into mainstream economic decision making. The ONS has been building UK natural capital accounts for over a decade.⁸ It puts the total asset value at over £1.5 trillion, including £445 million from the health benefits of recreation.⁹ In 2021 alone, the total value of services provided by nature was estimated to be £47 billion. This includes air pollution removal services worth £2.5 billion.¹⁰

The full economic value of nature goes beyond what we can measure. But, without some approximation of its value, we will never be able to incorporate it into our economic system and, therefore, will continue to undervalue and deplete it. Addressing this will enable a focus on rebuilding our natural assets, increasing our national wealth.

By undervaluing nature we are losing economic value

The UK is one of the most nature-depleted countries in the world.¹¹ Just seven per cent of Britain’s native woodland is in good ecological condition.¹² The government is nowhere near meeting its tree planting targets.¹³ Over two million hectares of soil are at risk of erosion in England and Wales.¹⁴ And sewage is polluting the UK’s coastlines and rivers.¹⁵

The economy is already bearing the cost of this depletion. According to Defra, the agriculture sector in England and Wales loses £1.2 billion per year due to

soil degradation.¹⁶ Flood damage cost the UK £333 million in the winter of 2019-20 alone.¹⁷ Britain's Network Rail plans to double its spending on adapting to risks, like worsening flooding, while acknowledging that "vital infrastructure will deteriorate" despite increased investment.¹⁸ Globally, natural disasters including storms, heatwaves and wildfires, made much worse by climate change, caused \$380 billion in economic damage in 2023.¹⁹

Insects that pollinate food crops are declining dramatically. According to government biodiversity indicators, pollinating insects have declined by 24 per cent since 1980.²⁰ Over 75 per cent of global food crops rely on them.²¹ Lower pollination means smaller crop yields, reducing agricultural incomes and food security.

Degradation of nature damages tourism, especially in rural economies with a rich natural heritage. In Croatia, losses of ecosystem services including water supply, pollination, and forestry cost the tourism industry €90 million in 2018.²²

Investing in nature delivers significant returns

Investment in nature restoration delivers both short and long term economic benefits, including job creation, higher productivity and protection from economic damage.

For example, improving woodland, peatland and parks could bring 16,050 jobs to the 20 per cent of UK constituencies that currently have the worst labour market outcomes.²³

Direct productivity improvements could be created in sectors such as tourism, agriculture and fishing, which could generate £4 billion a year by 2050, as well as indirect productivity increases due to reduced sickness, better air quality and urban cooling.²⁴

Natural structures in good condition can protect against extreme weather events, such as storms and wildfires, reducing impacts on communities, saving lives and reducing costs.²⁵ According to Lloyd's of London's chief executive, extreme weather in Europe is likely to mean an increase in insurance prices.²⁶ Investing in nature preservation reduces insurance costs for businesses and individuals by reducing the damaging spillovers from climate events that push up premiums. For example, research in California has shown that forest ecosystem management could reduce the level of wildfire risk on residential insurance premiums by 40 per cent.²⁷

Furthermore, investment in nature can improve health. Visits to woodlands have been shown to reduce depression and anxiety. In the UK access to woodlands is estimated to save the NHS £185 million per year in reduced mental health treatment.²⁸ High quality natural habitats also reduce air pollution, with a potential £1.6 billion benefit to the economy from higher productivity if the UK were to meet World Health Organization air pollution guidelines.²⁹

All these benefits add up. Investing in nature restoration has a high cost to benefit ratio. In terms of carbon sequestration, recreation and cleaner air

benefits, every £1 invested earns £4.60 back from peatland, £2.80 back from woodland and £1.30 back from salt marsh creation.³⁰ The cost-benefit would be even higher if better water quality, improved fish nurseries, reduced flood risk and other services were included and monetised.³¹

Investing in nature supports rural economies

Living standards across the UK vary more widely than in most other OECD countries. Rural, coastal and post-industrial areas in the North East, Midlands and North West of England, South East Wales and South West England all struggle with low living standards.³² This regional disparity is compounded by a lack of investment. However, many of these areas also have significant natural assets, currently being degraded. Investment in restoring the natural capital in these regions would provide local economic value, as farmers and landowners are likely to see their incomes increase. For example, if farming subsidies were reformed, upland farmers could increase their incomes by 50 per cent if they planted woodland on two thirds of their land and grazed the rest.³³ Supporting private investment through the development of nature markets would increase economic opportunity in areas suffering from underinvestment.

What are nature markets and why do we need them?

Benefits of nature, such as cleaner air and temperature regulation, are public goods. But there are also private goods from nature restoration, such as improved conditions for fish nurseries, reduced flood risk to properties and enhanced tourist attractions. Private goods with a clear return to investors can be sold through markets. But where the return is not clear to investors, the government should help to create markets for public goods, such as for carbon sequestration, or facilitate markets for private goods, such as reduced flood risk.

In both of these cases, investing in nature can be a cheaper and more effective option than the alternatives. Flood protection is a private good, as it protects private property from damage. After a year of storms and frequent flooding events in the UK, an investigation in January 2024 found that flood defences across England have deteriorated significantly since 2018, leaving households and businesses at risk.^{34,35}

Investing in natural flood management solutions can deliver greater benefits at lower cost than traditional 'grey' concrete infrastructure. For example, in Germany, a study on the river Elbe showed that the natural flood management option delivered double the net present value of the grey infrastructure option, was more effective at reducing flood risk and provided additional benefits by improving nutrient retention and biodiversity.³⁶

Critically, natural infrastructure is preventative. It delivers lower flood risk, as it helps to prevent flooding in the first place, whereas grey infrastructure is simply a defence mechanism. Therefore, there should be fewer floods and lower maintenance costs when natural flood management is prioritised.³⁷

Carbon sequestration is a public good for which a market has been created through government policy to reduce greenhouse gas emissions, such as through the UK Emissions Trading Scheme (UK ETS) and requirements on businesses to report on their emissions and their emission reduction plans.³⁸

Sequestering carbon through nature, such as through peat restoration or tree planting, is likely to be at least 3.5 times cheaper than alternative technologies, such as bioenergy with carbon capture and storage (BECCS) or direct air carbon capture and storage (DACCS).³⁹ And it has the additional benefit of delivering more natural capital through improving biodiversity improvements, recreation and cleaner air.

For both flood alleviation and carbon storage, nature-based solutions are better value than traditional options. As both of these cases demonstrate, when nature is valued and there are greater incentives to restore it, innovative nature-based solutions emerge that deliver services businesses need at lower cost.

Do nature markets already exist?

Important to market creation is a measurable outcome that has value. The most familiar example is the carbon market. The outcome is easy to measure, with a single carbon metric. For other nature markets, measurement is more complex. There is no single metric of nature’s value. Instead, natural capital accounts are being created which bring together estimates of the monetary value of some of the services nature provides. The table below sets out the current nature markets in the UK.

Existing UK nature markets

Market <small>(grey = not yet introduced)</small>	Source	Market type
UK Woodland Carbon Code	UK Woodland Carbon Code	Carbon market
UK Peatland Code	IUCN UK Peatland Programme	Carbon market
Hedgerow Carbon Code	Hedgerow Carbon Code	Carbon market
Soil Carbon Code	Soil Carbon Code	Carbon market
Biodiversity Net Gain	Environment Act 2021 (more information)	Ecosystem services – biodiversity

Nutrient credits for water quality	Case law on Habitats Regulations	Ecosystem services – water quality
Marine net gain	Government response to marine net gain consultation	Ecosystem services – marine biodiversity
Woodland water code	Nature markets framework (p 21)	Ecosystem services – water quality

Policy is too piecemeal to deliver private investment at scale

Public money alone cannot pay for the scale of nature restoration required. The finance gap to meet the UK’s nature targets is estimated to be at least £44 billion over the next ten years.⁴⁰ Private finance is needed to fill the gap.

The government has a goal to get £1 billion of private investment into nature by 2030 and recognises the need for the development of nature markets. In March 2023, it published a Nature Markets Framework. This contained core principles for high integrity markets, clarity on existing rules for how schemes interact and when stacking and bundling different credits is permitted, an arrangement with the British Standards Institution to develop nature investment standards and proposals to consult on market infrastructure for good governance.⁴¹

The Department for Environment, Food and Rural Affairs (Defra) also has multiple small schemes in place to speed up the establishment of nature markets, including the Natural Environment Investment Readiness Fund, the Big Nature Impact Fund and the Projects for Nature programme.^{42,43,44} Defra has also committed to delivering a Nature Positive Investment Roadmap, which will be linked to the Environmental Improvement Plan this year.⁴⁵

However, these small seed funds and crowdfunding projects are not driving private investment at scale and do not amount to a strategic policy to create and shape markets for nature. Currently, private investment into nature stands at £95 million per year, mostly delivered through the water sector.⁴⁶ If the government is to meet its goal of securing £1 billion of private investment in nature by 2030, it will need to take a more proactive and strategic role in shaping markets.

The public-private blend

The private sector cannot do this alone. Government must provide support to derisk nature markets. This can be done through existing budgets such as for the Environmental Land Management (ELM) scheme. ELM is designed to provide “public money for public goods”, but there is the option for farmers

to combine payments from public and private schemes. ELM includes the Landscape Recovery, Countryside Stewardship and Sustainable Farming Incentive schemes, each of which have avenues for private investment, as well as public investment.

The Landscape Recovery scheme is most well suited to private investment, with long term, large projects that could deliver peat restoration and tree planting at scale. These projects are “required to identify private funding streams to boost the outcomes they deliver”.⁴⁷

However, public investment is currently not targeting high impact projects through the Landscape Recovery scheme. Most of the farming support budget, freed up by phasing out the Basic Payment Scheme, is being spent on the lower impact Sustainable Farming Incentive. This is despite high demand among farmers for Landscape Recovery projects. The 2023 Landscape Recovery application round was again oversubscribed with half of the applications having to be rejected.⁴⁸ It is clear that farmers want to do more projects of this scale and ambition.

How to grow nature markets

Government policy is not delivering the scale of nature restoration required. In fact, UK nature continues to decline, with nearly one in six species threatened with extinction.⁴⁹ The UK is not on track to meet its ‘30x30’ (30 per cent of nature restored by 2030) targets, and private investment in nature is not enough to meet the government’s aim to bring in £1 billion per year by 2030.⁵⁰

Markets need supply and demand to function. For nature markets, supply means a large pipeline of high quality nature restoration projects. On the demand side, companies and investors must be willing and able to pay for them. This is a challenge, as investors are currently not seeing enough revenue generated from nature projects to be confident they will deliver returns. A review of the current pipeline showed that less than a quarter of projects were generating revenue, with 45 per cent expecting to start generating revenue in the next five years.⁵¹ Existing schemes that require businesses to pay to restore nature, such as Biodiversity Net Gain for the housing sector, are not big enough on their own to reverse nature’s decline.

The government can play a role in generating demand for nature projects by extending regulatory requirements or by stimulating the business appetite for nature restoration through the wider policy context. For example, mandating the requirements of the Taskforce for Nature-related Financial Disclosure (TNFD) would make nature more visible in the marketplace. Action taken by business to reduce nature-related impacts would begin to assign value to nature in the market.

However, the infrastructure on the supply side of the market needs to be in place to support this growing demand. On the supply side, there are three important areas of focus for government:

1. A project pipeline

Public investment should be used to create a pipeline of nature projects with the scale and ambition that can attract private investment. This can be done by directing the existing Environmental Land Management (ELM) scheme funding towards large scale Landscape Recovery projects. A third of the ELM budget should be reserved for Landscape Recovery. An additional injection of capital to support the upfront cost of habitat creation would help farmers make the transition.⁵² Ongoing maintenance of new habitats and delivery of ecosystem services will then be an attractive proposition for private investment.

2. Outcome focused investment

Public money should be invested on the basis of outcomes, rather than activities or projects. This will create market information that private investors can learn from. For example, communicating quantities of carbon stored, or water quality and flood protection improvements as outcomes of projects would demonstrate the benefits and monetary value that investors need. This would help to increase the appetite of investors as well as reduce the risk of investing in novel markets.

3. Standards and governance

Lessons need to be learnt from the voluntary carbon market which has suffered from a lack of standards and governance, leading to claims of ‘worthless’ carbon credits and greenwashing.⁵³ Standards for nature markets being developed by the BSI must include rules about what claims can be made by businesses, and an independent body is needed to decide if they are being met. Business is currently filling the governance gap.⁵⁴ The government should learn from this and the voluntary carbon market, and set up a system of governance that builds trust and confidence in the market.

These reforms would help to increase the confidence of investors and landowners to buy into nature markets and restore the UK’s natural assets.

This is the first of three briefings on the development of nature markets. This one focuses mainly on supply; the second will look at the role of public investment banks; and the third will look in more depth at demand.

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Endnotes

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