

It doesn't make sense to keep destroying nature 'for the sake of the economy'

We've seen a 70% decline in birds, amphibians, mammals, fish, and reptiles since 1970. This collection of scientists and investors are doing something about it. Maddyness is collaborating with Ours to Save to bring readers fresh perspectives on sustainability.

In the past, the environment has often been classified as an externality within economics. Lax policies have led to economic decisions that fail to consider the social costs of production. We've seen undesirable repercussions for our natural environment as a result.

However, there has been a recent shift in mainstream economic discourse. Finally, the advantages of factoring the environment into decision-making are being explored. The concept of natural capital – where economic value is assigned to natural assets, such as ecosystems and biodiversity – has entered the mainstream. Because of this, we're starting to see the conservation and protection of these assets included in economic and policy decisions.

Our anthropocentric economic system emits excessive greenhouse gases and destroys biodiversity. *The Dasgupta Review*, which was commissioned by the UK Treasury ahead of the 2021 Convention on Biological Diversity and

published in February, seeks to understand why and how our economy is failing our ecosystems.

Sir Partha Dasgupta and his colleagues identified three key objectives: assessing the economic benefits of biodiversity globally; assessing the economic costs and risks of biodiversity; and identifying a range of actions that simultaneously enhance biodiversity and deliver economic prosperity.

The review concluded that nature is our most precious asset. Humanity has mismanaged its assets, resulting in our demands on nature far outweighing the supply of goods and services available to us.

As a result of the Dasgupta Review, the UK Government announced a £10M fund to facilitate private sector investment in nature and biodiversity conservation. This will allow climate change, restoration and water purification projects run by local authorities, environmental groups and businesses to receive up to £100,000 in funding.

These are what are known as Nature-based Solutions (NbS); they address societal goals through protection, restoration, management and creation of ecosystems.

In the same month, news of the world's first conservation venture fund, OXGAV, was announced. This is a joint venture between Oxford University researchers and Global Accelerate Ventures (GAV).

The aim of OXGAV is to enable the commercialisation of new solution-focused technologies through greater access to private sector investment. It has outlined six 'trillion-dollar problems' it wants to solve, ranging from global warming and food security to rising levels of ocean plastics and COVID-19.

I spoke to Dr Robert Montgomery (RM), the Managing Partner of OXGAV and a professor at Oxford University, and Thomas Buchar (TB), Managing Director of GAV, about why this venture fund has emerged at such a critical time.

Do any of the six 'trillion-dollar problems' take precedence?

RM: No, they are completely integrated.

This is the challenge of environmental conservation. There are extremely complex coupled human and natural systems in which we live, where the components of climate change directly connect with biodiversity loss, and biodiversity loss directly connects with human food security, which directly

connects with education and poverty levels.

Each of these multi trillion-dollar problems are connected and it is important we create sustainable solutions for them and create a more profitable and sustainable future.

In the past, conservation has been funded by two channels; government or non-governmental support. OXGAV aims to develop a third channel for sustaining conservation activities over time, which will be associated with financial returns on investment.

The way that we envision the future of conservation science is one that operates productively across all three of those channels. The conservation venture studio demonstrates the provenance of record for this third channel which is investment resources.

With investment, you have the potential for financial returns on investment downstream. This will be achieved through commercialising various technological and innovative process-oriented solutions, which have commercial value and can make a timely impact on environmental problems in the present.

How will OXGAV bring about change?

TB: The way that research within this space has been approached over the last 40 years hasn't been effective.

We talk about accountability, but there also needs to be an urgency to commercialise new technologies that will stop biodiversity loss. The only way you're able to do that is by having accountability from a financial perspective.

The loss of these ecosystems is costing governments globally trillions of dollars. The only way to stop this is readjusting, undertaking research and commercialising new technologies.

This has to rapidly take effect in the next 5-10 years before the loss of biodiversity goes out of control.

This would mean a further reduction of between 20-30% of biodiversity and at that point, there will be very little left on the planet.

What would you like to see happen in the next five to 10 years in order to achieve the transformation that is required?

RM: The first thing we would like to see is tangible collaboration between governments and industry. This means matching contributions for government pledges towards biodiversity protection.

We commend the fund that has been developed by the UK government as an output from the Dasgupta Review... but this alone is going to be inadequate for addressing this problem.

What's vitally important is for industry to step up and match government contributions so that adequate resources are available to catalyse and commercialise novel technologies.

The second thing, specifically related to OXGAV, is that we want to bring additional university partners on board – with Oxford remaining the hub of our activities.

The environmental challenges that we are experiencing are beyond the scope of a single university... we are strategically onboarding university partners to grow out the OXGAV philosophy so that, as an aggregate entity, we will demonstrate how to positively affect these environmental problems.

Is ESG enough 'climate action' from the private sector?

RM: The role of OXGAV more broadly, as a catalyst for change within the conservation space, is to serve as a means for empowerment of all members of society – whether they be kids or grandparents.

We demonstrate alternative opportunities to empower people in their decision-making.

ESG is an important component of that, but so are the decisions of individuals: how they choose to spend their money, what products they buy and the way in which they live their lives. All of those components are important to creating a more prosperous and sustainable future.

TB: One of the reasons we partnered with Oxford is to create a platform for public policy, which is going to drive change within industries.

The legislative change still needs to happen to accelerate innovation and we're going to have to continue to put pressure on industry to ensure they make those kinds of changes.

The author, Ellie Roxburgh, is currently doing a master's in Environmental Technology at Imperial College London. She says:

"This partnership between Oxford University and GAV is certainly a reason for optimism as it will provide the funding to allow otherwise small-scale environmental technologies to be commercialised and scaled up around the world. I am very grateful to Dr Robert Montgomery and Thomas Buchar for their time and look forward to seeing the success of the conservation venture studies and GAV partner with other Universities over the next few years."

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