

# The Economics of Biodiversity: The Dasgupta Review – Reactions

2 February 2021

**Dr Akinwumi Adesina, President, African Development Bank Group**

'How we measure wealth determines how we seek it and what we reward. The conventional approach of using GDP to measure wealth has spurred significant growth, but at the expense of the environment and the quality of life. Nobody breathes or eats GDP. We must change our wealth construct to take nature into account. Growth must be discounted for negative impacts on the environment, health and biodiversity. When we measure wealth properly, taking nature into account, we will be better custodians of the planet. While COVID19 took each of us by surprise, we need to learn from the experience and ensure that we help our nations to build back better, through a green recovery pathway that also builds resilience against future pandemics. We can do this. Investment in restoring and preserving our collective natural capital has the potential for quick returns. I, therefore, fully endorse the views of Professor Dasgupta on this. It is high time we build and measure growth differently.'

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**Inger Andersen, UN Under-Secretary-General and Executive Director of the UN Environment Programme**

'The message from the Dasgupta Review on the Economics of Biodiversity is loud and clear: we must fix our relationship with the natural world or destroy human prosperity, well-being and our future. And it is with this knowledge in hand that in 2021 we must seek to join up the climate and nature agendas, and arrive at an ambitious, measurable and accountable post-2020 global biodiversity framework. To secure nature is to invest in our own self-preservation.'

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**Andrew Bailey, Governor, Bank of England**

'I welcome the publication of the Dasgupta Review which like the Stern Review on the climate in 2006 represents a landmark contribution to our understanding of the relationship between nature and our economy. Since 2015 the Bank has been focussed on the financial risks generated by climate change and the Dasgupta Review is clear that protecting and enhancing biodiversity will help us address climate change. We are engaging with other central banks and the Network for Greening the Financial System on these issues and it is clear to me that the solutions to the climate-related challenges we face must also benefit nature. As the report makes clear, it is our most valuable resource.'

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**Professor Sir Tim Besley, School Professor of Economics and Political Science, London School of Economics**

'This Review provides a timely reminder about the importance of Nature. Its core message that we are not on a sustainable path and the perils that this entails particularly for future generations has significant policy implications.'

'Among them is the need to establish new measurement tools for monitoring biodiversity and conservation efforts. Looking beyond GDP measurement as a measure of economic progress is also a key recommendation.

'The report also underlines the importance of building new institutional and decision-making arrangements to promote effective policy in communities, nations and at a supra-national level.'

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**Professor Caroline Bledsoe, Melville J. Herskovits Professor of African Studies, Northwestern University**

'Scarcely a day goes by when we do not hear of some alarming new human-caused environmental disaster or yet another ominous rise in global temperature. The biodiverse resources on which we depend – often those we didn't even know about until it was too late – are lost forever at the altar of "jobs" and "growth". Human economic welfare and the natural resources on which it depends appear to be hopelessly antithetical, a battle which Nature will inevitably lose.

'Partha Dasgupta's powerful new report on the economics of biodiversity recasts this bleak vision entirely. Insisting that humans' economic life is inextricably embedded in nature, it shows that our survival will depend on our collective willingness to manage complex natural biodiversity portfolios, a strategy in which leaving Nature alone is one of the most important investments we can make. This pathbreaking work shows how socially and economically informed institutions must help to shape the conditions of mutual trust that are essential to producing future biodiversities we cannot yet imagine.'

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**Peter Blom, Chief Executive, Triodos Bank N.V.**

'We greatly welcome this review and its unequivocal call for the finance sector to take a proactive approach to understanding and changing the impacts of investment decisions on nature and the vital ecosystems services that underpin all life on our planet. The decisions that the financial sector continue to make do not reflect today's reality, let alone the future we face. For too long we have taken from our natural assets, threatened biodiversity and destabilised environments and communities. If we do not act on the recommendations of the Dasgupta Review, we risk bankrupting our greatest asset.'

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**Dr John Bongaarts, Distinguished Scholar, Population Council**

'The alarming destruction of the biosphere by human activities is well documented by biologists. Their concerns are widely shared by the general public. Unfortunately, however, policymakers in governments tend to be reluctant to intervene vigorously, because their views are often guided by economic models and arguments. Hard-nosed economists typically ignore the value of natural capital or are willing to degrade it to improve human and physical capital.

'The Dasgupta Review represents an impressive effort to bridge the longstanding gap between the views of biologists and economists. Dasgupta has a deep knowledge of the field and its controversies and provides a valuable and comprehensive overview of the economics of biodiversity. The text is accessible and is packed with important insights and comments. Highly recommended for policymakers who face an increasingly urgent need to take action.'

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**Juan Pablo Bonilla, Manager, Inter-American Development Bank's Climate Change and Sustainable Development Sector**

'The Dasgupta Review builds on the tradition that brought us the Stern Review on the Economics of Climate Change in 2006. It should similarly serve as a blueprint for deeper action at the national, subnational, and private sector levels. Governments' economic models must incorporate nature and account for the impact on nature of other economic interactions. At the same time, Ministries can lead in directing investment towards natural capital and can influence private actors to do the same. The IDB looks forward to working with the UK to implement the recommendations of this report.'

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**Jean-Laurent Bonnafé, Director and Chief Executive, BNP Paribas**

'BNP Paribas continues to integrate nature into its risk assessment and decision making. Understanding the impacts of our clients and the companies in which we invest - as well as our dependencies - is essential in this endeavour. No one can do it alone. We all need to work together to shift the paradigm of our treatment of nature for a more sustainable future.'

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**Mark Carney, UN Special Envoy for Climate Action and Finance**

'Ecosystems that have more diverse natural assets are more productive, resilient and adaptable. Just as diversity within a financial portfolio reduces risk and uncertainty, greater biodiversity reduces risks and uncertainty within a portfolio of natural assets. As we awaken to the importance of natural capital, we need to place greater value on sustainability and biodiversity – the precondition to solving the twin crises of biodiversity and climate.'

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**Sir Ian Cheshire, former Chair, Barclays UK**

'The Dasgupta Review is a landmark in our developing understanding of the vital importance of Nature to all of us. Our prosperity and that of future generations depends on changing our systems, institutions and technologies to create a truly sustainable relationship with Nature. Biodiversity is the key measure of how well we are treating Nature, and we must act now – business, finance, citizens and government – we all have key roles to play in this transformation.'

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**Dominic Christian, Global Chair of Reinsurance Solutions, Aon and Chair of ClimateWise**

'Critically for insurers, the Report identifies Nature as capital, suggests accompanying measurement techniques and places it at the centre of determining the magnitude and connectedness of risk today.'

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**Mauricio Claver-Carone, President, Inter-American Development Bank**

'The Dasgupta Review on the Economics of Biodiversity is an important work that shows the importance of supporting the mainstreaming of biodiversity in policies, finance, and production within countries. Biodiversity is critical because it can serve as a foundation for productivity and to enhance resilience to stresses and shocks. The Inter-American Development Bank Group as well as other multilateral development banks can play an integral role, and collaborate with countries and the private sector to facilitate a transition to sustainable development. As we look to a post-COVID-19 economic recovery, the Review highlights evidence that all of us in

development can agree with that greater investment in biodiversity could help boost employment and support a green and inclusive recovery.'

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**Professor Gretchen C. Daily, Bing Professor of Environmental Science, Stanford University and Co-Founder and Faculty Director, The Natural Capital Project**

'All people – living in ancient or modern times, in luxury or destitution, in mega-cities or vast hinterlands – depend intimately and utterly on nature. Through the microbiome inhabiting our body, the nature in local parks and farms, and exotic forests and underwater realms across the world, we are all deeply embedded within the web of life. This extremely subtle and extensive net of relationships sustains and fulfils us, providing the material basics of nutrition, health, and security to ethereal senses of attachment, beauty, and spirit.

'The Dasgupta Review comes at a historical precipice, with human activity driving the collapse of nature and the future course of all known life. Through brilliant synthesis of knowledge, the Review lays bare the urgent situation today, its underlying causes, the risks and costs of failing to address them, and the pathways to a future world in which people and nature thrive.'

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**Angela Darlington, Chief Executive, UK Life, Aviva Plc.**

'As Professor Dasgupta makes clear in this excellent report, our economies, livelihoods and prosperity all depend upon on our most valuable asset; nature. The report should serve as a rallying call for sustained and collective action from governments, business and wider society. In particular, we need to address the market failures that too often drive the destruction of nature. This includes adjusting the price signals so that nature is brought into the heart of financial and political decision making. The challenge is great, but so is the prize. We welcome today's report.'

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**Jeremy Darroch, Executive Chair, Sky**

'The Dasgupta Review must surely leave no one in doubt that the protection of nature, increasing biodiversity and climate change are inextricably linked. It is critical that we invest in positive solutions for nature, ocean and climate recovery that help us build back from the global crisis in the right way. Sky has been working since 2009 to tackle some of the world's most pressing environmental issues. It is committed to being net zero carbon by 2030 and is working with WWF and others restoring biodiversity and natural carbon sinks that are critical to the success of a net zero, biodiverse world.'

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**Richard Deverell, Director, Royal Botanic Gardens, Kew**

'The premise of Professor Dasgupta's review is at the heart of RBG Kew's work and mission - all life on Earth, including humanity, depends on nature. Kew's experience in over 100 countries documenting, protecting and promoting the sustainable use of biodiversity supports his conclusion that our demands on nature are untenable. We welcome Professor Dasgupta's considered review and the specific actions he proposes to recognise nature as an asset and reconsider our measures of economic prosperity. In this critical year, Kew will continue to offer advice, provide evidence and take action. If we are to change the trajectory for future generations, real commitment to transformative change, such as that proposed in this review, is essential. This is an incredibly important report and a critical moment for humanity. Planetary health is on a knife edge.'

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**Henry Dimbleby, Lead, National Food Strategy, an independent review of the food system commissioned by the UK Government and Co-Founder, Leon Restaurants**

'Dasgupta sets out meticulously, brutally and brilliantly the fundamental truths about our relationship with the environment. Pulling together scientific, economic and historical evidence, along with rigorous mathematical modelling, Dasgupta demonstrates not only that we are currently living way beyond the planet's means, but that it is vanishingly unlikely that technological advances alone will save us. We are on a course that will destroy the lives of future generations. Dasgupta shows that once ecosystems are lost it is hugely expensive and often impossible to rebuild them. The financial cost of the sixth great extinction is already huge, before we even begin to contemplate the inestimable "sacred value" of nature.

'He reveals how our institutions have not only failed to prevent this but have been actively complicit in our assault on nature. Globally, for example, \$500 billion-worth of government subsidies are spent on practises, such as intensive farming, that destroy nature: economic incentives that are estimated to cause \$4 to \$6 trillion of environmental damage every year. By contrast, governments around the world spend just \$68 billion on programmes to restore nature.

'Dasgupta's Review provides us – citizens and policy makers – with a set of mathematically-derived, conceptual frameworks that we can use to get us out of this mess. He shows that we must begin, urgently, to think of our economy as embedded in nature, not separate from it; that we must slough off our fetishization of GDP and focus instead on measuring and increasing the combined total of our natural, human, and produced capital; and that if we are to avert disaster, we must reduce our consumption, use what we have more efficiently and actively rebuild our natural capital.

'Not all of this is hard, but it will take huge courage and political skill. Dasgupta has thrown down the gauntlet, it is now the turn of the policy makers to accept it.'

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**Professor Paul R. Ehrlich, Bing Professor of Population Studies Emeritus and President, Center for Conservation Biology, Department of Biology, Stanford University**

'The destruction of biodiversity is a major existential threat to civilization, and it is cheering that at the behest of the UK government, perhaps Earth's leading economist has assembled a brilliant and detailed scientific analysis of its costs. It is a review that should be studied by decision-makers around the world.'

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**Emmanuel Faber, Chief Executive, Danone and Chair, One Planet Business for Biodiversity (OP2B)**

'Our food system is broken because we did not preserve non-renewable resources and over-pressurized renewable ones. We simply ignored that our way of life is relying on nature. GDP, which is 98% correlated to GHG emissions, does not even consider nature as an asset. It is blind to its depletion or regeneration, guiding wrong public policy making, business strategies, and ultimately food decisions by individuals. This important Review provides us with detailed analysis of the challenge, and a route to the solutions. There will not be a resilient and inclusive recovery to the current pandemic without an immediate adoption of more holistic and inclusive indicators encompassing the well-being of current and future generations.'

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**Russ Feingold, former US Senator; former Special Envoy to Great Lakes Region of Africa; and Ambassador for the Campaign for Nature**

'The Review should be read by everyone making decisions that impact Nature - not just "environmentalists" but also leaders in government and business, investors and consumers whose decisions impact the natural world that we are part of - namely, all of us. The Review gives new meaning to the old saying that "you get what you measure." We need to include Nature in how we measure our economic development and our wealth. The idea that we need to measure Nature will be new to many and actually doing it will be hard. But not including Nature in our economic measurements has brought us to the biodiversity and climate crises we have today. We have no choice but to change how we measure economic progress.'

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**Christiana Figueres, Former Executive Secretary, United Nations Framework Convention on Climate Change (UNFCCC) and Founding Partner, Global Optimism**

'Congratulations to Professor Dasgupta and his team for this essential Review. And kudos to the UK Treasury for commissioning it. It is a compelling example of the leadership we need from government and the world's leading experts on how to address the interrelated crises of Nature and climate. The Review makes it clear that it is less costly to conserve Nature than to restore it once it's damaged or degraded and provides the economic rationale for expanding and improving the management of protected areas. We can translate this idea into action by protecting 30% of the planet by 2030. The Review lays the foundation for how to address the twin crises of biodiversity and climate. We all must take these ideas and turn them into action – now!'

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**Liv Garfield, Chief Executive, Severn Trent**

'If we want a strong, healthy economy we need to invest in a strong, healthy environment.

'The Council for Sustainable Business has seen that across multiple sectors the loss of biodiversity has a hard financial cost, as well as broader societal ones. The good news is that if we invest sensibly in the environment we can save money in the long run and create more pleasant and resilient places in which to live and work. This is precisely the logic behind Severn Trent's Great Big Nature Boost. This scheme involves planting 1.3 million trees, improving 12,000 acres of land and taking care of 2,000 km of river, all of which will help us reduce flooding and pollutions. In turn, this will help us keep customers' bills amongst the lowest in the UK.

'The Dasgupta Review is a serious piece of work looking into the economics of biodiversity. As businesses we need to test the ideas and take rapid action to ensure we put ourselves on the right long-term path.'

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**Kristalina Georgieva, Managing Director, International Monetary Fund**

'The Dasgupta Review comes at an opportune time for the world economy, with many governments thinking about how to embark on a more equitable, greener, and sustainable development path. Professor Dasgupta makes a most compelling case for economists and policymakers to place our biosphere and biodiversity on an equal footing with human and physical capital. The Review is a must-read for all global citizens interested in supporting efforts to tackle climate change and safeguard our world for future generations.'

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**Sir Roger Gifford, Chair, Green Finance Institute**

'The Dasgupta Review confirms what we know in our hearts is true – in our failure to value natural capital in trade and commerce we have pushed our ecosystems to breaking point. We must respond - what is needed is no less than a fundamental and urgent rethink of how we source and use basic commodities and finance has a crucial role to play in making this happen.'

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**Piyush Gupta, Chief Executive and Director, DBS Group**

'As Partha Dasgupta rightly points out, our economic models for development focus on "produced capital". Even the most fundamental measure - GDP - is a measure of output, of goods and services. These models were suitable for a time, for example the era of the great depression and WW2, when reconstruction was critical, and natural resources seen as relatively abundant. Unfortunately, this is no longer the case. It is now quite clear that mankind is currently living outside our planetary boundaries and therefore, as with any constrained resource, we now need to put a price on natural capital. Unfortunately, finding the "right price" is easier said than done. Nature's processes are silent and invisible and therefore subject to the tragedy of the commons. The difficulties notwithstanding, it is critical that we agree on a way to measure the negative externalities from nature abuse and biodiversity loss, and modify our notion of value to incorporate these. As allocators of capital, banks need to be at the forefront of this exercise. The UK Treasury's Dasgupta Review is timely in spurring us in this direction.'

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**Dr Doug Gurr, Director, Natural History Museum**

'After the year we have just had, there can be no doubt that we have to start to heal our broken planet - from a million species threatened with extinction, soaring temperatures marking the hottest year on record to Covid-19 crossing the species barrier. We can't afford to go on like this - but it hasn't been clear how to change course. The Dasgupta Review is a brilliant new synthesis of new economics and the latest biodiversity science. We are proud to have contributed to this milestone review that shows how our planet's health is intertwined with global economies; we need to properly value nature and the Review provides the blueprint for the transformation that we need.'

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**Andrew Haldane, Chief Economist, Bank of England**

'Most of economics and economic policy has neglected the role of Nature and underplayed the importance of biodiversity in protecting both Nature and, ultimately, us.

'The Dasgupta Review not only provides an analytical framework within which Nature is embedded and embodied within our communities, economies and societies; it also provides a policy blueprint for protecting and enhancing biodiversity in ways which, longer-term, would enrich individuals, economies and societies.

'It is a rigorous, comprehensive and brilliantly argued call-for-action which, as a policymaker, I passionately believe we need now to act upon.'

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**Ralph Hamers, Chief Executive, UBS Group**

'UBS recognizes the importance of mobilizing financial resources to preserve biodiversity and was pleased to contribute to this timely review. Through ongoing collaboration of the public and private sectors we can better understand the risks and opportunities for our clients, offering the insights and solutions they need to contribute to the development of a more sustainable world.'

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**Dr James E. Hansen, Director, Climate Science, Awareness and Solutions Program, Earth Institute, Columbia University**

'Flourishing nature, restoration of a healthy climate, and economic well-being of all humanity can co-exist, but they require understanding. Dasgupta's Review helps us begin a journey, which will require decades.'

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**Emeritus Professor Rashid Mekki Hassan, Secretary General, Higher Council for Environment and Natural Resources, Government of Sudan**

'The Dasgupta Review advances our understanding of what makes it hard to incorporate the value of biodiversity in evaluating public policy choices. Readers are well educated about how measures of value are challenged by the three key attributes of "mobility, invisibility and silence" that distinguish this living component of natural wealth from more tangible assets. The Review then establishes the link between the hidden, silent, and mobile features of the services of biodiversity and the environmental externalities that cause outcomes of private decisions to diverge from social optima. The important role of biodiversity in the regulation and maintenance of the dynamic interactions between functional natural ecosystems, social institutions, and human capital, to obtain the desired balance between our demand for and supply of necessary for life services of nature becomes powerfully evident. Absolutely required reading for researchers, policy makers, managers, and students of sustainability science and practice.'

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**Emma Howard Boyd, Chair of the Environment Agency and Adviser to the Board of Trade**

'This excellent report's call to change our measures of economic success is about creating jobs fit for a greener world economy and longer-term, more steady, returns for investors with nature's recovery at their core. As more and more countries look to green finance for an economic boost, there's a race to mobilise trillions of dollars to reverse natural decline and manage climate shocks, like floods and droughts. Governments and companies everywhere should take a good look at their global supply chains and heed these recommendations.'

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**Dominic Jermy, Director General, Zoological Society of London**

'Nature is not a free good. By failing to grasp its value, biodiversity has become collateral damage from the human drive for economic growth. This Review resets the debate amid a Coronavirus pandemic caused by this imbalance between people and nature. The opportunity exists to shift the economic model, by valuing natural capital and recognising that we need nature to thrive if we are to survive. We can bring an end to the crippling 'impact inequality' described in the Review. But Governments, business and societies must listen, learn and transform, fast. Dasgupta points the way.'

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**Tony Juniper, Chair, Natural England**

'For too long it has been widely assumed that the degradation of the environment was a necessary price of progress. This Review reveals, however, that the opposite is in fact the case, and how a healthy natural world is essential for sustaining the health of our economy and society.'

'The clear upshot is that we now need to ensure collective and sustained action to ensure the natural world on which we depend is not only protected, but also restored at transformational

scale. This will require a step change in investment, both public and private, in the recovery of Nature.

'The restoration of the natural world will bring a range of valuable dividends, making this one of the wisest investments we can make, with rich returns seen in, for example, improved public health and wellbeing, catching carbon from the air, helping us adapt to the changing climate, ensuring supplies of clean water, boosting tourism and protecting our future food security.'

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**Indy Kiemel Greene, 15-year-old UK conservationist and naturalist**

'As the British naturalist, Charles Darwin, once said, "A man who dares to waste one hour of time has not discovered the value of life."

Time is against us. Life in all its forms is so precious. Without biodiversity we have nothing. Financial sectors worldwide have to take a lead from this vital report and invest in natural wealth, which ultimately will determine our own health.'

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**Dan Labbad, Chief Executive, The Crown Estate**

'The natural world is the bedrock of our shared prosperity and this review is an important step towards an economic system that values nature, and nourishes biodiversity, to support the wellbeing of all species and help safeguard the legacy we leave to future generations.'

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**Professor Lord Richard Layard, Co-Director, Community Wellbeing Programme, Centre for Economic Performance, London School of Economics**

'If you doubt the impact of humans on the biosphere, read this. It is a masterly, integrated account, and, better still, it shows how we could do better. Economics at its best.'

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**Professor Simon A. Levin, James S. McDonnell Distinguished University Professor in Ecology and Evolutionary Biology, Princeton University**

'The Dasgupta Review is the most seamless, authoritative and elegant treatment of the economics and ecology of biodiversity in existence, or likely to be. This is hardly surprising, since the author embodies the integration of the necessary perspectives more completely than anyone who has addressed the subject.'

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**Professor Justin Yifu Lin, Dean, Institute of New Structural Economics, and Honorary Dean, National School of Development, Peking University**

'The Review is a timely and urgent call for the conservation and restoration of biodiversity in nature, within which humanity is embedded and relies on for existence. The study provides the needed understanding and recommendations for building up a sustainable ecological civilization for our and future generations in the world. Decisive biodiversity actions at the community, national and global levels should be followed immediately for preventing devastating impacts on our health, well-being and economy from pandemics, similar to COVID-19, and other risks fueled by the accelerating loss of biodiversity.'

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**Professor Thomas E. Lovejoy, University Professor, Environmental Science and Policy, George Mason University**

'A profoundly important analysis of the interaction of economics and biodiversity: with thoughtful farsighted insights to correct our past myopia. A recipe for everyone – governments, businesses and individuals – to address and correct the far too frequent destructive effects of human activity on the biological underpinnings of both humanity and the rest of life of Earth.'

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**Hon. Jane Lubchenco, Ph.D., Distinguished University Professor, Oregon State University and former inaugural U.S. Science Envoy for the Ocean (2014-2016)**

'The Dasgupta Review is the most profound and important document published in the last 100 years. The Review proposes a quantum leap in the utility of mainstream economic models by internalizing the reality that humanity is dependent upon Nature. It makes clear that simply grafting new features such as climate change onto existing models fails to address fundamental flaws in the underlying models themselves. Rather, the economy must be understood to be embedded in the biosphere, not independent of it. Economic accounts must be inclusive of Nature as an asset; economic processes must reflect the relationships between biodiversity and other assets; the economics of biodiversity must be understood to be fundamentally different from the economics of produced capital. This wholesale rethinking, repositioning, reconceptualizing the relationship between the economy and Nature has profound ramifications.

'This logical, timely, but radical thinking provides hope and a path toward enlightened local-to-global portfolio management in which all assets and their relationships to each other are considered holistically.

'The stakes could not be higher: the future of humanity is at risk. The carefully explained concept of Inclusive Wealth in the Dasgupta Review does more than simply challenge the status-quo, it provides a bold but practical blueprint for enlightened, inclusive economic development that is sustainable and just.

'Read this report, envision a vibrant, hopeful future, and seize the opportunity to make that vision a reality through Inclusive Wealth for our common future.'

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**Professor Robert E. Lucas, Jr., Nobel Laureate and John Dewey Distinguished Service Professor of Economics at the University of Chicago**

'Dasgupta's Review provides a deep and wide-ranging assessment of the importance of natural assets for the economic wellbeing of populations around the world. It makes an invaluable contribution in explaining how natural resources, including climate and biodiversity and other aspects of the environment, as well as tangible assets like forests, fisheries and mineral deposits, contribute to and are affected by man's activities.'

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**Dr Robert Macfarlane, Fellow, Emmanuel College, University of Cambridge**

'The Dasgupta Review is a major achievement. It recognises that we have degraded the biosphere to the point of profound malfunction, and produced immense and unevenly distributed human suffering in the process. It seeks to address this by re-imagining the task and vision of economics, such that Nature – and especially biodiversity – are placed at the heart of our notion of wealth. Crucial to the Review is the idea of "good ancestry": the responsibility we currently bear not to leave a devastated Earth for future generations. As an educator with particular interests in early years and childhood education, I was especially struck by the Review's closing call for an ecological education to be integrated into all learning, from the

earliest stages. Professor Sir Partha Dasgupta has written a vital document for our times, at a vital moment for the planet.'

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**David Malpass, President, World Bank Group**

'Climate change and the loss of biodiversity are defining issues of our time. They present critical challenges to reducing poverty and inequality. This timely review presents a strong economic case for the need to address biodiversity loss and act urgently. The World Bank Group has supported operations focused on biodiversity for three decades – conserving species and natural habitats and working to improve livelihoods for people in sectors that rely on natural capital, including forestry, fisheries, and agriculture. We will continue to ramp up our biodiversity work and support countries to align their biodiversity and climate goals with development programs.'

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**Professor Eric Maskin, Nobel Laureate and Adams University Professor and Professor of Economics and Mathematics, Harvard University**

'Soberly and authoritatively, the Review shows that we are degrading our natural environment so quickly that avoiding our own impoverishment or extinction will be hard. It also offers a possible escape route, but one that requires nations to replace GDP as their measure of success with "inclusive wealth" – comprising not only conventional economic assets but the biosphere itself.'

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**Ajay Mathur, Director General, The Energy and Resources Institute**

'We would move miles ahead if we are able to implement just one of Professor Dasgupta's recommendations – that of making our institutions conscious and cognizant of our biodiversity resources. As his report shows, this is indeed possible – unfortunately it is done too infrequently.'

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**Professor Bonnie J. McCay, Distinguished Professor Emerita, Rutgers University and Member, U.S. National Academy of Sciences**

'This extraordinary work in ecological economics is true to empirical data, fair in respecting the diversity of perspectives, and compelling in showing the embeddedness of society in nature and the responsibilities that entails.'

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**James Miller, 19-year-old environmental campaigner and filmmaker**

'The report describes how nature fundamentally underpins our economy, and highlights the urgent need for this to be reflected in the way we measure and pursue prosperity. If we continue to ignore nature's value, and strive for GDP at its expense, that will pose extraordinary risks to society. COVID-19 is just the tip of the iceberg.'

'It is crucial that countries around the world take the opportunity presented by the UN Biodiversity Summit and COP26 to act on the findings of this report, and create strong international agreements that protect our climate, biodiversity and oceans. The UK government, through its Presidency of COP and the G7 summit, has a chance to show much-needed international leadership.'

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**Jennifer Morris, Chief Executive, The Nature Conservancy**

‘The Dasgupta Review issues a clarion call to world leaders: we must tackle the nature crisis in conjunction with the climate emergency for the sake of our economies, livelihoods, and wellbeing – and those of future generations. The COVID-19 pandemic has laid bare the full extent of our broken connection with nature—but it has also highlighted the power of global, radical collaboration in addressing complex problems with urgency. This same collective energy must now be applied to preventing the further destruction of nature.’

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**Ken Murphy, Group Chief Executive, Tesco**

‘We know that our long-term success depends on the health and stability of our natural environment. That means adopting sustainable agriculture practices that protect water resources, biodiversity, climate and soil health, and playing our part in addressing the environmental impact of food production and consumption on a global level. We welcome the timely publication of the Dasgupta Review, which clearly lays out the economic case for rebalancing our relationship with nature.’

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**Dr Bruno Oberle, Director General, International Union for Conservation of Nature**

‘The Dasgupta Review on the Economics of Biodiversity clearly shows that our economies and societies are embedded in nature, forcing us to recognise the boundaries we must place on our consumption and use of natural resources. It is my hope that this evidence brings much-needed change to our relationship with natural capital and leads to effective and impactful global decisions, much like the Stern Review did for the climate. We now have a new tool in our understanding of what must be done, and it is extremely encouraging to see the Dasgupta Review at the centre of the global discussion.’

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**Lord Jim O’Neill, Chair, Chatham House**

‘This study shows clearly that we need to devote a lot more thought and action towards managing our human interaction with the natural world as, of course, does the dreadful pandemic we are witnessing. Improving wealth and living standards does not necessarily damage the world’s resource base or the biodiversity, but we need to act faster to respect the environment, otherwise, we are going to see repeated clashes between the accepted ways of life and our mistreatment of the natural world, that will result in it exacting its revenge.’

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**Hank Paulson, Chair, Paulson Institute and former US Treasury Secretary**

‘We face a biodiversity crisis that poses significant risks to our global economy and the health and well-being of humanity. As the Dasgupta Review makes clear, we cannot afford to continue with “business as usual.” Now is the time to build a coalition of governments and financial institutions to steer public and private capital away from activities that harm our natural world to those that encourage and incentivize the protection and restoration of biodiversity and ecosystems of the planet.’

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**Professor Charles Perrings, Professor of Environmental Economics, Arizona State University**

‘The Dasgupta Review is at once a thoroughgoing assessment of the place of biodiversity in the global economic system, and a penetrating theoretical exploration of the connections between

nature, wealth, and wellbeing. It is a “must read” for all those concerned about the wider consequences of environmental change.’

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**Ben Pollard, Founder and Chief Executive, Cushon**

‘This Review provides a fascinating insight into how we think about our relationship with nature. Anyone who, like me, cares about the impact of policy decisions on nature and global communities, will appreciate the urgency of its message. We all have a role to play, and this report highlights the need for stronger political and institutional leadership to harness the power of the private sector to create positive impact.’

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**Paul Polman, Co-Founder and Chair, IMAGINE**

‘The Dasgupta Review could not come at a more crucial time, as we urgently need to reassess the intrinsic value of nature and its undeniable connection to our economic, social and physical wellbeing. Unlimited economic growth is simply not possible on a planet of finite natural resources. Business leaders and policymakers need to act now and grasp the enormous opportunities of fundamentally reframing our relationship with nature.’

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**Professor Robert D. Putnam, Research Professor, Harvard University**

‘Partha Dasgupta adds to his lengthy list of remarkable scholarly and policy accomplishments in this landmark report on biodiversity, which notably includes new attention to the role of communities and civil society.’

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**Noel Quinn, Chief Executive, HSBC**

‘The Dasgupta Review makes clear that the world cannot tackle climate change and build long-term economic resilience without protecting and enhancing nature - our most important asset. The financial system has a crucial role to play in encouraging investment in nature and factoring nature-related risks into financial decision-making. HSBC is strongly committed to growing the world’s natural capital, and ready to support the development of common standards and frameworks to encourage more sustainable investment in this precious resource.’

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**Lord Randall of Uxbridge, Former Member of Parliament for Uxbridge and South Ruislip**

‘Our natural world is more under threat than ever and at the same time more people around the world realise how important nature is to their lives. This masterly report is incredibly timely to underline the basic fact that our world simply cannot afford to ignore the fundamental economics of biodiversity as well as all the other benefits it brings to the human race.’

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**Professor Peter Raven, Missouri Botanical Garden President Emeritus and George Engelmann Professor of Botany Emeritus, Washington University, St. Louis**

‘With eight times as many people in the world as when Adam Smith published *The Wealth of Nations* (1776), we are forced, like it or not, to take nature’s productivity into account in constructing any realistic economic model. The loss of biological species and the associated unravelling of the living systems that support us have become a global torrent of destruction. The foundational, original analyses presented here by Sir Partha Dasgupta will necessarily underpin our future calculations if the survival of civilization is our objective.’

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**Lord Rees of Ludlow OM FRS, Astronomer Royal**

'Loss of biodiversity threatens health, well-being and prosperity – for the world's people today, and for all future generations. This authoritative and cogently-written report spells out what's at stake, and presents a compelling case for urgent action worldwide. Partha Dasgupta has given us a document that's both practical and inspirational. Let's hope it motivates the shift in priorities that's needed if nations are to create a sustainable global future. It deserves to be hugely influential.'

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**Dame Fiona Reynolds, Master, Emmanuel College, University of Cambridge**

'If the coronavirus pandemic has had one benefit, it's been to wake us all up to the vital importance of nature. But that's not enough: we need to stem its decline and put it into recovery. The Dasgupta Review offers hope for nature across the whole planet by showing us how we need to think and what we need to do differently so that we live within nature's limits, not beyond them. And with the forthcoming UN Biodiversity Conference in Kunming, China, we have the chance to act collectively and with determination.'

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**Philipp Rickenbacher, Chief Executive, Julius Baer**

'I congratulate Professor Dasgupta on his thorough work in identifying and dissecting the diverse revenue streams nature brings to our economies. Through the lens of a globally leading private bank, we see a compelling business case to evaluate investment opportunities in nature to protect our valuable ecosystems in perpetuity.'

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**Enric Sala, Explorer in Residence, National Geographic**

'The natural world makes human life possible, but for long we've been told that economic growth prevails over nature. At a time of unprecedented environmental degradation and consequent human suffering, The Dasgupta Review puts the final nail in the coffin of that suicidal way of thinking. The Review is clear: if we are to prevent a global humanitarian catastrophe, we need to curb our excesses, reform our failed institutions at all levels, make the economy work for us and not the reverse, protect what wild is left, and restore much of our degraded lands and ocean.'

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**Professor Samuel Scheffler, University Professor of Philosophy and Law, NYU**

'This visionary report argues, with rigor and passion, that economics can and must acknowledge our embeddedness in the natural world and devise better ways of incorporating environmental and ecological considerations into social decision-making. Only then will it provide policy-makers and citizens with the tools they need to protect the biosphere on which we all depend and stem the rapidly accelerating degradation of our environment. The Dasgupta Review will help set the agenda for future discussions of the economics of biodiversity.'

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**Divya Seshamani, Council for Sustainable Business and Managing Partner, Greensphere Capital**

'The simple truth that biodiversity is critical to our survival as a species, has always been clear to many of us on the frontline of environmental protection. It is therefore with a mixture of hope and excitement that I welcome the UK Government incorporating the conclusions of the Dasgupta Review into its policies for a resilient economy - now needed more than ever in a

post-COVID world. The Review provides an excellent, evidence-based economic framework to put biodiversity at the heart of how we, as a nation, transform our institutions and systems to grow sustainably.'

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**Shekhar Shah, Director General, National Council of Applied Economic Research**

'The Dasgupta Review stands out as the simplest and the most accessible and elegantly argued statement available today of why the wealth of any nation must include Nature and biodiversity. With deep insight it describes why our economies, livelihoods, and well-being all depend on this precious asset that humankind has, and why we cannot continue to demand more goods and services from Nature than it can supply. Dasgupta argues that this can be reversed by changing how governments and individuals think, act, and measure success, overcoming institutional failures within each country and across countries that prevent us from striking a balance "between what humanity takes from Nature and what we leave behind for our descendants." The Review is so timely during this tumultuous period of global havoc and personal tragedies that the Coronavirus has produced, a stark reminder of why Nature is us and we are Nature. The more biodiverse our world, the lower the chances of a pathogen passing from one species to another and dominating.'

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**Beccy Speight, Chief Executive, RSPB**

'This hugely significant review brings together a wealth of evidence to demonstrate that our economies, livelihoods and well-being all ultimately depend on the health of the natural world. The review makes the economic case for environmental action crystal clear; and shows us why every finance minister in the world should now be investing in protecting and restoring nature.'

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**Professor A. Michael Spence, Nobel Laureate and Philip H Knight Professor and Dean Emeritus, Stanford Business School, Stanford University**

'Most of us have come, albeit a bit slowly, to understand that we have entered a new era, sometimes called the Anthropocene, in which the dominant influence on nature is human activity. The just published Human Development Report of the United Nations is premised on this view. Biodiversity is crucial in thinking about sustainable economic and social trajectories and about planetary boundaries.

'This review is led by Sir Partha Dasgupta, a gifted economist who has spent decades in collaboration with biologists and ecologists, figuring out how to build nature into economic models and frameworks. It is exceptionally valuable in many ways, but for me, particularly in laying out so clearly why assets, including especially natural assets, are central to understanding sustainable and unsustainable paths. Standard measures like GDP, growth, productivity, are flows or ratios derived from flows. As performance indicators, they are at best incomplete, akin to flying with half the instruments out of commission. A comprehensive picture of the assets on which our well-being depends is an essential guide for policy, behaviour, and education. The review calls this comprehensive approach, inclusive wealth. One hopes the review will have the impact it richly deserves.'

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**Tanya Steele, Chief Executive, WWF UK**

'The findings of the Review are clear: nature underpins our economies and our prosperity. Our failure to recognise this fundamental truth, and take steps to reverse nature loss, is costing us dear. To safeguard our future, we must transform our economies and finance systems, so they are geared towards restoring the natural world on which we all depend.

'Our climate and nature goals need to become a core part of how decisions are made on all aspects of policy – and in particular economic and fiscal policy, with a test to make sure public spending aligns with the Government's net zero commitments.

'We also need the UK Government to throw its full weight behind establishing a new Global Commission on Economy and Nature – because if we're going to succeed, we need to see countries working together to tackle this enormous threat.'

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**Emeritus Professor Will Steffen, Australian National University**

'This is a powerful review at a critical time. It analyses why we are liquidating our own planetary life support system and proposes visionary economic and governance approaches towards true sustainability. It should be mandatory reading for anyone interested in the future of the planet.'

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**Professor Lord Nicholas Stern, IG Patel Professor of Economics and Government, London School of Economics (LSE) and Chair, Grantham Research Institute on Climate Change and the Environment, LSE**

'The Dasgupta Review shows that we are taking out much more from the Earth than it can stand, we are running it down fast, and we will pay the price. With its clear, comprehensive and conceptually well-founded framework, it provides the foundation for urgent action needed now to tackle the interconnected challenges of climate change and biodiversity loss.'

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**Professor Joseph E. Stiglitz, Nobel Laureate; University Professor, Columbia University and Chief Economist, Roosevelt Institute**

'We are living beyond our planetary boundaries, which is obviously unsustainable. Most recognize the consequences of climate change, including on our wellbeing, and actions have been taken, although not enough. But there is a much bigger picture, and for the first time a major government review addresses it. While called "The Economics of Biodiversity"—conducted by the world's leading economist on ecology, economics, and growth and development, Sir Partha Dasgupta—it is about biodiversity writ large, and how we as humans can live within a sustainable ecology. The report describes forcefully the destruction to the biosphere we have wrought in the past century. It provides an important measure by which we can gauge what we are doing—whether inclusive wealth is increasing or decreasing. It outlines the actions that have to be taken. It is not sanguine that technology by itself will save us. It provides, for the first time, a framework for the difficult global discussions we must have on how to restore sustainability, not just in climate but in all dimensions of the environment.'

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**Pavan Sukhdev, Chief Executive, GIST Impact; Goodwill Ambassador, UNEP; and, former Study Leader, TEEB**

'The economic invisibility of nature, despite its many and valuable contributions to human wellbeing, continues to plague the worlds of policy-making and business decision-making and drives the accelerating losses of biodiversity and ecosystem services that, regrettably, we continue to see to this day. Correcting this problem at its root requires changing how we value and account for natural capital in every dimension of human endeavour. It is therefore heartening to see the publication of the Dasgupta Review, a timely and trenchant reminder about why and how we must change the way we make policy, do business and account for our true wealth, if human society is to continue to thrive on earth.'

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**Kristian Teleki, Director of the Ocean Programme of the World Resources Institute; Director of Friends of Ocean Action at the World Economic Forum and Head of Secretariat - High Level Panel for a Sustainable Ocean Economy**

'We once thought the Ocean was inexhaustible and able to withstand everything that humanity did to it. But this \$24 trillion asset and seventh largest economy in the world, if put into terms of Gross Domestic Product, is in serious trouble. This is one of the planet's savings account from which we keep making only withdrawals, even though we all know that to continue this pattern will lead to bankruptcy. The Dasgupta Review clearly makes the case that we need to prioritize nature-positive investing and consumption as though our very existence depends on it – which of course it does!'

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**Dr Rhian-Mari Thomas OBE, Chief Executive, Green Finance Institute and Co-Chair of the Informal Working Group of the Taskforce for Nature-Related Financial Disclosures**

'The Dasgupta Review makes clear that the value of nature and ecosystem services to our global economy urgently needs to be translated into financial risk models and impact assessments. In response, we need determined action in redirecting global financial flows away from nature-negative outcomes and towards nature-positive outcomes. As with climate, to achieve a nature-positive transition will require all of finance to work together to be part of the solution – both private and public.'

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**Sunny Verghese, Co-Founder and Chief Executive of Olam International and Chair of the World Business Council for Sustainable Development**

'Now more than ever, it is vital to recognise the interdependence of protecting our natural resources and improving social equality alongside global prosperity. Economic growth and sustainable development must not be viewed as a binary choice. Businesses and policymakers must urgently and collectively work to drive changes that will conserve our world now and for the future. Businesses must accelerate their reporting to account for their natural and social capitals, while governments must establish clear policies to promote and incentivise investment to conserve our natural world. The Dasgupta Review shows clearly that if we are to reverse – and restore – the negative impacts on our planet and people, we cannot wait to do the right thing.'

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**Richard Walker, Managing Director, Iceland Foods**

'This is a critical, timely and valuable piece of work on the economics of biodiversity. It proves that leaders who do not recognise the importance of nature to humankind are not only failing as custodians of the planet, but as guardians of generations to come. We now need an urgent shift of mindset to accept the fact that economic success, along with thriving communities, can only be achieved if they are embedded within nature. Congratulations to Professor Dasgupta, his colleagues and contributors, who have set out this premise so clearly and suggested practical ways in which we can all think, act and measure success to protect not just nature but our future.'

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**Sir Bob Watson, former Chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services**

'This important report demonstrates how nature is an asset that plays a vital role in the human well-being of current and future generations. But we can only realize this potential if we stop over-exploiting it and embrace natural capital in decision-making, and invest in its conservation

and restoration. This report comes at a critical time given the upcoming meetings of the biodiversity and climate Conventions to negotiate new targets, goals and commitments.'

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**Kate Wylie, Global Vice President of Sustainability, Mars Incorporated**

'The Dasgupta Review is a deep analysis on the evolution required in economics to incorporate nature. The world is facing a nature and biodiversity crisis and HM Treasury should be thanked for taking the leadership in sponsoring this Review. The next step will be to see insights incorporated into policymakers thinking in the UK and internationally.'