



Book review

The Economics of Biodiversity: The Dasgupta Review, Partha Dasgupta. HM Treasury, London (2021)., ISBN: 978-1-911680-29-1

The Dasgupta Review, named after its primary author (a mainstream resource economist at Cambridge University), was commissioned by the UK Treasury and is a manifesto for the financialisation of Nature as a wealth creating capital asset. On its launch, Sir David Attenborough, naturalist and TV personality, official Ambassador for *The Review*, controversially proclaimed that economists understand the value of biodiversity better than ecologists. In line with the [United Nations \(2021\)](#) system for applying environmental economics to ecosystem accounting, it is economists, not ecologists or conservation biologists, who are required to deliver the ‘accounting prices’ that would allow management of biodiversity. Yet, *The Review* has been popularly supported by environmental NGOs (e.g. Royal Society for the Protection of Birds, World Wildlife Fund) and Dasgupta lauded as an ecologically concerned economist.

Over the course of twenty one chapters (602 pages) Dasgupta, aided by various background ‘contributors’, moves from outlining ecological crises to reducing Nature to capital, ecosystems to stocks and biodiversity to a sub-class of wealth-contributing financial assets. The theoretical base is textbook (neoclassical) economic foundationalism, using axiomatic deductive mathematical optimisation models to claim economists know how to allocate resources efficiently. Along the way, strong uncertainty (ignorance and indeterminacy) is reduced to weak probabilistic risk, and all that is qualitative becomes quantitative. Despite its length, and claim to be a ‘review’, there is much missing. For example, Chapter 12 covers the core issue of valuing biodiversity in just twenty-one pages (3.5% of the report), eight of which are an ‘annex’ uncritically presenting a case study. The literature included on biodiversity economics is appallingly thin and biased, there is an absence of critical reflection on mainstream economic theory, models and their assumptions, as well as nothing addressing the serious limitations and inadequacies of monetary valuation methods and social cost-benefit analysis which are central to the whole approach. *The Review* lacks critical reflection on how such economic reasoning has contributed to the extinction crisis, and, while claiming more attention by economists to Nature is required (p.130), critiques from outside mainstream economics are explained as having been legitimately dismissed (p.4), because Dasgupta believes the mainstream has provided better models!

Treating biodiversity and indeed all Nature as if it were a financial asset to be managed, taking into account probabilistic risk on the expected rates of return, is the bottom line for Dasgupta. This requires ‘getting the prices right’ by valuing all assets in terms of their social costs, or, as Dasgupta prefers, their ‘accounting prices’. This would be a gargantuan task, even if one believed it were feasible. The fact is that such valuation is neither theoretically justifiable nor practically possible. Even within the neoclassical economic approach, monetary

valuation is only valid for marginal changes not adjusting every single price in the economy, and yet that is exactly what would be required, because environmental damages (e.g. biodiversity loss, pollution) are all pervasive. Supposed ‘externalities’ are internal to the price-making market as a competitive system, which shifts costs on to others, both human and non-human, present and future.

The whole approach is typical of mainstream economists: talk about substantive challenges then squeeze them into the unchanged pre-existing paradigmatic theory. For example, half a century after [Meadows et al. \(1972\)](#) modelled scenarios for inevitable systems collapse due to exponential growth, Dasgupta has been praised for recognising there are limits to economic growth. Yet, his belated confession has little purchase in terms of policy implications. He still maintains that GDP growth is compatible with “sustainable development” (p.337) and that “it could be possible for GDP to grow without an increase in demands on the biosphere” (p.339). Elsewhere he states that “it is possible for both GDP and inclusive wealth to grow indefinitely even as they tend to finite limits [...], provided the stock of natural capital is large” (p.138). A central claim here is that: “social well-being is maximised if and only if inclusive wealth is maximised” (p.42). As a consequence, maximising inclusive wealth is considered to automatically maximise intergenerational well-being which is then framed as the objective of policy-making. Dasgupta terms this his “sustainable development theorem” (ibid: 333). At the launch, he officially endorsed the aim of *The Review* as being to use Nature's goods and services to achieve sustainable economic growth.

This is additionally interesting because Dasgupta associates himself with ecological economics (p.61, p.322) and notes his role as Director of the Beijer Institute of Ecological Economics in the 1990s (p.7), where he collaborated with environmental economist Karl-Göran Mäler to implement a mainstream economic research programme. His praise for the Institute's board members of the time notably excludes the leading ecological economist Herman Daly who resigned. Daly later stated: “I felt it was a kind of take-over—here is something called Ecological Economics, it is beginning to get a little following, it might get in the way some day, let's just take it over” (quoted by [Röpke, 2005](#): 272). Daly is held in high regard for his sustained criticism of what Ezra Mishan called ‘growthmania’, and his development of a proposed alternative steady-state economy.

The point is that Dasgupta deliberately excludes decades of relevant research and literature in ecological economics. If he read [Georgescu-Roegen \(1971\)](#), a Distinguished Fellow of the American Economic Association under whom Daly studied, he would not treat ecosystems as a capital stock supplying flows, but a fund maintaining processes. Running down a stock is not equivalent to using a fund that can supply and maintain a function, as ecosystems can do, on the basis of their structure. Funds can provide a given service per period of time without being depleted, while use of a stock means depleting it at a variable rate (the flow). Ecological economists also recognise that supposedly

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sustainable circular bioeconomies are in fact linear material and energy throughput systems that degrade natural systems to create artificial ones, and so require more artificial structural substitutes, more throughput and more destruction... This vicious circle is not broken by incorporating Nature, as a set of accounting prices, into the process of its own destruction. Georgescu-Roegen also pointed out the failure of economists to recognise qualitative features of the world due to their insistence on using quantitative mathematical categorisation—a basic category mistake. Dasgupta appears oblivious to such textbook lessons in ecological economics, which are based on ecological realities, and so promotes an economic system reliant upon destroying ecosystem's structures and functioning to create wealth based on the monetary value of a stock of capital.

Indeed, at the heart of *The Review* is the imagined triumvirate of produced, natural and human capital. Dasgupta defines an economy's 'inclusive wealth' as the weighted (accounting price) sum of the stocks of all the capital goods it possesses. Biodiversity is downgraded to being an enabling asset, not even a primary capital concept. The idea of placing everything in a single capital/asset form is to allow commensuration: all values are equivalent and a total value for wealth can be calculated. A core issue is then the degree to which substitution is allowed across these forms of capital/assets. Here Dasgupta fudges the issue by claiming a high price indicates non-substitution (p.328), which is totally fallacious because it merely indicates costly substitution! Converting everything to money is the essence of economic (perfect) substitutability and market trading. Absent from discussion is the long recognised inability of economists to define the value of even a human-made capital stock due to total circularity in their definition, because knowing the stock itself depends on the price which depends on the stock; see [Spash and Hache \(2021\)](#).

Then there is the essential and necessary claimed ability to undertake universal monetary valuation of all forms of capital, which must include valuing all social and environmental benefits and harms across space and time. Dasgupta—like other mainstream economists such as William Nordhaus and David Stern—relegates the fate of the future to a theoretical dispute over discount rates. Meanwhile, the necessary accounting price adjustments he recommends require environmental cost-benefit methods that appeal to individual (utilitarian) preferences. Research shows that, when asked to state their preferences for biodiversity (e.g. changes in species numbers, ecosystem structure) as willingness to pay, individuals, in significant numbers, reject the economists' valuation approach: expressing plural and incommensurable values, rights-based

or virtue ethics, refusing trade-offs and evidencing lexicographic preferences. In addition, assuming individual's have well formed preferences for specific marginal changes in ecosystems, species and/or genes makes little sense. The supposed 'review' fails to take any of these concerns into account and simply ignores the literature.

Even without all these problems, the capital/asset approach offers no protection for species or ecosystems and thus cannot help societies address the extinction crisis. As Dasgupta (p.41) states: "An asset that has a lower rate of return than another will not be chosen. A portfolio is the best for the agent *only* if the assets in it have the same rate of return". Preserving biodiversity that does not payback profit is inefficient. Slow growing stocks should be liquidated and the capital invested elsewhere. Dasgupta then dishonestly claims his approach equates to "saving the Blue whale" (p.354). They are simply a bad investment, along with old growth forests and much else in Nature that reproduces too slowly. Cutting down the Amazon and Indonesian forests to plant oil palm trees is how to get high rates of return. Financial profiteering is the essence of capitalism and a core mechanism causing ecological harm and crises. Dasgupta's capitalist approach to Nature will preserve nothing, it simply makes investors money and accumulates financial capital. Biodiversity valued as a financial asset will be destroyed, not saved.

Declaration of competing interest

There is none.

References

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