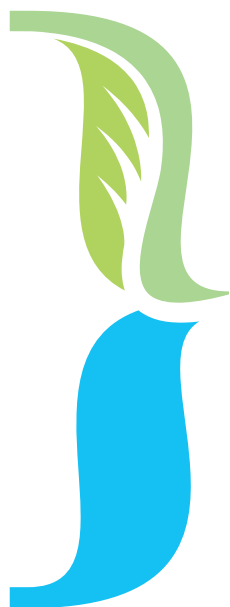




RISKS OF PERVERSE OUTCOMES FROM ACCELERATING **NATURAL CAPITAL THINKING**: A REFLECTION



1. Introduction

This paper has been developed in response to a concern expressed by the ethics review panel appointed to review the We Value Nature proposal, that there is a ***“risk that businesses may perversely apply natural capital approaches to justify damage to species and ecosystems”***. In response, the We Value Nature consortium requested the chair of the We Value Nature Academic Review Board and two distinguished academics who focus on natural capital accounting to develop this note to highlight the possible pitfalls of natural capital accounting and how to guard against them. This document does not seek to resolve this debate (this is impossible) but rather seeks to keep this space open for critical reflection.



‘Natural capital thinking’ involves adopting various approaches to placing a value on nature, such that an organisation’s impacts and dependencies on nature can be brought into account in its decision-making (Natural Capital Coalition, 2016). Natural capital thinking is proliferating rapidly, driven in part by initiatives such as the **We Value Nature** project and also championed by the Capitals Coalition ([The Capitals Coalition – redefining value to transform decision making](#)). The rationale for such thinking is that if organisational decision-making ignores the value of nature (as has largely been the case historically), then short-term economic considerations will continue to take precedence over ecological considerations, leading to the further degradation of the biosphere. Whilst this is an appalling tragedy in its own right, with the extinction of unique species and the destruction of complex ecological systems, it is also highly detrimental to the long-term well-being of humanity. Nature provides myriad vital services that are fundamentally crucial to the functioning of our economies and societies (Dasgupta, 2021). So natural capital thinking aims to secure the well-being of humanity by rendering decision-making more conducive to the conservation and restoration of nature. This line of thinking has been advanced over a number of years in the policy environment: from the Millennium Ecosystem Assessment (2005), through to The Economics of Ecosystems and Biodiversity (2010) and the Dasgupta review (2021). These publications focus primarily on the macro policy space, but they also include recommendations for integrating natural capital thinking at the organisational scale.

At the same time, natural capital thinking has met with concerns that it may actually facilitate even greater loss of nature (Barter, 2015; Monbiot, 2018). There are layers to this concern. In the first instance, there is a concern that valuing nature through the lens of 'capital' risks limiting rich and diverse understandings of social and natural worlds (Sullivan 2017b) and in turn this is seen to lead inexorably to the monetisation of nature and its integration into economic markets (that is, its marketization). In this context, natural capital thinking is characterised as putting a price on nature and then leaving the market to sort out the problem of conserving nature alongside the creation of new financial assets. This approach raises particular concerns because economic focused markets are not able to take equity into account and hence market-based nature accounts risk entrenching inequity (Sullivan 2017b, 2018). A second outcome from bringing nature into markets arises from the tendency of economics to promote nature's instrumental value which is seen to denigrate nature's intrinsic value (again there is a risk that different stakeholders might have different views, with those seeking nature's intrinsic value being less powerful). This tendency also risks replacing people's basic love of nature, and a moral obligation to protect it, with market-based incentives to act in their own financial self-interest. A third concern is that if economic self-interest dominates natural capital accounting, then an organisation may be able to more effectively exploit nature. Finally, natural capital accounting is argued to be detrimental to the conservation of nature because equating natural capital with human-made capital is seen to permit trade-offs between these, which creates conditions for decision-making that can justify and legitimise destruction of natural capital in favour of human-made capital. Additional concerns span the limited evidence of the use of market or financial mechanisms to achieve promised ecological outcomes (Chiapello & Engels 2021; Sullivan 2017a) or address the structural causes of socio-ecological crises (Spash & Hache 2021). The framing of 'capital' risks limiting rich and diverse understandings of social and natural worlds (Sullivan 2017b).

Whilst concerns about natural capital thinking are valid, and the risks to nature from the misuse of natural capital accounting are real, there are some nuances to natural capital thinking that can help to mitigate these.

2. Nuances in natural capital thinking

Distinctions between quantification, evaluation, monetization and marketisation

First and foremost, natural capital thinking and valuation does not have to mean monetisation of nature (Cuckston, 2019, Thomson, 2021). A commitment to valuing nature means adopting various approaches to valuation, depending on the decision-making context (Vollmer, 2021). Valuation can be quantitative or qualitative (Cuckston, 2021b). Value does not just mean economic value. It can mean social or cultural value, spiritual value, or ecological value (Russell, Milne, & Dey, 2017). Value does not just mean value to a company or its shareholders. It can mean value to other stakeholders, to society, or to the integrity of the biosphere (Bebbington et al., 2020). Valuing nature, in this much broader sense, does not therefore need to mean that natural capital is made commensurable (and thus tradeable) with human-made capital. Indeed, in the vast majority of cases, doing so would be an inappropriate application of natural capital thinking. This notion is captured by Frame & O'Connor (2011) who identify the notion of a 'monetization frontier' where some aspects of decision-making can reliably be monetized while other aspects remain decision relevant but outside of this process (see also Frame & Brown, 2008; Frame & Cavanagh, 2009).

In this light, it is worth considering the alternative to valuing nature, which is essentially to continue to ignore the value of nature in business decision-making. This is still a valuation, but one that sets the value of nature to zero in economic terms and hence invisible if there is a reliance on financial decision-making. Even if nature is not valued at zero (there might still be a financial cost to access nature's services) the value attributed to nature is likely to be lower than its "true" value (to the extent this can be determined). The argument that one should not value nature, therefore, is hard to square with the desire to restore and conserve nature. Indeed, a zero (or cost to access) value for nature has been historically dominant in decision-making and has been demonstrably ecologically disastrous.

The calls to eschew natural capital thinking can also be seen as, in essence, calls to maintain the sanctity of nature and the purity of its separateness from human society. The problem is that nature is not separate from society. Rather, nature and society are deeply intertwined within socio-ecological systems (Castree & MacMillan, 2001). As such, the conservation and restoration of nature requires the organising of socio-ecological systems in ways that sustain ecosystems and that protect habitats and species (Cuckston, 2018, 2021a). This work of organising socio-ecological systems in turn requires that managers have the information they need to make decisions that can lead to desirable socio-ecological outcomes (Feger et al., 2019). The conservation and restoration of nature thus demands that we account for nature in ways that enable this organisational work.

In addressing the risks involved in accelerating natural capital thinking it is helpful to consider two key distinctions between forms of accounting for nature. The first is a distinction between macro-level accounting and entity-level accounting. The second is a distinction at the entity level between financial accounting and management accounting. Finally, the possibilities for ecosystem-centric accounting is discussed.

Macro-level and entity-level natural capital accounting intersections

Natural capital accounting is most intuitive at a macro-level (Sobkowiak, Cuckston, & Thomson, 2020). Global, regional or national assessments can identify and account for ecosystems and the services they provide that benefit society. These macro-level accounts of natural capital enable intergovernmental organisations, and regional and national governments, to better understand the vital importance of nature to the functioning of the economy and the well-being of society.

Conversely, natural capital accounting tends to be less intuitive at the level of an individual organisation, particularly for a profit-seeking corporation with a primary focus on maximising the wealth of its shareholders (Dey & Russell, 2014; Feger & Mermet, 2017). This focus means that corporations are largely constrained by short-term financial imperatives and so do not have the capacity to concern themselves with natural capital that benefits wider society (Gray, 2010). It is fundamentally difficult to ask a corporation to give up its financial resources (which directly benefit its own shareholders) in order to restore and conserve natural capital (which may only provide ancillary benefits to its shareholders).

An important response to this difficulty is the growing realisation amongst many corporations that they have natural capital dependencies that underpin their operational and economic viability. This is an important outcome in itself and has also led (in some places) to a recognition that corporations may need to collaborate in order to protect a common natural capital dependency (for example, infrastructure providers will be reliant on land management practices to reduce flooding incidents in the face of more volatile weather). Moreover, this joint dependency and/or impact gives rise to the opportunity for organisations to jointly develop natural capital thinking and (perhaps) jointly invest in the integrity of natural systems. This recognition that understanding natural capital dependencies can lead to better business is some way from an instrumental market mediated conceptualisation of natural capital (Capitals Coalition, 2018).

Furthermore, it is vital to carefully consider the role of legal and regulatory frameworks for driving effective natural capital thinking (Bebbington, Cuckston, & Feger, 2021; Bebbington & Unerman, 2020). It is not possible to simply ask corporations to value nature in the hope that they will then feel compelled to protect it. Corporations can clearly see that this value is not always directly attributable to themselves. Rather, government policies and nongovernmental initiatives can be designed to create a legal and regulatory environment that obliges and facilitates the protection of a society's natural capital (Munasinghe, Cuckston and Rowbottom, 2021). Such policies can more clearly define organisational responsibilities towards a society's natural capital, holding organisations accountable for their actions in respect of restoring and conserving nature. At an entity level, therefore, natural capital accounting is a means of meeting these responsibilities and discharging these accountabilities.

This crucial point is put succinctly by the eminent ecologist Georgina Mace:

“ [Accounting] should not be simply a means to place a monetary value on the natural environment in order that it is taken more seriously in decision-making. Rather, accounting should be a means by which governments, corporations and individuals can take proper responsibility for the essential components of natural capital that underpin society and a good life (Mace, 2019, p.55). ”

Financial accounting and management accounting

At the entity level, the distinction between financial accounting and management accounting is also important for addressing the risks of accelerating natural capital thinking. The idea of natural capital as being “accounted for” as an “asset” draws immediate comparisons with more traditional assets recorded on an entity’s balance sheet (Jones, 1996; Sullivan & Hannis, 2017). Within financial accounting, such assets are defined as being a resource that is controlled by the entity and which results in economic benefits flowing to the entity. Yet, as described above, natural capital does not tend to conform to this definition because it is rarely controlled by a single organisation and the benefits of natural capital are rarely felt by a single organisation. Accordingly, financial accounting is unlikely to be the most helpful medium for effective natural capital accounting. Financial statements are meant to provide information that is useful to the decision-making of capital providers, but such decisions will invariably depend principally upon the economic benefits that will accrue to these capital providers. In light of this, efforts by the *Taskforce for Nature-related Financial Disclosures* (TNFD) aim to determine what kinds of information might enable capital markets to function in a way that supports natural capital thinking.

Conversely, management accounting is focused on providing information that is useful to a company’s managers. A manager’s decision-making is necessarily a more complex and nuanced process, requiring all manner of different kinds of information. Thus, management accounting tends to be less narrowly focussed on strictly economic concerns, and management accountants have greater scope to design and develop techniques that can bring numerous different aspects of organisational life into account. It is here that natural capital thinking can play a substantive role in enabling organisational action on nature conservation and restoration (CIMA, 2014; Jollands, Burns, & Milne, 2019). Within management accounting systems, natural capital does not need to be forced into a purely economic framing (as it likely would within financial accounting). Rather, the nuances of natural capital as fundamentally benefitting wider society, but for which an organisation may be held responsible and accountable, can more readily be preserved.



Nevertheless, even within management accounting there remains considerable risk that natural capital accounting will be used inappropriately to justify management decisions that are not conducive to nature conservation and restoration. The main route to countering this risk is through improving the ecological literacy of managers and management accountants so that they can better see and understand the ecological underpinnings of natural capital and are therefore more likely to be wary of accounting for it in ways that are ecologically unsound. Indeed, case studies drawing from ‘The Natural Capital stories’ assembled by We Value Nature ([Natural capital stories | We Value Nature](#)) and the Capitals Coalition ([Case Studies – Capitals Coalition](#)) provide a valuable learning resource to enhance ecological literacy and could be complemented by more substantive evaluation of efforts taking account of multiple stakeholders’ perspectives and the diversity of ways in which nature has been valued.

Related to this, enhancing the ecological literacy of external financial stakeholders (such as funders and owners) would provide further support for organisations to make sound management decisions. A possible wider move to a more ‘stakeholder’ focused capitalism that includes wider values (including nature’s value) would also reinforce management decision-making. While a number of books suggest that this more purposeful business model is emerging, it is not clear how ingrained this approach is or will become. There is also little evidence (as yet) that managers’ remuneration systematically includes their natural capital performance and hence there may be a lack of internal incentives for managers to ‘walk the talk’.

A further strategy involves working with other stakeholders, including ecologists, to co-produce natural capital accounts to determine the relevance of information and associated valuation of nature in connection with individual corporate entities (Putten et al., 2021) and collective action to manage ecosystems, which is the final topic we consider.

Ecosystems & ecosystem-centric management accounting

Addressing biodiversity loss or ecosystem management requires another facet of natural capital thinking, namely the recognition that efforts often require collective action (Feger & Mermet 2017). In this regard, *ecosystem-centric management accounting* aims to use accounting information in order to provide strategies and negotiate responsibilities between stakeholders to organise the management of the ecosystem and deliver ecological outcomes. Positioned alongside macro- and entity-level accounting, a number of issues may arise when seeking to accelerate ‘natural capital thinking’ and associated action at this level, including the assignment and negotiation of responsibilities to various stakeholder groups, particularly the merit and costs of corporate contributions to delivery of ecological outcomes, and the identification and negotiation of collective ecological outcomes with reference to macro-level and local-level priorities (Feger & Mermet 2021). Whilst nascent in development, ecosystem-centric management accounting opens up further avenues to accelerate natural capital thinking amongst accounting professionals and managers.



3. Summary

Natural capital thinking and the valuation of nature has the potential to render business decision-making more conducive to the conservation and restoration of nature. At the same time, there are risks that a misuse of such thinking and accounting can lead to negative natural capital impacts (as outlined in this paper). There are ways to mitigate this risk including natural capital thinking and decision-making (on behalf of organisational decision makers, owners and funders) taking place alongside strong legal and regulatory environments in which corporate responsibilities to protect and enhance natural capital are clearly defined within a robust accountability system that supports collective responsibility to maintain and enhance natural capital. Within this context, ecologically-informed natural capital thinking can be brought into management accounting systems, to inform management decision-making in ways conducive to nature conservation and restoration. Accordingly, strengthening the ecological literacy of organisational leaders, funders and owners will be vital to mitigating the risks associated with accelerating natural capital thinking.



Authors:

Thomas Cuckston, Shona Russell and Jan Bebbington
(respectively at the Universities of Birmingham,
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wevaluenature.eu

info@wevaluenature.eu

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