

The accounting push, the policy pull and policy change

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Abstract

Climate change and biodiversity loss are escalating from natural capital degradation. At the 1992 Rio Earth Summit, governments committed to sustainable development, and the United Nations developed the System of Environmental-Economic Accounting (SEEA) to support it. SEEA's growing adoption and advances in natural capital accounting (NCA) more generally represent a strong “accounting push”, yet the corresponding “policy pull” remains weak for two reasons. On the supply side, the push did not evolve as the sustainability agenda that motivated SEEA lost momentum and fractured into separate climate and biodiversity agendas. On the demand side, economic orthodoxy, siloed institutions, and a preference for symbolic policy leave little incentive to pursue integrated information via SEEA. Public policy theory suggests that only disruptive change will alter this situation. We argue that SEEA, built incrementally over three decades, is infrastructure that can be strengthened now to support both incremental improvement and the more ambitious change that a future disruption could bring.

Note: *The paper is a summary of a journal article currently in review.*

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1. Introduction

The Earth is experiencing significant environmental, economic and political change. The intertwined and escalating crises of climate change and biodiversity loss (IPBES, 2019) are driven by the human-induced degradation and depletion of our natural capital (Dasgupta, 2021), while international politics is shifting toward a more fragmented and unstable world order. Both undermine the economy and human wellbeing and compromise the long-recognised need for a healthy environment to sustain economic activity.

Our Common Future (WCED, 1987) put sustainable development on the global policy agenda, and most countries committed to it through the Rio Declaration and Agenda 21 — the ‘sustainability agenda’. Natural capital accounting (NCA) was part of that agenda. It was developed to address the disconnect between environmental and economic decision-making by embedding environmental information into the System of National Accounts (SNA), the framework that measures economic activity and produces the indicator gross domestic product (GDP) (Hein et al., 2020). This led to the System of Environmental-Economic Accounting (SEEA), the international standard for NCA and an extension of the SNA (UN et al., 2014; 2024; Edens et al., 2022).

Ten years ago, Vardon et al. (2016) identified the ‘accounting push’ and the ‘policy pull’. The accounting push is the development and implementation of NCA by the international statistical community; the policy pull is the public sector’s demand for accounts to support decision-making. The conclusion then was that the push was strong and the pull weak. A decade on, the push-pull dynamic continues. This paper revisits it for a policy audience. Our approach is analytical rather than empirical: we synthesise the public-policy literature with documented applications of NCA to explain the weak policy pull and to identify the conditions under which it might strengthen. While NCA is not a panacea for complex decision-making, we argue that it is an underutilised tool that, built incrementally over three decades, is infrastructure that can be strengthened now and activated by a future disruption.

2. Environmental problems and how NCA supports decision-making

Environmental problems pose distinctive challenges for public policy. They are systemic, ubiquitous across economic activities, cumulative over time, spatially variable, and embedded within complex ecological systems, with impacts that are often long-term, uncertain and unevenly distributed across people and generations (Dovers et al., 2024). Many environmental resources are not traded in markets and so lack a market value, making it difficult to internalise externalities or to value costs and benefits using tools such as cost-benefit analysis (Dasgupta, 2021). Fragmented sectoral policymaking is poorly suited to these problems. Integrated approaches are essential, but they require information systems capable of revealing ecological-economic interdependencies across sectors, scales and time.

The SEEA is part of an information system that can support all stages of the policy cycle, from issue identification through to evaluation (Figure 1). The five-stage policy cycle (Howlett, 2009) that framed the original push–pull analysis (Vardon et al., 2016) is elaborated in Figure 1 into the more detailed eight-steps of Dovers et al. (2024), which unpacks policy formulation into its operational steps: analysis, instrument choice, consultation and coordination. SEEA’s distinctive contribution is a single, comparable evidence base on which options can be framed, developed and weighed on a common footing, rather than in isolation. Where monetary values are used, SEEA applies a clear concept of exchange value; but many applications support effective management on biophysical measures alone (Burnett et al., 2020), and NCA does not require monetisation.

Figure 2: The policy cycle and natural capital accounting. After Dovers et al (2024). The eight steps shown are: identify issues, policy analysis, instrument choice, consultation, coordination, decision, implementation and evaluation; world views and framing, and cooperation and co-design, are cross-cutting influences

3. The accounting push

Since 2016, NCA has advanced through the standardisation of ecosystem accounting (UN et al., 2024), national implementation strategies, capacity building, purpose-built software, more data and better methods. In 2024, more than 90 countries were producing or planning SEEA-aligned accounts (UNCEEA, 2024), and several nations and the European Union have dedicated NCA strategies. NCA is recognised in the Kunming-Montreal Global Biodiversity Framework, whose Target 14 calls for the integration of biodiversity and its multiple values into policies. Australia now requires SEEA-based accounts under the Environment Information Australia Act 2025, and the 2025 SNA recognises natural resources as a factor of production and deducts their depletion from net domestic product, as with the depreciation of fixed capital (Edens et al., 2026).

Table 1. Selected examples of NCA policy applications identified since 2016 (illustrative, not exhaustive).

Policy issue	How NCA can be used
Climate change	Quantify carbon stocks and flows to inform nature-based solutions; link emissions, energy and land accounts to evaluate mitigation instruments and track progress.
Biodiversity loss	Track ecosystem extent and condition against national and Global Biodiversity Framework targets (30×30, SDG 15.9.1) and support biodiversity disclosure.
Water availability and pricing	Inform water pricing reform, catchment management and harmonised river-basin reporting.
Land and catchment management	Locate degradation, model trade-offs, target investment, and attribute restoration liabilities.
Forest management	Quantify trade-offs between timber and non-timber services and identify priority areas for conservation and restoration.
Oceans and coasts	Provide standardised ocean data for marine spatial planning and compile accounts for regional seas.
Economic modelling	Adjust welfare measures and provide inputs to scenario, general-equilibrium and integrated-assessment models.
Private sector reporting	Support corporate natural capital accounting and disclosure aligned with TNFD, ISSB and European standards.
Sustainable Development	Support multiple SDG indicators and systems-based analysis for integrated SDG policy.
Indigenous land management	Apply SEEA with flexible spatial units and integrate First Nations' values in co-designed accounts.

A significant part of the push has been research on NCA applications and the development of guidance linking accounts to major policy and analytical areas (Table 1). This marks a shift from producing accounts in the expectation of use toward producing them with explanations and applications for use. Yet in many places, development has been decentralised and project-driven, without an overarching commitment to use or coordination between producers and users. Australia is telling: despite a national strategy, a review of environmental law recommending accounts, a statutory requirement to produce them, and numerous national and regional accounts, the legislation is largely silent on how to use them. The gap is not in producing accounts but in embedding them in decision-making.

4. Why is the policy pull weak?

NCA serves two distinct integration goals: bringing the environment inside economic decision-making, so that natural capital is visible in the measures that drive fiscal and economic policy; and making environmental policy itself more coherent across sectors, scales and institutions. Despite the ongoing push and the many potential applications, the pull for NCA's original purpose of supporting the sustainability agenda remains weak. As standardised in the SEEA, NCA is distinct from other environmental information in three respects: it is built into the economic accounts governments use to measure performance; it cannot easily be tailored to a preferred result, since accounts are comparable over time and across jurisdictions; and, by covering economy-environment relationships across all sectors at once, it removes the structural escape that lets sector-specific, symbolic responses be presented as 'sustainability'. These properties make SEEA both an unusually capable tool and a particular threat to the status quo. We identify two reasons for the weak pull.

Reason 1: the accounting push did not react to the evolving policy agenda. SEEA was commissioned as part of an integrated response to global environmental problems, but the Rio sustainability agenda fractured into the issue-specific agendas of climate change and biodiversity, and its dedicated institutions were discontinued, with the Commission on Sustainable Development holding its final session in 2013. Assigned to the UN Statistical Commission and developed largely by statistical agencies operating independently of policy agencies, integrated accounts built around the agenda of the 1990s have been offered to a policy world whose attention has moved on. This is a coordination failure between the producers and the intended users of accounts, and the remedy is to align supply and demand through cooperation and co-design (Ruijs et al., 2019).

Reason 2: the policy system does not demand integrated information. The paradigm of never-ending economic growth has become hegemonic (Schmelzer, 2016). Moving to a model based on maintaining natural capital stock would, in many cases, require constraints on economic activity whose benefits accrue mainly in the long term, to people not yet born. Path dependency and institutional resistance make such change difficult (Baumgartner and Jones, 2009), and much environmental policy is symbolic and does not require comprehensive accounts (Newig, 2007). A standardised, repeated measure is awkward for symbolic policy: because it cannot be tailored to a preferred result, trends become visible and inflated claims of progress are harder to sustain (Blühdorn, 2007). This makes comprehensive accounts an unusually durable threat to symbolic policy — which is also why they meet resistance.

5. Policy change

Public policy theory helps explain the weak pull and what might change it. Baumgartner and Jones' (2009) punctuated equilibrium theory holds that long periods of stability, maintained by policy monopolies, institutional friction and negative feedback, are periodically disrupted by rapid change when shifts in attention, framing or decision venues overwhelm the stabilising forces. Where the measurement infrastructure already exists, a punctuation can translate into rapid adoption; where it does not, the same window may pass unused. Prior investment in NCA therefore raises the probability and speed of uptake at a punctuation rather than guaranteeing it.

At the same time, NCA suits the incremental mode that characterises normal policymaking (Lindblom, 1959; Braybrooke and Lindblom, 1963). Because it compiles consistent classifications over time, it accumulates a comparable evidence base that bespoke valuation studies and methodologically variable snapshots cannot, supporting the successive, limited improvements that incrementalism describes. The first SNA illustrates the

alternative: it was standardised quickly in the wake of the Great Depression and the Second World War, when crisis created the political will and institutional space for reform (Eichengreen, 2008). NCA has had no comparable trigger and has progressed incrementally over three decades. An emerging pull is now appearing in the private sphere through nature-related disclosure frameworks such as the Taskforce on Nature-related Financial Disclosures (TNFD, 2023). No single one is a whole-of-government punctuation, but together they suggest the equilibrium is less stable than it appears.

Whatever pull exists will deliver little without institutional reform. Information frameworks realise their potential only when supported by independent institutions with clear mandates, adequate resourcing and enough political insulation to sustain their work across electoral cycles. The SNA became the backbone of macroeconomic governance not through the quality of its methods but because it was embedded in a network of statistical offices, treasuries and central banks. NCA requires an equivalent architecture, including the clear separation of policy and information agencies and, potentially, new bodies such as the Natural Capital Bank proposed by Vardon et al. (2021). Effective reform depends less on importing ideal designs than on deliberately building on existing institutional competence and legacy (Clement et al., 2015).

6. Conclusion

Over the past decade, substantial progress has been made in implementing SEEA-based NCA across low- and high-income countries, and the references to SEEA in the Global Biodiversity Framework and the Sustainable Development Goals recognise its potential usefulness for policy. But most of this activity sits at the monitoring and review tail of the policy cycle; its potential at the front end of integrated policy development and design remains unrealised. The accounting community will likely continue the push, and cooperation and co-design with users would strengthen the pull, though there has been little to date. Significant pull is likely only where there is a strong will for change.

History and theory suggest that only a high-level disruption will punctuate the policy equilibrium and enable decision-makers to adopt the policies needed to avoid dangerous climate change and biodiversity loss. But this does not mean NCA's policy role must wait passively for crisis. Meaningful pull can be built incrementally through statutory mandates, budget and appraisal rules, regulatory impact assessment, national balance sheets, environmental-economic reporting to cabinets and parliaments, and independent institutions responsible for maintaining and interpreting the accounts. The policy task, therefore, is not simply to continue the accounting push but to convert it into a durable institutional pull. Built over three decades, SEEA-based NCA is now mature enough to support both incremental improvement and the more ambitious change that a punctuation could bring.

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