WORLD ECONOMIC FORUM

Mainstreaming Natural Capital: Advancing the Global Agenda to Integrate Nature in Decision-Making

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Contents

Introduction

Integrating natural capital in decision-making is essential for building resilient, sustainable economic systems.

The global economic system, designed to promote growth and improve human development, has largely succeeded in lifting millions out of poverty. However, this system was designed with the assumption that nature is an externality and an unlimited resource. As we approach the limits of resource exploitation, the trade-offs are becoming more pronounced – such as the tension between food security and soil degradation, or the balancing act between industrial expansion and habitat destruction.

The time has come for a paradigm shift in how we think, measure and make decisions about nature. The natural capital approach offers a critical pathway forward, integrating the value of ecosystems and natural assets into decision-making alongside physical, human and financial capital. Healthy ecosystems and productive landscapes are not just environmental concerns; they are essential assets for long-term socio-economic resilience.

Natural capital accounting and valuation are key to making this transition, providing decision-makers with the data necessary to evaluate trade-offs related to the health of natural assets and their contributions to socioeconomic well-being. Yet, despite growing interest from governments, businesses and civil society, natural capital remains largely undervalued in mainstream economic systems. Existing metrics – such as gross domestic product (GDP) – are deeply ingrained but imperfect, masking the underlying risks of resource depletion and perversely incentivizing environmental degradation. While these metrics have been useful in shaping the modern economy, they fail to account for the critical role nature plays in economic production and human well-being.

A long-term systems change is essential, starting with integrating natural capital into decision-making. This shift could address not only the "tragedy of the commons" often associated with environmental externalities, but also the "tragedy of horizons" where risks such as biodiversity loss and ecosystem collapse are pegged as long-term risks in decision-makers' minds despite their imminent impact.

As an example, analysis by the World Economic Forum's *Global Risks Report* – based on insights from over 900 experts across academia, business, government, international organizations and civil society – has, across multiple editions, consistently scored "biodiversity loss and ecosystem collapse" as the 2nd, 3rd or 4th most urgent global risk ranked by severity over the next 5-10 years. Yet it has failed to highlight these risks as a priority within the next two years. This needs to change, through a rapid mindset shift that values nature in ways that make the business case for sustainability clear, helping to steer investments towards more resilient and resource-efficient models.

This paper outlines how the natural capital approach can help drive these transformations. It synthesizes insights from over three decades of work in the global natural capital discourse and offers insights to support decision-makers seeking to navigate the increasingly complex and interconnected challenges of the 21st century. It also seeks to inform the global community of key areas for future progress, building on renewed global momentum for the Kunming-Montreal Global Biodiversity Framework (GBF) after a vibrant COP16 in Colombia in October 2024. This momentum will now prove critical to carry the agenda through global headwinds buffeting both climate and nature action.

The paper comprises four chapters:

1. **Understanding natural capital** – key terms and trends in public and private approaches.
2. **Challenges to mainstreaming natural capital** – six complex and related challenges to overcome.
3. **Advancing the agenda** – five proposed workstreams to elevate natural capital in decision-making.
4. **Next steps** – the Forum's contribution to advancing the agenda, through a new Global Future Council on Natural Capital, with a new vision and goals.

1 Understanding natural capital

Natural capital comprises the world's stock of natural resources and its flows of ecosystem and abiotic services. It provides critical benefits to business and society – but is in severe decline today.

1.1 Legacy economic models and metrics are no longer fit-for-purpose

The term "natural capital" derives from ecological sciences. It refers to the world's stock of natural resources, both renewable and non-renewable, that combine to yield a flow of benefits to humanity.[1] Figure 1 provides an overview of these flows, broken down into various ecosystem services and abiotic (non-living) services.[2] These flows create benefits that are indispensable to socioeconomic progress and human well-being. For example, biomass provides us with food and fibre, while climate regulation leads to manageable temperatures and lower risk of extreme weather events. The experiential qualities of nature, captured in part by cultural services, provide critical contributions to health, arts, history, philosophy and connections between people.

The full value of these benefits provided by natural capital is not captured in economic models today. Captured value typically includes natural resources that have been traded for millennia, particularly in primary sectors such as agriculture, fishery, forestry and mining. These usually have prices assigned to them, generating easily quantifiable "outputs" or benefits that can be included in routine economic statistics such as GDP or financial indicators in business accounts.

"Leakage" occurs with benefits that are more challenging to quantify and therefore remain largely unpriced in the economy or production process, including water retention, flood mitigation, pollination and carbon sequestration. These services are not usually captured in economic or business statistics, since – being historically abundant – they are considered as "free" inputs.

This is a major oversight, because natural capital as an asset or factor in the production process cannot be substituted by other man-made assets. So its decline is therefore detrimental to economic and human progress. These "leaked" benefits accrue to all economic actors, but the responsibility to maintain them often falls on governments and communities.[3] The negative consequences of harming nature at the expense of these benefits are therefore "external" to economic systems. These are commonly referred to as "environmental externalities", which total trillions of dollars each year.[4]

FIGURE 1 | **Natural capital provides critical benefits that are not fully valued**

STOCKS

Natural capital:

The stock of renewable and non-renewable natural resources on Earth found in ecosystems that combine to yield a flow of benefits to people

e.g. plants, animals, air, water, soils, minerals, biodiversity

FLOWS

Ecosystem services:

Provisioning services

e.g. agriculture, fisheries, water supply, biomass

Cultural services

e.g. value to science, education, health, leisure

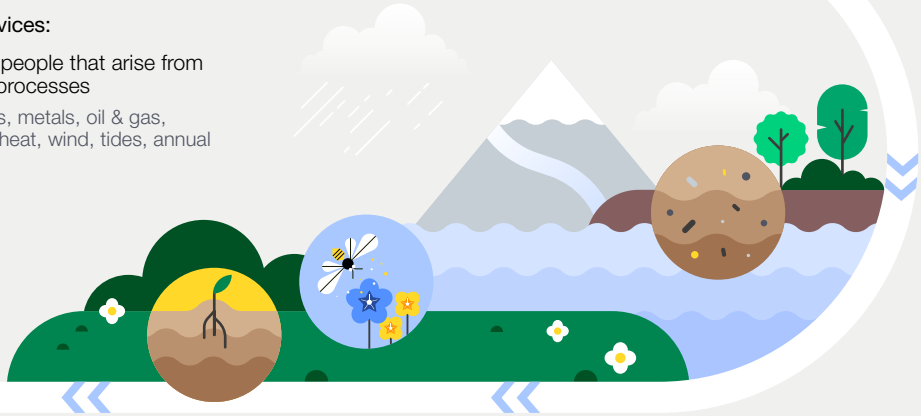
Regulating & maintenance services

e.g. water & soil retention, flood mitigation, pollination, carbon sequestration, climate regulation

Abiotic services:

Benefits to people that arise from geological processes

e.g. minerals, metals, oil & gas, geothermal heat, wind, tides, annual seasons



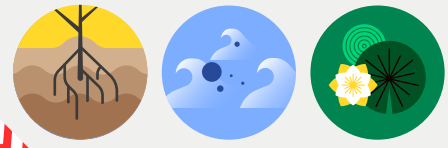
BENEFITS

to business and society

CAPTURED VALUE

Benefits that are captured in economic statistics

e.g. commodities & products in agri-food, forestry & fishing sectors, some services from recreation and tourism sectors



LEAKAGE

Benefits that are largely not captured in economic statistics

e.g. water & soil retention, flood mitigation, pollination, carbon sequestration, climate regulation, experiential & spiritual value

Sources: Adapted from Capitals Coalition (2021), TNFD (2023), Zheng et al (2023).[5]

While produced capital per person rose by more than 47% from 1995 to 2020, renewable natural capital per person declined by

20%

Current economic models and related decision-making systems were developed around the 1930s. As policy-makers grappled with how to contain the Great Depression and support war efforts later in the 1940s, metrics such as GDP were invented to understand a country's "produced capital" output in a given year – that is, the physical output of goods and services plus financial assets. Greater output meant a nation was producing more food, fuel, commodities, products, weapons and services associated with taking them to market. As these goods and services were associated with a higher standard of living, higher output became associated with economic strength.

Metrics like GDP rapidly gained popularity despite economists documenting their limitations.[6] Aggregate metrics such as GDP do not measure distribution of output creation, income or the overall stock of wealth. They offer a narrow interpretation of value that focuses only on "produced" capital, without accounting for natural, human or social capital. They also fail to factor in opportunity costs, including the costs of extracting resources versus the benefits of keeping them intact. However, given that abundant natural resources were available in the 1900s to produce sufficient goods for a smaller population, metrics such as GDP became synonymous with "growth".

As a result, economic models have encouraged growth at the cost of natural capital, which is consequently in alarming decline today. While the past century has advanced economic progress and human health, this has come at a significant cost to nature.[7] The World Bank estimates that while produced capital per person rose by more than 47% from 1995 to 2020, renewable natural capital per person declined by 20%, reflecting sharp falls in biodiversity and ecosystem services.[8,9]

The stock of natural capital that is in most severe decline is renewable resources (e.g. forests, freshwater, fish, clean air) that are essential for sustaining life. Crucially, these can still be regenerated in time with the right investments. However, nature-negative financial flows totalled nearly $7 trillion in 2022, comprising $1.7 trillion of harmful public subsidies (mainly in agriculture and energy) and over $5 trillion in private sector impact.[10] This far outpaces investment in nature, which totals around $200 billion annually.

It is clear that legacy economic models are no longer fit-for-purpose. They perpetuate a system in which nature declines rapidly to support benefits for a larger and more demanding global population, in turn threatening the socioeconomic benefits that nature provides. At least half of global GDP is moderately or highly dependent on nature and is at significant risk of disruption from nature loss.[11] Far more than half the output of many critical sectors (e.g. agriculture, energy, utilities, consumer goods) is similarly at significant risk of disruption.[12] Moreover, many of the most concerning impacts on well-being are not captured in economic metrics. Nearly half the world's population lives in areas facing water scarcity.[13] Around 1 million species are at risk of extinction.[14]

> **..to judge whether the path of economic development we choose to follow is sustainable, nations need to adopt a system of economic accounts that records an inclusive measure of their wealth...[that] includes Nature as an asset.**
>
> Professor Sir Partha Dasgupta, *The Economics of Biodiversity: The Dasgupta Review*[15]

1.2 Natural capital approaches provide a clearer picture of nature's value to business and society

In recent decades, economists, ecologists and policy-makers have developed natural capital accounting to incorporate nature more effectively in economic systems. This approach, which recognizes the challenges faced by current economic models in capturing natural capital, forms part of the broader sustainable development movement that has spurred, among other initiatives, the Human Development Index (HDI) by the United Nations Development Programme (UNDP) and the UN's Sustainable Development Goals (SDGs). The natural capital approach extends the economic concept of capital to the environment, conceptualizing stocks of natural resources as conventional goods worth restoring, maintaining and enhancing for their flows of productive value. Crucially, this includes systematic measurements and valuations of the "leaked" benefits not captured in prevailing economic indicators such as GDP or financial statements.

The approach is essentially a decision-making framework that uses two connected processes – natural capital accounting and natural capital valuation. Natural capital accounting is the process of recording the status, health and integrity of specific natural assets and the flow of benefits these assets provide within specific periods.[16] Natural

capital valuation converts data on stocks of natural capital and flows of benefits into metrics of value that can help organizations make better decisions. These metrics include both biophysical accounts (physical characteristics and flows of natural resources, such as land, water and forests, within a specific geographical area) and monetary accounts (such as profit and loss analogues) that enable organizations to compare the value of nature with financial data.

Together, such accounting and valuation provide a clearer picture of nature's benefits and its present and future value for organizations, ecosystems and regions. They enable leaders and decision-makers to access critical data on the health of natural assets and their contributions to socioeconomic well-being. Governments can use the natural capital approach to integrate data on the enhancement or depletion of natural assets into national economic accounts. This enables them to make more balanced decisions on sustainable development. Similarly, businesses can use this approach to integrate natural capital with traditional financial and management accounting systems. This enables them to better manage risks associated with resource depletion, develop their nature strategies, comply with environmental regulations and foster resilience.

1.3 The public sector is beginning to embrace natural capital approaches

China piloted its Gross Ecosystem Product (GEP) metric as a macroeconomic analogue to GDP. GEP pilots are now being commissioned in Colombia, India, Sri Lanka and Sweden.

Natural capital approaches, while not new, are not mainstreamed today. Business and government decisions are still grounded in maximizing performance on indicators of produced capital. The natural capital approach remains a novel tool in the decision-making process. Its usage is not rewarded by markets or regulators, so there is consequently no guarantee that the data generated will meaningfully alter an organization's decision-making. However, there are many notable international efforts that aim to accelerate the adoption of natural capital accounting and valuation. Although these initiatives are driving strong progress, the widespread adoption of natural capital approaches remains limited.

Natural capital initiatives are more developed in the public sector, building on international efforts. For example, the System of Environmental-Economic Accounting (SEEA) is the UN's standard for natural capital accounting for the public sector.[17] It was first introduced in the 1990s and subsequently adopted as the UN statistical standard in 2012. The Ecosystem Accounting framework (SEEA-EA) provides governments with a clear standard to integrate nature into decision-making, while also guiding how this data should feed into business decisions. As of 2024, 94 countries had implemented SEEA and maintain at least one natural capital account.[18] However, there is limited evidence to show that such accounts are either acted upon or devolved to local governments or business contexts.

The World Bank has, for more than a decade, promoted a "comprehensive wealth" approach that is well-aligned with SEEA. Its focus has been to improve the global dialogue on improving traditional systems of national accounts (SNA) and moving "beyond GDP" by measuring countries' stocks of productive assets for sustainable development in ways that distinguish them from traditional flows of income, goods and services. The Bank's Wealth Accounting and Valuation of Ecosystem Services (WAVES) partnership pioneered natural capital accounting approaches in the development planning and national economic accounts of 10 countries;[19] this approach has since reached 40 countries through the work of the Bank's Global Program on Sustainability (GPS).[20] The Bank has also created the Changing Wealth of Nations database that provides wealth accounts for over 150 countries that encompass different forms of human and natural capital.[21] Regional development banks have been similarly active: for example, the Inter-American Development Bank (IDB) recently launched an action plan to accelerate the use of natural capital approaches in development projects.[22]

Many indicators, pilots and tools have been developed for the public sector in recent years. China piloted its Gross Ecosystem Product (GEP) metric as a macroeconomic analogue to GDP (see Box 1).[23] The SEEA framework recommends GEP as an indicator to support decision-making. GEP pilots are being commissioned in various countries including Colombia, India, Sri Lanka and Sweden. The Accounting for ecosystems and their services in the European Union (INCA) project introduces ecosystem accounting in a standardized and comparable manner for the EU's 27 member states;[24] and it has informed the development a new pilot module for GEP.[25] The Stanford Natural Capital Project's InVEST suite of software also provides policy-makers with decision-support tools, which can equally be used by private sector organizations.[26]

BOX 1 **Gross Ecosystem Product (GEP)**

GEP, a metric first developed in China in 2012, is among the indicators available for governments at all levels to measure their ecological performance. GEP is consistent with SEEA-EA and provides an indicator analogous to GDP. It uses market prices and economic techniques to calculate the value that ecosystems provide to the economy each year. This includes the value of production (e.g. agricultural produce), regulating services (e.g. climate resilience) and cultural services (e.g. scientific value). GEP can support environmental policy-making, provide a basis for investments in conservation and restoration, and help measure local officials' performance.

As of 2023, 17 local governments and 50 cities in China have issued guidelines to use GEP and around 200 pilots have been launched, including in Guizhou, Shenzhen and Qinghai. One example, a nature reserve in Deqing county of Zhejiang province, had its GEP valued at RMB 311 million ($43 million) in 2021 – and analysis based on this indicator directly influenced the choice of renewable energy projects approved in the reserve. The Central Committee of the Chinese Communist Party and the State Council issued "Guiding Opinions on Establishing the Mechanism of Realizing the Values of GEP" in 2021. Accounting standards for GEP were released in 2022 by the National Development and Reform Commission (NDRC) in coordination with the National Bureau of Statistics (NBS).

Sources: see endnote.[27]

1.4 Natural capital initiatives in the private sector are relatively nascent

There is a consensus among experts that natural capital approaches are more suited to businesses with significant exposure to natural assets, including those in agri-food and mining sectors. For example, BHP's Beenup Site Pilot Case Study is a recent example of natural capital accounting in the mining sector.[28] Forico, a leader in the forestry sector, produced Australia's first Natural Capital Report.[29] In a world-first, 18 leading forestry companies across 21 countries have launched a sector-wide pilot with the International Sustainable Forestry Council (ISFC), Capitals Coalition and Taskforce on Nature-related Financial Disclosures (TNFD) to test natural capital accounting using a shared valuation framework.[30] United Utilities, based in the UK, produced a natural capital account for its operating area.[31] These examples of natural capital accounts are akin to balance sheets. Meanwhile, agri-business Eosta's true cost accounting approach focuses on producing natural capital statements that more closely resemble management accounts.[32]

Nevertheless, sectors without direct exposure to natural assets have also created leading initiatives, spurred by consumer demand and regulatory requirements for businesses to disclose their impacts and dependencies on nature. For example, Kering – a luxury goods multinational – created an Environmental Profit & Loss (EP&L) account that was among the first corporate efforts in environmental accounting; it has since been developed and shared with the fashion sector.[33]

Notable guidance exists for businesses to incorporate natural capital approaches. This includes the Capitals Coalition's Natural Capital Protocol, which was developed through extensive stakeholder consultation and was also influenced by Kering's EP&L.[34] The Natural Capital Protocol has in turn informed the development of many organizational-level approaches, both in the private sector and beyond.[35] One example is the Integrated Profit and Loss (IP&L) management account developed by Natura &Co, a multinational cosmetics group (see Box 2).[36] Holcim, a leader in the construction sector, publishes a similar IP&L statement.[37] In July 2025, the Capitals Coalition also introduced the Integrated Decision-Making Framework that provides guidance on integrating metrics on natural, human and social capital in decision-making.[38] The Biological Diversity (BD) Protocol, developed by the Biodiversity Disclosure Project (BDP), is another tool to support companies with credible accounting and reporting frameworks that is receiving significant attention in Africa.[39]

Official (but voluntary) standards include the British national standard *BS8632: Natural Capital Accounting for Organizations*[40] and the similar, in-development *ISO 14054: Natural Capital Accounting for Organizations — Principles, requirements and guidance*.[41] Both provide guidance on a mixture of financial and management accounting analogues. It should be noted that natural capital assessments are a separate approach, typically designed for businesses to measure their impacts and dependencies on nature for reporting and strategic purposes. These assessments may be a mix of quantitative and/or qualitative analyses.[42]

Natural capital approaches in the private sector form part of broader approaches to guide business action on nature. For example, the Assess, Commit, Transform and Disclose (ACT-D) framework is a set of high-level actions that guides businesses through various tools available to support them in developing nature strategies.[43] Natural capital accounting and valuation form part of the "Assess" phase to provide science-based information to support decision-making through the subsequent steps of the framework. The recommendations of the TNFD are similarly designed to support the "Assess", "Commit" and "Disclose" phases.[44]

BOX 2 **Integrated Profit & Loss (IP&L) accounting**

Natura &Co's IP&L account is an example of business leadership in generating natural capital accounts.[45] The IP&L is an integrated management tool that enables accounting for the impact of corporate performance in the environmental, social and human dimensions (the three "capitals") – in addition to financial results. The IP&L consists of 15 indicators and covers the company's entire value chain. Natural capital indicators include air and water pollution, land and water use, forest conservation, climate change and use of resources.

Natura &Co's management uses the IP&L regularly in key decisions that seek to maximize results across capitals. This includes guiding investment in agroforestry business models and improving hiring practices. The IP&L results showed that, in 2023, for every Brazilian real (R$) of revenue, the brand generated a net return of R$2.7 in benefits for society. Although impact on natural capital was "negative", Natura &Co's IP&L has been crucial to reducing impact.

2 Challenges to mainstreaming natural capital

Six complex and interlinked challenges are preventing the mainstreaming of the natural capital approach across the global economy.

International efforts covered in the previous section aim to mainstream natural capital in the global economy. Collectively, experts indicate that there are six principal challenges that these efforts seek to solve, covered in this chapter.

Additionally, while many organizations at the forefront of these efforts are cooperating to advance the adoption of natural capital approaches in decision-making, there remains an urgent need for a global vision that defines what "mainstreaming" natural capital means, as well as a mechanism to coordinate efforts based on such a vision, including under the auspices of the GBF.

2.1 Unclear market mechanisms to value and/or price nature in economic and financial systems

While methodologies to account for the full value of natural capital have advanced significantly, what is less clear is how to translate this accounting to new economic infrastructure that is fit for business and finance. There are few existing instruments that enable market actors and investors to move away from short-term gains in output and profit and instead reward better outcomes for nature. This persists despite significant research on the attractiveness of nature-positive business models, growing knowledge of the risks of nature loss and increasing compliance requirements for listed entities.[46]

There is also debate on the role of "valuation" and "pricing". The former is the creation of both biophysical and monetary data that describes the value of natural capital in specific contexts (i.e. what it is worth) and the latter is a market-driven exercise that involves financial flows (i.e. establishment of willingness to pay and exchange of money). Consensus is lacking on the elements of natural capital that can be priced based on robust valuation, how this price is determined and the unintended incentives that pricing systems might create. For instance, if certain ecosystem services are "priced" higher than others (e.g. provisioning over regulating services), then investment in enhancing these services could perpetuate the decline of others.

2.2 Lack of regulations and incentives for nature

“ There is a critical lack of capital market infrastructure to support the valuation of and subsequent investment in nature.

Regulators have a critical role to play in creating rules and incentives to integrate the value of nature in economic activities and improve outcomes for nature. This is especially important when markets are not set up to reward such outcomes. However, regulatory action for nature is significantly lacking, which is why economic actors do not face the costs of nature loss and are not rewarded for improving the state of nature. Commonly proposed actions such as pricing for specific resources (e.g. carbon, water and land taxes to reduce negative externalities) or subsidy reform are necessary, but not sufficient to fundamentally alter targets on short-term indicators like GDP and profit or perceptions of what constitute growth and capital formation. There is also a critical lack of capital market infrastructure to support the valuation of and subsequent investment in nature, despite experts noting a significant uptick in interest from investors in recent years.[47]

Moreover, natural capital approaches are largely voluntary, both in the public and private sectors, limiting significant adoption. In the public sector, natural capital accounts are not explicitly connected to targets under the Kunming-Montreal GBF or National Biodiversity Strategies and Action Plans (NBSAPs).[48] In the private sector, few mechanisms exist to hold businesses to account on natural capital performance beyond voluntary impact assessments – including via disclosures required by NGOs (e.g. TNFD), environmental laws, corporate charters or capital markets.

2.3 Data and capacity challenges

Collecting consistent, comprehensive and accurate environmental data is challenging, especially in biodiversity-rich countries. While the technologies exist to support accurate data collection at scale, significant technical expertise and resources are required to understand how to use them, navigate complex metrics, compile relevant accounts and analyse environmental interactions with economic activity. Experts cite “chronic underinvestment” in this capability, both in the public and private sectors.[49]

Additionally, disagreements remain on several methodological challenges. There is limited consensus on the right output variables to support decision-making. For instance, although the frameworks and methodologies available for the public sector require maintenance of accounts covering natural capital stocks, which track the health of natural assets relative to a baseline, the outputs that receive significant attention like GEP are “flow” variables, which track the value of benefits that nature provides in a given period. Maximizing these benefits may come at the cost of the underlying stocks, perpetuating current trends. Disagreements also remain on trade-offs in extending natural capital valuation from biophysical to monetary terms (for balance sheets or income statements) and whether the former is sufficient for decision-making. Finally, accounts only provide a basis from which decisions can be made – evaluating scenarios and trade-offs for different decisions is an even more complex challenge, requiring strategic systems thinking.

2.4 Unique challenges for businesses

While businesses face data and capacity limitations, they have additional challenges in accurately scoping the ecosystems upon which they depend and that they impact over time, both directly and via their supply chains. It is time- and resource-intensive to collect data on ecosystem services that have traditionally been "free inputs" and model this data into meaningful business metrics, especially given the lack of clear standards and methodologies in many regions and for specific sectors. They also face additional resource demands in navigating both climate-related and newer nature-related disclosures, including TNFD's recently released recommendations, as well as standards from the Global Reporting Initiative (GRI) and European Sustainability Reporting Standards (ESRS).

Moreover, leading corporates that implement natural capital approaches are not rewarded. While markets and governments have failed to effectively internalize the full value of natural capital, many first movers, as highlighted in Chapter 1, have adopted natural capital approaches as they are increasingly aware of the associated competitive advantages of incorporating nature in decision-making. This includes generating social value, maintaining a licence-to-operate or expanding access to markets. However, their performance continues to be rewarded by investors and regulators based largely on financial performance. As a result, considerations for natural capital remain on the periphery of company strategy and the limited resources devoted to natural capital approaches are at risk when finances are tight. This in turn raises uncomfortable questions around the true purpose of business models as commonly understood and whether they are fit for purpose to maximize outcomes for nature, people and investors.

2.5 Lack of public-private collaboration

There is a lack of alignment between public and private sector efforts in natural capital. The public sector has a critical role to play in accelerating the private sector's adoption of natural capital approaches, improving capacity and ensuring alignment between natural capital approaches in terms of definitions, metrics and methodology.

Critically, unlocking data flows between public and private sector accounts could be the most significant benefit of public-private collaboration in natural capital. However, there is a significant disconnect on natural capital data between the business community and government agencies responsible for national accounts, including national statistics offices (NSOs) and environmental agencies that are unaware of the natural capital needs of the business community.[50] There are limitations in the way that public sector accounts of natural capital are created and communicated and, in many cases, businesses and financial institutions are unaware that such work has been done. Conversely, governments too can benefit from improved data flows from the business community to improve policy-making and track progress on international climate and nature targets.

2.6 Political and cultural challenges

Centuries of industrial development have embedded a world view that prioritizes material growth over ecological balance, sidelining Indigenous and place-based knowledge systems that value stewardship.

Nature loss continues to rank low on the hierarchy of global crises among political and business leaders. Yet, mainstreaming natural capital requires sustained visibility and high-level engagement. Crises that dominate headlines – conflict, inflation, pandemics, misinformation – tend to be immediate and tangible.[51,52] Nature loss, by contrast, is often perceived as slow-moving, complex and less urgent, despite the GBF beginning to elevate its profile.[53] Experts warn that without stronger political commitment, efforts to value nature risk stalling in technical circles.

At the same time, the transition to a nature-positive economy may generate "transition anxiety," especially where reforms affect entrenched subsidies or externalities. Changes in pricing structures for sectors such as agriculture, energy and water could impact already-strained households and businesses. Pushback from affected industries, along with equity concerns from civil society, could slow reforms. In some cases, pricing nature may also raise geopolitical sensitivities – particularly where shared ecosystems cross national borders or where valuation tools risk reinforcing unequal power dynamics.

Underlying these frictions is a deeper cultural disconnect. Centuries of industrial development have embedded a world view that prioritizes material growth over ecological balance, sidelining Indigenous and place-based knowledge systems that value stewardship. Reviving respect for these alternative paradigms – and embedding them in policy, education and finance – requires not just behavioural change but systemic reorientation. This is a generational undertaking, but changing minds, language and incentives will be as vital as developing better metrics.

3 Advancing the natural capital agenda

The global community has an opportunity to accelerate efforts to mainstream natural capital in decision-making. This report proposes five workstreams to advance the agenda.

The momentum of existing efforts provides a strong platform to solve challenges in mainstreaming natural capital. The World Economic Forum invites the input and collaboration of natural capital practitioners, governments at all levels, academics, standards bodies, the private sector, international organizations, civil society, Indigenous leaders and innovators to solve the challenges identified in Chapter 2. To facilitate meaningful dialogue and develop feasible solutions to mainstream natural capital across the global economy, this report proposes five workstreams to advance the agenda:

1. Embedding natural capital approaches in the public sector.
2. Boosting data, science, analytics and capacity building.
3. Integrating natural capital into financial accounting.
4. Empowering traditional finance and markets to price in the full value of nature.
5. Redefining social and cultural values for systems change.

3.1 Embedding natural capital approaches in the public sector

Where markets fail to incentivize better decisions for natural capital, regulators must play a critical role. Thoughtful, well-designed policies can incentivize action. Solutions are needed in at least four areas: mandates, economic indicators, regulation and subsidies.

Mandates

Governments can mandate natural capital accounting, with targets connected to policies like NBSAPs and growth projections, building on Target 14 of the GBF.[54] They could also action Target 15, which requires them to ensure large multinationals report their impacts and dependencies on nature. This could start with organizations in exposed sectors (e.g. agriculture, energy, mining) keeping natural capital accounts and being rewarded or penalized based on environmental performance. Encouragingly, businesses are calling for such mandates. Target 15 was added to the GBF at the request of Make it Mandatory – a coalition of 400+ businesses and financial institutions.[55] Harmonizing available standards and disclosures (e.g. TNFD, International Sustainability Standards Board – ISSB) would provide a platform to embed natural capital approaches.

However, some experts doubt the feasibility of mandates, especially in biodiversity-rich countries facing immediate challenges from poverty, education and healthcare that make it hard to prioritize the longer-term benefits of natural capital. Multilateral development banks (MDBs), donor agencies and public institutions have a critical role to provide these countries the finance and technical assistance they need to mainstream natural capital in decision-making.

Economic indicators

There is an urgent need to update the economic toolkit beyond short-term indicators on produced capital (e.g. GDP) to better account for natural capital. GEP and net gain policy are two possible mechanisms. Strong environmental accounting can be seen in Chile, Belize and Uruguay, while the United Kingdom recently passed its Biodiversity Net Gain Policy, which requires natural capital accounting in land development.[56] There is growing interest in debt-for-nature swaps to achieve economic and environmental goals simultaneously, with Ecuador agreeing the world's largest such swap in 2023.[57]

Regulation

Macroprudential regulators (e.g. central banks, financial supervisors) have an important role to play in quantifying and managing the impact of nature-related risks on economic and financial systems. The Network for Greening the Financial System (NGFS) published guidance for nature-related financial and litigation risks,[58] while the Financial Stability Board (FSB) conducted a stocktake of initiatives assessing such risks, at the request of G20 finance ministers and central bankers.[59]

The World Bank is developing frameworks to integrate climate and nature risk assessments, credit ratings, index rankings and reporting frameworks. Central banks (e.g. Sri Lanka) have published green finance taxonomies.[60] Capital markets infrastructure also requires support. New financial instruments and contracts require new guardrails, including clear rules and fiduciary responsibilities.

Subsidies and externality pricing

Progress on fiscal measures to correct market failures and capture the full value of natural capital used in the production process has been slow.[61] GBF Target 18 calls for $500+ billion of harmful subsidies to be reduced annually by 2030 – still a fraction of the ~$1.7 trillion of nature-harming direct subsidies.[62]

GBF Target 19 calls for an additional $200 billion of funding per year for nature, via domestic and international sources. Externality pricing may be one option – this taxes "excess" resource usage and waste streams, or operates permit systems like cap and trade on usage. It has proved powerful in reducing environmental impact by incentivizing efficiency and creating new revenue pools for mitigating impact. Successes in carbon and water pricing offer models, tied to robust natural capital accounting and valuation.[63,64]

Clearer articulation of the benefits for first movers would be helpful. Research shows repricing subsidies and externalities can make nature-positive business models more attractive, incentivizing markets to reward them with a premium.[65]

GBF Target 18 calls for

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of harmful subsidies to be reduced annually by 2030.

3.2 Boosting data, science, analytics and capacity building

The public and private sectors need greater access to natural capital data and guidance on how, where and what to measure. A growing community of impact assessment professionals and environmental data platforms are developing tools to help organizations understand their impacts and dependencies on nature.[66] Efforts to share natural capital data as a public good are leading to more harmonized metrics – led by TNFD[67] and the World Bank-managed Sovereign ESG Data Portal.[68]

Guidance and consensus are needed on the trade-offs between using stock or flow variables, biophysical accounts or monetary accounts, and extending monetary valuation to financial flows – including concepts like "nature as an asset class" and "nature on the balance sheet". Trade-offs need resolving between developing ever-more comprehensive datasets versus acting on available data today. Arguably, methodologies are sufficiently developed for organizations to begin basic natural capital accounting and incorporate it in decision-making, particularly for land, water and emissions.

Alignment is needed on the "value factors" to convert data on biophysical changes in natural capital into impact on society. GIST Impact recently reported on value coefficients for 25 countries,[69] while SEEA-EA provides guidance on pricing ecosystem services, similar to the "fair value hierarchy" observed in financial accounting standards.[70]

Developing greater capacity for natural capital accounting and valuation will be critical to mainstream this agenda. Training materials are urgently needed, along with natural capital practices that are scientifically robust, easy-to-use and transparent to audit. Networks including Stanford Natural Capital Project and Africa Natural Capital Accounting Community of Practice provide valuable opportunities for capacity building.[71]

3.3 Integrating natural capital into financial accounting

An important next step is integrating nature into mainstream financial accounting. This means not just improving how natural capital is managed within sustainability reports, but recognizing the value of nature's assets and services in core financial statements. Doing so can influence capital allocation, reshape incentives and make the business case for investing in nature more compelling.

Initiatives such as Nature on the Balance Sheet, led by the Capitals Coalition, are exploring how to account for ecosystem services, natural assets and biodiversity-related risks and opportunities using established accounting standards and frameworks.[72] Challenges include:

- Defining which nature-relevant assets and liabilities should be recognized in financial statements.
- Addressing methodological challenges such as consistency in valuation techniques, availability of nature-related data and attribution of ecosystem service flows.
- Aligning with financial materiality thresholds and double materiality standards to ensure integration is technically credible and decision-useful.

Markets and regulation must evolve in parallel to support this shift. Standard-setting bodies and regulators need to update disclosure frameworks, clarify fiduciary duties, and encourage financial institutions to reflect nature-related risks in loan covenants, insurance policies and investment mandates.

By embedding nature into accounting infrastructure, companies can move beyond voluntary disclosures towards treating nature as a core strategic asset — one that is tracked, managed and stewarded with the same rigour as other capital inputs.

3.4 Empowering traditional finance and markets to price in the full value of nature

"The key question is: can markets effectively price in good nature outcomes and drive price discovery without policy?

The landscape of nature finance is developing rapidly, with nature emerging as a strategic investment frontier. A new nexus of ecologists, economists and financiers is helping investors understand new opportunities,[73] while major investment houses have announced new nature funds.[74] However, complexities abound: biodiversity data remains fragmented, ecosystem services are hard to price, and financial markets are only beginning to embed nature into decision-making.

Markets alone cannot solve these challenges, but translating nature's economic value into pricing systems acceptable to markets is an essential step towards mainstreaming natural capital. The key question is: can markets effectively price in good nature outcomes and drive price discovery without policy? Piloting at scale is urgently needed to answer this question – and to reveal the gaps between markets' willingness to pay and the full value of natural capital. This will identify the extent to which regulators may need to correct market failures.

A new insight report, *Finance Solutions for Nature*, published by the Forum in September 2025, presents 37 potential financial solutions to mobilize capital for nature. The main debate is between innovative, nature-specific instruments and more traditional, general-purpose instruments. The report shortlists 10 priority solutions with potential to deliver nature outcomes at sufficient scale and with investable returns. Five are general-purpose – sustainability-linked bonds and loans, thematic bonds and loans, plus impact funds. Five are purpose-built for nature – natural asset companies,[75] environmental credits,[76] debt-for-nature swaps, payments for ecosystem services[77] and internal nature pricing.[78]

Convergence across these models is essential to achieve the scale of investment required. To move from the current fragmented landscape towards a mature global market for nature requires combining the familiarity, liquidity and simplicity of general-purpose finance with the credibility of nature-specific models that deliver positive impacts for ecosystems.

To get there will take concerted action by a range of stakeholders. Standard-setters and auditors must drive alignment on natural capital accounting methods and decision-relevant data for investors. Development banks, donors and philanthropies must de-risk transactions with blended finance and first-loss capital. Venture studios and impact funds must help source, de-risk, scale up and aggregate an investment-grade pipeline of nature projects. Governments have a key role to create a stable, enabling environment of policy incentives and sanctions. And asset owners and boards must recognize their nature-related dependencies through an approach that balances risk, return and impact.

3.5 Redefining social and cultural values for systems change

In June 2024, a bipartisan survey of 1,000 US voters found that

94%

supported the expansion of natural climate solutions, such as conserving and restoring forests and wetlands.

As noted earlier in this report, the urgency of nature loss and ecosystem collapse still fails to translate into priority actions by political and business leaders – despite being consistently ranked by the Forum's *Global Risks Report* among the top-four risks facing the world in the next 5-10 years.

Without a fundamental reset of prevailing socioeconomic models of production and consumption, no amount of technical work to promote natural capital approaches will help. So how can the value of nature be elevated in political and social discourse in a way that leads to systemic, tangible change? And who is best positioned to drive this change in attitudes and values – leaders or ordinary people?

Change may prove more popular than current political polarizations might suggest. In June 2024, a bipartisan survey of 1,000 US voters found that 94% supported the expansion of natural climate solutions, such as conserving and restoring forests and wetlands, and encouraging more regenerative approaches to agriculture.[79]

Telling inspiring stories is essential, according to a recent article for the World Economic Forum.[80] Costa Rica, for example, succeeded in reversing deforestation while growing its economy;[81] and Ecuador's debt-for-nature swap saw $450 million of debt service payments repurposed to finance conservation projects in the Galapagos Marine Reserve.[82]

Narratives must shift.[83] Sustainability – too often viewed in terms of sacrifice or cost – needs reframing as foundational to prosperity, equity and resilience. This includes appealing to widely shared values – health, security, fairness – and recognizing the emotional and cultural connections people have to nature and to place. The challenge is as much about reframing the story as it is about building the science: showing how nature underpins economic and social stability, and why preserving it is a moral and strategic imperative. A critical part of this process is to elevate the voices of nature stewards and learn from their experiences, including Indigenous Peoples and Local Communities (IPLC) who collectively care for the majority of the world's biodiversity.

By harnessing these stories and insights, leaders can encourage a cultural shift – through schools, universities and citizen science institutions – that raises public awareness of the value to society of ecosystems and embraces a stewardship mentality towards nature.

4 Next steps

The World Economic Forum welcomes engagement from the global natural capital community to advance the agenda.

The World Economic Forum recognizes the value of the natural capital approach. The Forum inaugurated a dedicated workstream on natural capital in 2024 to elevate the approach in the global socioeconomic agenda and to mainstream its use in decision-making. This work forms part of the Forum's broader multistakeholder efforts to unlock greater financing for nature, to tackle the global biodiversity finance gap which averages $711 billion annually.[84] These efforts include:

- Mainstreaming natural capital in global socioeconomic systems.
- Guiding the finance sector's transition to nature positive.
- Championing innovative instruments to finance nature.

In November 2024, the World Economic Forum hosted a convening on natural capital that brought together leading global thinkers and practitioners to develop an ambitious roadmap to mainstream natural capital. This led to the creation of the Forum's Global Future Council (GFC) on Natural Capital 2025-26,[85] which acts as custodian of this roadmap for the next two years. It comprises 25 experts in natural capital from diverse backgrounds and meets virtually and in-person throughout the year.

The Council is informed by a simple, powerful vision: "Transform the economic paradigm to rebalance our relationship with nature" – supported by four goals, presented in Box 3. It aims to provide thought leadership and engagement to support governments, businesses, investors and civil society in mainstreaming natural capital in line with its vision and goals. The roadmap's focus areas are broadly based on the five workstreams presented in Chapter 3 of this paper. The Council's work will build on the achievements of existing coalitions and nurture new partnerships among the global natural capital community.

BOX 3 **Roadmap to mainstream natural capital**

Vision

> **Transform the economic paradigm to rebalance our relationship with nature.**

Goals

1. Move decision-making beyond produced capital to capture the full value of natural capital.*
2. Bring the value of nature onto public and private balance sheets.
3. Incentivize greater public and private finance to flow towards protecting, restoring and sustainably managing nature.
4. Embed values- and place-based approaches to reshape how institutions relate to and act on nature.

***Full value of natural capital – a definition:**

All categories of ecosystem services and their related socioeconomic benefits, encompassing not only:

- **Provisioning services** and **abiotic services** (e.g. agriculture, products and services derived from nature) that are captured in economic statistics, but also:
- **Regulating services** (e.g. water retention, flood mitigation, pollination, carbon sequestration) and **cultural services** (e.g. value to science, education, health, leisure) that are not captured in economic statistics.

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