

Natural capital for biodiversity policy: what, why and how

DRAFT-Version
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DRAFT

Context and acknowledgements

This draft narrative aims to show the added value of natural capital approaches for achieving biodiversity policy objectives and shows how these approaches can help to deliver the biodiversity ambitions of the Post-2020 Global Biodiversity Framework. It builds on [Natural Capital for governments: what, why and how](#), a narrative published in 2018 on the added value of Natural Capital approaches for governments, as well as on publications by Business for Nature, IPBES, WEF, the Dasgupta Review and many others.

This paper is developed in the context of the Government Dialogue on Natural Capital, supported by the Economic for Nature Programme that is funded by the MAVA Foundation. Drafts of this paper have been discussed and commented on by representatives of countries across the globe and contains examples of applications from over twenty countries: Australia, Brazil, China, Costa Rica, France, Germany, Indonesia, Japan, Malaysia, Mexico, Myanmar, Netherlands, New Zealand, Nigeria, Peru, Philippines, South Africa, Spain, Sri Lanka, Sweden, Uganda and the United Kingdom, as well as from the African region, the European Union and BIOFIN.

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Executive Summary

Aim and audience

This paper explains what natural capital is, why it is relevant for biodiversity policy, and how it can help to achieve the global goal to be carbon neutral and nature positive. It is written to inform leaders, policymakers and decision-makers that are negotiating a new deal for nature and people in the context of the 15th Conference of the Parties to the Convention of Biological Diversity (CBD) and the 26th Conference of the Parties on Climate Change. It aims to demonstrate how natural capital approaches can help to mainstream biodiversity into all decisions taken by business, financial institutions and the whole of government. The examples of government actions that are presented throughout the document show that natural capital is a proven systemic lens to integrate the value of nature in social and economic decisions for a more sustainable and just world.

Key messages

1. Our way of living is at risk and the world has to redirect its course. As set out in the update of the zero draft of the Post-2020 Global Biodiversity Framework, transformational change is needed to reverse nature loss and ensure nature's health and resilience to support our economies and livelihoods.
2. To achieve transformational change, it is necessary to frame nature as an asset ('capital') and biodiversity as a characteristic of those assets that enables them to be more productive and resilient. Ecosystems are a useful way of breaking down natural assets to make its value visible in all decision making of business, financial institutions and the whole of government.
3. Applying natural capital approaches will help to integrate the value of nature in all decision-making and foster a better understanding of people's impacts and dependencies on nature, and of the potential of investments in nature for achieving all Sustainable Development Goals, because it puts nature and in the context of economic prosperity and human well-being.
4. Government interventions are essential for speeding and scaling up the transition, because they can create the enabling environment for change. For this governments have five levers of change: Value and embed nature, Adopt targets, Integrate policies, Reform incentives and Empower action. By adopting and promoting natural capital approaches, governments will unlock tools and solutions that are needed to mainstream the value of biodiversity into all policies and decision-making by business, finance and government.

> 60 examples show how natural capital approaches can inform change

The paper provides a wide range of examples how policymakers across the globe, working in diverse policy areas – ranging from conservation to planning, economy and development – use natural capital approaches to take more informed decisions and help reversing nature loss. Together these examples testify the power of framing nature as an asset to promote better understanding of threats to nature as well as people's needs of nature. And they provide a compelling library of best practices to help achieving the Sustainable Development Goals and mainstream nature into the policies of the whole of governments as well as of business and finance institutions.

1. Introduction

Aim and audience

This paper explains what natural capital is, why it is relevant for biodiversity policy, and how it can help to achieve the global goal to be carbon neutral and nature positive. It is written to inform leaders, policymakers and decision-makers that are negotiating a new deal for nature and people in the context of the 15th Conference of the Parties to the Convention of Biological Diversity (CBD) and the 26th Conference of the Parties on Climate Change. It aims to demonstrate how natural capital approaches can help to mainstream biodiversity into all decisions taken by business, financial institutions and the whole of government. The examples of government actions that are presented throughout the document show that natural capital is a proven systemic lens to integrate the value of nature in social and economic decisions for a more sustainable and just world.

Business-as-usual is no longer an option – change is inevitable

Our way of living is at risk and the world has to redirect its course. As set out in the Zero-draft Global Biodiversity Framework, transformational change is needed to reverse nature loss and ensure nature's health and resilience to support our economies and livelihoods.

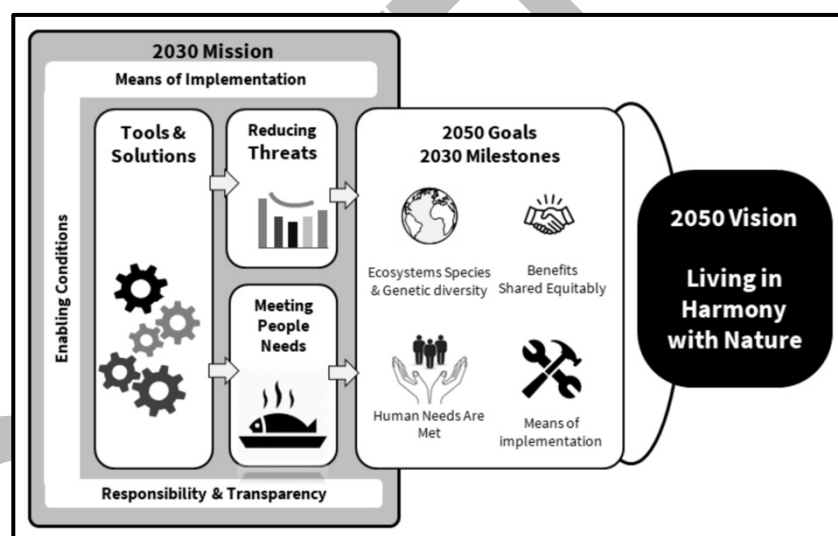
Nature underpins all aspects of our economy, society and well-being. Even by conservative estimates, in low income countries natural capital accounts for up to 50% of national wealth while in high income non-OECD countries it amounts, on average, to 30% of their wealth (World Bank, 2018). Yet, traditional measures of progress such as GDP fail to show this underpinning value of natural capital to an economy. The way we measure progress should change fundamentally, to go beyond GDP and fully include the value provided by nature, people and society.

This is no luxury but crucial, as the evidence is clear that nature is at risk. The IPBES global assessment report on biodiversity and ecosystem services provides an unambiguous message: "Nature and its vital contributions to people, which together embody biodiversity and ecosystem functions and services, are deteriorating worldwide. Direct and indirect drivers of change have accelerated during the past 50 years" (IPBES, 2019). We are overusing the goods and services that nature provides beyond its ability to supply those goods and services on a sustainable basis (Dasgupta Review, 2020), and this will hamper achieving international objectives such as the Sustainable Development Goals (Markandya, 2020). In increasingly globalized systems nature loss and ecosystem collapse pose increasing systemic risks to our economies, as the WEF Global Risks Report for 2020 indicates. And while this knowledge is not new today, the Covid-crisis has now taught us that these risks are no longer risks of the future but are an important underlying cause of threats to lives and livelihoods of millions today. The overuse of nature and the loss of biodiversity frequently increases disease transmission and

evidence indicates that preserving intact ecosystems and their endemic biodiversity should generally reduce the prevalence of infectious diseases (Keesing et.al., 2010).

It is inevitable that the world has to redirect its course. To reverse nature loss societies and economies need to transform the way they operate (IPBES, 2019). Fundamental changes of economic, social and financial models are needed. In order to meet people’s needs a fundamental transformation is needed across three socio- economic systems: food, land and ocean use; infrastructure and the built environment; and energy and extractives (WEF, 2020c). To support this change the [Update of the zero- draft Post-2020 Global Biodiversity Framework](#) has introduced a theory of change (Figure 1) that focuses on reducing the threats to biodiversity, ensuring that biodiversity is used sustainably in order to meet people’s needs, and putting in place tools and solutions for effective implementation (CBD, 2020).

Figure 1
Theory of change of the Post-2020 Global Biodiversity Framework (source: CBD, 2020)



The added value of framing nature as an asset to inform necessary change

To achieve transformational change, it is necessary to frame nature as an asset ('capital') and biodiversity as a characteristic of those assets that enables them to be more productive and resilient. Ecosystems are a useful way of breaking down natural assets to make its value visible in all decision making of business, financial institutions and the whole of government.

Identifying and managing nature as one of a range of assets or 'capitals' with an understanding of how these capitals interact, can help to make the value of nature visible in decision making across all sectors of society, because it integrates nature with other assets that are central in financial-economic and corporate decision-making: financial, social and human capital. It promotes seeing expenditures in nature as an 'investment' that will ensure a continuous return to society, instead of 'costs' that will draw down performance (see Box 1).

Box 1 | The use of capitals

A capitals approach takes into account the value of impacts and dependencies on capital assets (stocks) such as natural, social, human and produced capital. It integrates the value of nature, people, society and economy as the source for our well-being into decision-making, and shows how these assets change over time and how investment and good management in these assets can contribute to a healthy and resilient base for our economy and society.

A capital is a resource or asset that stores and provides value to people. When invested in and managed responsibly, the asset creates value. If we draw down on the capital stock itself, we limit its ability to provide value to people and the economy, and if we degrade it too much, it can stop providing value all together. The four most commonly conceptualized capitals are:

- **Produced capital:** The man-made goods as well as all financial assets that are used to produce goods and services consumed by society.
- **Natural capital:** The stock of renewable and non-renewable natural resources that combine to yield a flow of benefits to people.
- **Human capital:** The knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being.
- **Social capital:** The networks together with shared norms, values and understanding that facilitate cooperation within and among groups.

Although it is possible to look at capitals in isolation, they are all interconnected, and we should always aim to take a multi-capital management approach (Integrated thinking). In this way all of the capitals are considered as part of a system. By applying integrated thinking organizations will deliver their purpose to the benefit of their key stakeholders over time, create and preserve value and enable better decision making (Capitals Coalition, 2020; IIRC, 2020).

Framing nature as a capital asset, using the concept of natural capital (see Box 2), helps to mainstream biodiversity into decision making across all sectors of society. It provides a strategic lens that comes with sustainability metrics fit for mainstreaming biodiversity into all relevant sectors. Metrics that are increasingly aligned and internationally accepted.

Natural capital approaches complement the usual theory of change within conservation policy, because it helps to understand nature's underpinning value for our wellbeing in a language that is understood by business, financial institution and the whole of government. It identifies the relevant stocks and flows that nature provides and helps all stakeholders to better understand their impacts and dependencies on these. Information on the state of natural capital provides important practical information for evaluating different policy trade-offs, investment objectives and financial risk- management.

Applying a natural capital lens does mean that nature is considered not only for its economic or monetary value but for all benefits of nature to people, from the cultural and spiritual values to the economic values, consistent with [CBD decision X/3, paragraph 9\(b\)\(ii\)](#). Applying natural capital approaches is not about capturing nature in a monetized value, but about embedding its relative importance and worth in all decision-making, in such a way that any kinds of value of nature to people, whether tangible or intangible, are considered.

Box 2 | Natural Capital: The stock of resources that delivers benefits for people

Natural Capital is the stock of renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals) that yield a flow of benefits to people (Natural Capital Coalition, 2016). The terms “capital” and “stocks” are used as metaphors to help describe the role nature within the economy. The presence of, and interactions between, natural capital stocks generate a flow of goods and services that create value through the benefits they provide to business and society (Figure 1). The broad range of goods and services provided by natural capital include food, water, energy, shelter, medicine, and the raw materials we use in the creation of products. It also provides less obvious services such as clean air, flood defense, climate regulation, pollination and recreation. The flow of benefits from natural capital can be **ecosystem services** (benefits from ecosystems such as pollination, water, climate regulation) or abiotic services (does not depend on ecological processes but from geological processes, such as metals, oil and gas).

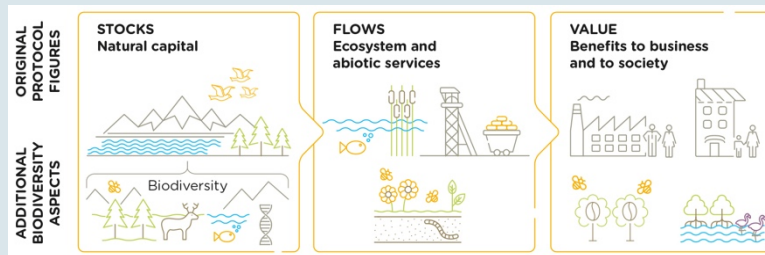


Figure 2 | Relationship between biodiversity and natural capital stocks, flows, and values (Capitals Coalition and Cambridge Conservation Initiative, 2020)

Biodiversity is an integral part of natural capital stocks and underpins the goods and services that they generate. Biodiversity is the “variability among living organisms from all sources including, inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems” (Art. 2, CBD 1992). In essence, biodiversity describes the variety of life and can be thought of as the living component of natural capital stocks. It can refer to the level of genetic variation, the variety of species present, or the variety of groups of species or ecosystems. There is an important and complex relationship between biodiversity and the delivery of ecosystem services. Biodiversity affects the quantity, quality, and resilience of ecosystem service provision. Less biodiverse natural systems can still yield ecosystem goods and services, but they are generally fewer, of lower quality, and more vulnerable to change. In many ways, biodiversity can be seen as a measure of the quality and resilience of a natural capital stock.

Society’s impacts and dependencies on biodiversity become more visible by using natural capital approaches. Economic prosperity and human well-being as well as the performance of almost every business depend on biodiversity and often impacts it at the same time (negatively or positively). These impacts and dependencies result in risks and opportunities, and thus in costs and benefits for business and society (Figure 2). Using natural capital approaches can help frame the complexities of biodiversity into an economic language that businesses understand.

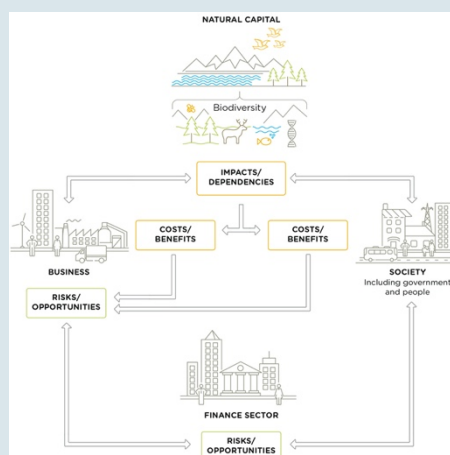


Figure 3 | Biodiversity impacts and dependencies: conceptual model for business, the finance sector and society (Capitals Coalition and Cambridge Conservation Initiative, 2020)

For further reading: See the [Natural Capital Protocol](#), the additional [Biodiversity Guidance](#) as well as the [Natural Capital Toolkit](#) that brings together available tools and methodologies to measure and value impacts and dependencies on nature. In addition to this, see also [The System of Environmental-Economic Accounting \(SEEA\)](#) on UNSD’s website.

2. Using natural capital approaches to understand threats and needs

Applying natural capital approaches will help to integrate the value of nature in all decision-making and foster a better understanding of people's impacts and dependencies on nature and of the potential of investments in nature for achieving all Sustainable Development Goals, because it puts nature in the context of economic prosperity and human well-being.

Improving the visibility of nature's underpinning role for wellbeing

Applying a natural capital approach helps to better understand our dependencies on nature and improve the visibility of nature's underpinning role for wellbeing. Figure 4 illustrates this underpinning role in terms of an allocation of the Sustainable Development Goals (SDGs): The natural assets base (underpinned by biodiversity) supports sustainable production and consumption and ultimately societal well-being for current and future generations. Goals to preserve and enhance biodiversity therefore also contribute to, and are interconnected with, broader sustainable development goals focusing on natural resources, the economy, and ultimately societal well-being.

Figure 4

The Sustainable Development Goals 'wedding cake' which highlights the importance of the biosphere for society and the economy (Adapted from PBL 2017)



Natural capital approaches, especially when interlinkages and trade-offs with human, social and produced capitals are included, help to better understand the interactions between different SDGs and integrate the value of nature in all decision-making. It makes visible how over-exploitation of natural capital can become a threat to the economy and our well-being (the two top layers of the 'wedding cake'). Or, vice versa, it helps to understand how investments in nature to reverse nature loss and restore ecosystems integrity, contribute to achieving all SDGs. The examples presented in this document and summarized and complemented with other examples in the annex illustrate how governments across the world use natural capital approaches to inform policy decisions to deal with these interactions and achieve the SDGs.

Showing the threats of a degraded natural assets base

As outlined in the *Updated Zero- draft of the Post-2020 Global Biodiversity Framework*, there is an urgent need to tackle the threats to our natural assets base, ranging from climate change and over exploitation of wild species, water (fresh and marine) and landscapes, to invasive alien species and pollution by nutrients, plastic and pesticides (Targets 1 to 7, CBD, 2020). These threats not only concern wild species and protected areas, but also productive areas (e.g. agriculture) and cities (health and well-being). Applications from e.g. Australia, Indonesia, Peru and Netherlands show how natural capital approaches have been applied to assess changes in natural assets due to impacts of human activities and better understand the related threats to society.

Indonesia | Indonesia's [Low Carbon Development Initiative](#) illustrates clearly that without changing its development course, Indonesia will not be able to continue to grow its economy due to environmental degradation and increased scarcity of environmental goods and services (Garrido et.al., 2019). The government of Indonesia has become increasingly aware that preserving and restoring natural resources is key to grow the economy sustainably and reduce pressure on natural capital. To achieve this the Low Carbon Development Initiative for Indonesia (LCDI) explicitly incorporates Green House Gases (GHG) emissions reduction targets into the country's Mid-Term Development Plan (RPJMN 2020-2025), along with other interventions for preserving and restoring natural resources at the regional level and for particular ecosystem types.



Peru | To show how at local levels ecosystem degradation has created equity issues associated with access to resources, Conservation International has worked with Peruvian authorities on [Natural capital accounts to assess the economy-wide local effects of ecosystem degradation](#) (Vardon et.al., 2019). The study also highlighted the impacts of land degradation, the trends of threatened species, and trends, both positive and negative, in the benefits we receive from nature. Indicators from the natural capital accounts can, for example, help to better understand linkages at local level between nature conservation and sustainable water use, allowing for more holistic resources management and policy implementation.



Australia | The Australian government is using [Natural Capital accounting to help prawn fisheries businesses](#) assess the risks and opportunities associated with the ecosystem assets they rely on. A new study is looking at the prawn-producing habitat in Wallis Lake, on the New South Wales coast north of Newcastle, the estuary and adjacent catchment – made up of saltmarsh, seagrasses and mangroves – with a view to understanding how this natural capital supports the fishery's productivity and to value its contribution through the use of natural capital accounting. The research is prepared as part of a larger national project, 'Increasing farm gate profits: the role of natural capital accounts.



Netherlands | As a supervisor for the Dutch financial system, the Dutch Central bank (DNB) explores how sustainability issues might affect the Dutch financial institutions and the financial system as a whole. In the report [Indebted to nature: Exploring biodiversity risks for the Dutch financial sector](#) (DNB & PBL, 2020) the central bank has investigated the exposure of the financial sector to different risk channels of biodiversity loss. Biodiversity loss is identified as a potential source of financial risks that threatens the availability of ecosystem services, such as wood, animal pollination and soil fertility, on which economic activities depend. Dutch financial institutions worldwide have EUR 510 billion in exposure to companies with a high or very high dependency on one or more ecosystem services. This comprises 36% of the portfolio examined. One of these ecosystem services is animal pollination. At a global level, the financial sector's exposure to products that depend on pollination amounts to EUR 28 billion.



See the annex for these and additional applications of natural capital approaches showing threats to nature (including examples from the Philippines).

Investing and using our natural assets to suit people's needs in a better way

Nature delivers multiple returns for society, ranging from environmental returns that help to harness ecological resilience, to societal returns such as public health, well-being and livelihoods, as well as to economic returns such as inclusive wealth, economic benefits and innovation (Targets 8 to 20, CBD, 2020). More than half of the world's GDP (\$44 trillion of economic value generation) is moderately or highly dependent on nature and its services and is therefore exposed to nature loss, with three large economic sectors (construction, agriculture and food and beverages) being highly dependent on nature (WEF, 2020b, p.8). This was already one of the key challenges the world was facing when Covid-19 struck and is even more needed in the context to build back our economies better to recover from the pandemic we are now facing. As applications from Uganda, Myanmar, the United Kingdom (Scotland) and India testify, applying a capitals approach helps to provide relevant information to manage our needs from nature as well as the trade-offs in meeting those. It ensures that the necessary information is available and taken into account by decision makers and helps to find better ways to deal with challenges such as climate change or Covid-19.

Uganda | The government of Uganda is working with the World Bank's Global Program on Sustainability to develop accounts for land, forest and wetlands ecosystems. The aim is to inform economic planning of these wetlands and ensure its ecosystem health and resilience, as well as its continued provision of services for the wellbeing of people, ranging from food production and water supply to tourism services.



A comparable approach has been followed for Senegal's Saloum Delta. Here the International Institute for Sustainable Development (IISD) implemented a [pilot of the Sustainable Asset Valuation tool \(SAVi\) to value the economic contribution of the Saloum Delta to sustainable development](#), focusing on wetlands and mangroves.

Myanmar | On the other side of the planet a comparable example for the [mangroves of the Ayeyarwady Delta](#) shows how a natural capital approach helps to estimate the return on investment in environment, social, human and financial capital. This case focused on piloting the [3Returns Framework](#) developed by the Green Growth Knowledge Platform and Global Green Growth Institute. The results of the pilot indicate that improved management of mangroves and green growth alternatives can enhance the well-being of the communities and that even limited investment in mangrove restoration provides high levels of benefits in the long-term. The work has continued with the support of the World Bank WAVES program.



United Kingdom (Scotland) | The government of Scotland is applying a four capitals approach, including natural capital, to build a strong strategy for achieving wellbeing for its citizens. On the basis of this it is developing [a robust economic strategy for Scotland](#) that will enable a post-Covid recovery by creating a resilient wellbeing economy: An economy one that generates strong economic growth with the concomitant creation of quality jobs, and that does so with an unequivocal focus on climate change, fair work, diversity, and equality.



India | Since 2015, the government of Andhra Pradesh state has been implementing the [Zero budget Natural Farming \(ZBNF\)](#) with 58 000 farmers to enhance people’s welfare while conserving the environment. Part of [TEEBAgriFood initiative](#) (an UNEP programme), ZBNF consists of a set of regenerative agricultural practices that restore natural capital stocks and reduce farms costs. Historically, India faced food insecurity and farmers debts due to high costly chemical input model. ZBNF appear as an alternative that meets people’s need for food, diversifies farmer’s incomes with intercropping and reinforces ecosystems services. Thanks to engagement of local government, 260 000 hectares are part of ZBNF and soil fertility improvement, better water retention, higher biodiversity and climate change resilience have been demonstrated.



See the annex for these and additional applications of natural capital approaches showing how to better manage needs of people (including examples from Australia, Netherlands, Sweden and United Kingdom).

3. Governments' opportunities for mainstreaming of biodiversity through natural capital approaches

Government interventions are essential for speeding and scaling up this transition, because they can create the enabling environment for change. For this governments have five levers of change: Value and embed nature, Adopt targets, Integrate policies, Reform incentives and Empower action. By adopting and promoting natural capital approaches, governments will unlock tools and solutions that are needed to mainstream the value of biodiversity into all policies and decision-making by business, finance and government.

Five levers of change

Transformational change can only be achieved if the way society works systemically changes. Enabling conditions and policy frameworks must be aligned, and economic and financial systems reformed in such a way that they award preferable solutions instead of non-preferable ones. By adopting and promoting natural capital approaches governments will unlock tools and solutions that are needed to mainstream the value of biodiversity into all policies and decision-making by business, finance and government.

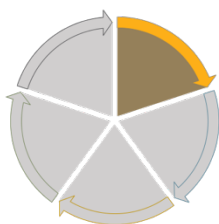
Governments have five key levers of change to reverse nature loss and achieve a just and green economy (see Figure 4): valuing and embedding nature in decision-making by governments and private actors; adopting appropriate targets that reverse nature loss; integrating and mainstreaming nature into all policies and sectors; changing the rules of the game, reforming incentive mechanisms and co-funding change; and fostering stakeholder participation and empowering everyone to act (Building on Lok et.al., 2018, and Business for Nature, 2020). All of these interventions of can be applied at sub-national, national, regional as well as international levels. None of these levers of change is the silver bullet that will work in all contexts, as the effectiveness of government interventions will differ depending on transformational progress made by a company, sector, geography, etcetera (PBL, 2020). And although there is no necessary order to implement them, or even to implement them all, implemented together they form a strong flywheel for transformative change.

Figure 4

A flywheel of potential government interventions to leverage transformative change



LEVER 1: Value and embed nature in decision-making by governments and private actors



To better understand people's relationship with nature, their impacts and dependencies on it, governments first need better data. To this end governments around the world apply natural capital accounting and assessments (see Box 3). Using these approaches governments can monitor and improve insights in society's dependencies on natural capital. For government the UN-System of Environmental-Economic Accounting (SEEA) framework provides a standardized approach.

There are two parts of the SEEA: the SEEA Central Framework, which is an international statistical standard and focuses on stocks and flows of natural resources, as well as the SEEA Experimental Ecosystem Accounting (SEEA EEA), which looks at the extent and condition of ecosystems and the services ecosystems provide. The SEEA is currently being revised and is envisaged to become an international standard by 2021 and to provide a measurement framework for the post-2020 monitoring framework. In a parallel track, business application of natural capital approaches is also increasing, using the Natural Capital Protocol and its accompanying guidances, tools and metrics. By supporting private sector applications and linking public and private sector experiences governments can help scale-up the use of natural capital approaches. Examples from India, France and the EU, as well as the state of global SEEA implementation, show how nature can become more visible and prominent in all decision making.

Box 3 | Accounting and assessing natural capital

Natural capital accounting: Compiling consistent, comparable and regularly produced data using an accounting approach on natural capital and the flow of services generated in physical and monetary terms to show the contribution of the environment to the economy and the impact of the economy on the environment. The System of Environmental Economic Accounting (SEEA) is the agreed international statistical standard for natural capital accounting. It is a statistical framework to organize information on the economy and the environment using accounting principles and structure compatible with the System of National Accounts, which is framework for deriving GDP as well as other macro-economic indicators including produced assets. This enable countries to better understand how the environment underpins wealth and economic activity and to monitor environmental degradation and its costs.

Natural capital assessment: The process of measuring and valuing relevant impacts and dependencies on natural capital, using appropriate methods. The scope can be broad, and it is primarily about providing information to inform decisions. The data used can be both accounting data and other types of data and statistics.

Ca. 100 countries | According to the [2017 survey of the UN Committee of Experts on Environmental Economic Accounting \(UN-CEEAA\)](#) already 69 countries worldwide are implementing the UN-SEEA experimental Environmental-Economic Accounting framework (UNCEEAA, 2017) and use the insights derived from this to inform policy decisions. And this number rapidly increased last years, so that now ca. 100 countries have commitments or are already applying natural capital accounting. The [Natural Capital Accounting in Action](#) series of the WAVES Partnership gives examples of these applications, including examples of how Australia uses natural capital accounts to tackle impact of drought as well as better manage the Great Barrier Reef. Another example is from Guatemala and shows the use of forest accounts to inform economic development.



India | In 2018, the Central Statistics Office of India has published the first [Environmental Economic Accounts with asset of four natural resources: forests, land, minerals and water](#), and updated this report in 2019. It's revealed nuances of the state

of India's natural capital stock and flows; with, for instance, areas with a net-positive increase in carbon stock and forests and other with unsustainable groundwater extraction.



France | The French [assessment of ecosystems and ecosystem services \(Efese\)](#) brings together a set of assessment activities that relate to ecosystems and their services at different scales. The program started in 2012 and aims to build robust and coherent tools to support awareness-raising and decision-making. Efese is a platform between science, decision-making and society. Its objective is to strengthen its inclusion in public policies and private decisions in France.

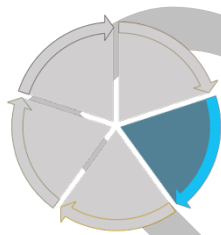


European Union | As part of the EU Green Deal the European Union is developing [environmental general accepted accounting principles](#) in collaboration with partners from the private sector (Value Balancing Alliance, Capitals Coalition and the World Business Council on Sustainable Development). With the aim to establish a standardized measurement and valuation methodology enabling decision makers to create and protect long-term value for the company, society and nature.



See the annex for these and additional examples of natural capital approaches to better mainstream the value of nature (including examples from Australia, Brazil, European Union, Germany, Japan, Netherlands, New Zealand, Mexico, Uganda and the United Kingdom).

LEVER 2: Provide direction by adopting targets to reverse nature loss



When a government has developed a better understanding of its relationship with nature, they can use this to develop, adopt and build societal support for targets to reverse nature loss. This is a key enabler for change because it provides public as well as private actors with the direction and confidence to implement and invest in solutions for biodiversity. A [Global Goal for Nature](#) has been proposed by a group of international conservation and business organization –

Nature Positive by 2030 – and this is already being widely picked up by governments and the private sector as an overarching goal. Under this the Science Based Targets Network is developing decision useful targets for businesses and cities which should also be of note. As examples from Indonesia, the United Kingdom (Scotland) and Sweden show, natural capital approaches can be used to inform progress towards such a target and to further develop more detailed inspirational targets that clearly link nature to economic activities.

Indonesia | [Natural Capital Accounts for land, ecosystems and carbon](#) developed with support from the WAVES program contributed to make a case for stronger government action on peat preservation and restoration. The accounts peatland accounts showed that the peatland area of Indonesia was much larger than expected. This had direct

consequences for the expansion plans of oil palm plantations, as Indonesia introduced a moratorium on oil palm plantations on peatlands.



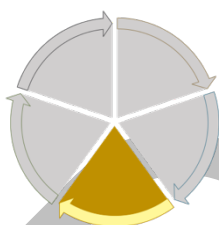
United Kingdom (Scotland) | The government of Scotland has established a [National Performance Framework](#) containing 'national outcomes' that describe the kind of Scotland it aims to create. One of these desired outcomes is that people value, enjoy, protect and enhance their environment. This outcome includes the growth of its natural capital assets as indicator of success.



Sweden | Building on [its SEEA-implementation](#), the government of Sweden has adopted a [policy target to reduce greenhouse gas emissions attributed to the Swedish consumption pattern](#). In this way, greenhouse gas emissions from Swedish consumption are made part of the country's environmental quality objectives. SEEA-based greenhouse gas emissions are used to estimate a consumption footprint indicator of consumption-related 'incorporated' greenhouse gas emissions. This combines domestically generated emissions with emissions incorporated in the goods that are produced in Sweden but consumed abroad. In this way Sweden shows its commitment to also reduce emissions outside of its national territory (Vardon et.al, 2019, Box 2.4; Statistics Sweden, 2015).



LEVER 3: Integrate and mainstream policies



A third step governments can take is the integration and mainstreaming of policies to achieve a carbon neutral, circular and green economy with equal opportunities for all. Without such a mainstreaming we will not be able to 'bend the curve' and reverse nature loss (Leclère et al., 2020), as also the [draft Long-Term Approach for Mainstreaming of Biodiversity](#) and the accompanying [draft action plan](#) clearly proves (CBD, 2020b/c). The challenges we are facing such as nature loss, climate change and inequality can only be tackled together. Therefore, policy coherence and efficient implementation and enforcement is needed and can be informed by deploying natural capital approaches, as is also illustrated by the [Green Economy Tracker](#), an online assessment tool that charts 20 'best in class' policies across 5 themes that drive systemic change in our national economies, including the valuation of nature. This Tracker illustrates how a natural capital approach can be used as a basis for the development of macro indicators and/or information systems alongside economic indicators such as GDP. Examples from New Zealand, Uganda, China and Sweden illustrate how this is becoming a reality in more and more countries.

New Zealand | In December 2018 the New Zealand Treasury released the [Living Standards Framework Dashboard](#), that provides indicators and analysis to inform the Treasury's advice about wellbeing priorities. The framework builds on the OECDs Wellbeing Framework and uses four capitals (natural, human, social, and produced) to

show how these generate wellbeing now and into the future. Similar approaches have been developed by other countries, including France, Netherlands and Scotland.



Uganda | The government of Uganda uses natural capital accounting, including regularly produced [Water accounts](#), as a basis for [mainstreaming of nature into policies for water and livelihoods](#). To restore the River Rwizi catchment area the district leadership has established a management committee comprising of district natural resource officers, private sector, civil society, elected leaders, youth, opinion leaders and the media. Collaboration with the private sector has been set up to support sustainable management of the catchment area. In addition to this, the government of Uganda uses Natural Capital Accounting also to inform strategic policies, including for the development of the third National Development Plan.



China | As part of its dream to become 'the ecological civilization of the 21st century', China is developing and piloting a new indicator: [Gross Ecosystem Product \(GEP\)](#). The aim of the GES is to complement the indicators of GDP and the Human Development Index, to create a more complete picture of wellbeing. The GES is now implemented and tested in several provinces and counties of the Republic of China. One of the provinces where GEP is tested is the province of Qinghai, showing that the approach is tractable using available data. In this province, that is the source of the Mekong, Yangtze, and Yellow Rivers - water-related ecosystem services make up nearly two-thirds of the value of GEP for Qinghai. It has been shown that most of the benefits accrue downstream. In Qinghai, GEP was greater than GDP in 2000 and three-fourths as large as GDP in 2015 as its market economy grew ([Zhiyun Ouyang, 2020](#)).



Sweden | A relevant application of natural capital approaches related to food and agriculture stems from Sweden. Its government has used land accounts to identify which landowners are responsible for biodiversity management on a specific plot and has published [Land accounts for ecosystem services](#), that connect statistics on land use with economic actors (WAVES Policy Forum 2018). These breakdowns can be used for analyzing agricultural investments and help to learn more about the importance of the environment and ecosystems for the wider economy. These kinds of insights help to reorient agricultural practices and priorities towards more sustainable and regenerative ways that will help to reverse nature loss instead of driving it.



Biodiversity Finance Initiative | The [Biodiversity Finance Initiative](#) develops evidence-based Biodiversity Finance Plans and supports countries implement finance solutions to reach their national biodiversity targets. It promotes national platforms, regional and global dialogues enabling countries to accelerate the reduction of their finance needs to the point where these biodiversity targets are no longer hampered by the systemic lack of investment. A practical tool that has been created is the [Finance Solution Map](#), an online "catalogue" and comprehensive list of instruments, tools and strategies that are applicable to the field of biodiversity finance. Biodiversity finance is

not only about mobilizing new resources. It is concerned with delivering better on what is available, reallocating resources from where they harm to where they help and acting today to reduce the need for future investments.



See the annex for these and additional applications of natural capital approaches to integrate nature considerations in other policies (including examples from Australia, European Union, France, Indonesia, Netherlands, Mexico, Myanmar, Philippines, South Africa and the United Kingdom).

LEVER 4: Change the rules of the game by reforming incentives and subsidies



The transformative change that is needed cannot be achieved without changing the rules of the game. Incentives, financial mechanisms and regulations has to be adopted to achieve systemic change and natural capital approaches can help to inform the changes that are needed to reward positive outcomes for nature or penalize negative ones.

Building on these incentives, governments can also raise revenues that are needed to promote green finance and co-funding positive actions for nature. Examples from Brazil, Costa Rica, the European Union, France, Sweden and the United Kingdom show how governments are starting to change the rules of the game.

Brazil | Building on their development of [Environmental-economic accounting for water and EEB-services](#) the Brazilian governments has developed a [System of Incentives for Environmental Services](#). For example, the National Water Agency (ANA), in coordination with regional-local TEEB project have a pillar on Natural Capital Accounting with compiled and precise data about water accounts, an essential element for biodiversity. Since 2001, the [water producer program](#), a national initiative of payment for ecosystem services in 38 watershed reward producers who are implementing practice to control erosion, to enhance water infiltration in water-table and to restore and preserve biodiversity.



Costa Rica | [Costa Rica's Payment for ecosystem services \(PES\) program](#) is globally recognized as leading example for enhancing economic, environmental, and social returns from investments in integrated ecosystem management. It has provided innovative financial incentives for ecosystem services that are not usually monetized and paid for in the traditional market. The Costa Rican PES scheme has been credited for more than doubling the country's forest cover from less than 30% in 1980s to 54% in 2015. Results indicated that in 2016 1,122,312 hectares have been submitted to the Costa Rican PES program. In addition, 6,478,254 trees have been planted in agroforestry systems, almost 16,000 families have been involved in the program, and over 136,000 hectares of indigenous territories have been placed under PES. These achievements strongly demonstrate the viability and effectiveness of green growth (GGGI, 2016).



European Union | The European Union has developed a [Taxonomy for sustainable activities](#) that provides technical screening criteria for economic activities that can make a substantial contribution to climate change mitigation or adaptation, while avoiding significant harm to the four other environmental objectives: sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention control, and protection and restoration of biodiversity and ecosystems.



France and the European Union | In its national deforestation strategy France has included [measures for increasing the monitoring and disclosures of deforestation by companies](#) (non-mandatory). Many more countries have these non-mandatory disclosure regulations, including the European Union. The EU is now reconsidering its policies for non-financial disclosure as part of the EU Green Deal. It is expected that future regulation will be stricter, with a bigger group of companies within its scope.



Sweden | To offer investors a transparent way to ensure that bonds are green, the government of Sweden has published [Sweden's Sovereign Green Bond Framework](#) (2020). This framework has been developed in accordance with the guidelines in the Green Bond Principles (GBP), which was published in 2018 by the International Capital Market Association (ICMA). The work was carried out within the Government Offices in consultation with relevant expert agencies and reviewed by an independent expert. The Swedish National Debt Office will issue the bonds at an appropriate time during 2020.



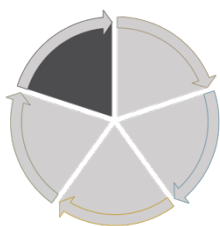
A related example from a financial institution stems from the Inter-American Development Bank and its support for [private sector investment in climate-resilient infrastructure](#) in Latin America and the Caribbean. To achieve this IADB is developing the business case for action that includes a full range of both costs and benefits, including those related to biodiversity.

United Kingdom and Netherlands | As part of its international biodiversity strategies, the governments of the United Kingdom and the Netherlands support the explorations of an international group of stakeholders, including several financial institutions as well as UNDP, to establish a [Taskforce on Nature Related Disclosures](#). Following the example of the Financial Stability Board's Taskforce on Climate-Related Financial Disclosure and the [Recommendations on voluntary, consistent climate-related financial risk disclosures](#) it has developed for companies and financial actors, this new taskforce on nature-related financial disclosures would be tasked with developing comparable guidelines to address nature loss.



See the annex for additional applications of natural capital approaches to change the rules of the game and provide better incentives (including examples from Brazil, Philippines, South Africa and Uganda).

LEVER 5: Empower everyone to act



The first four levers of change are more effective if all actors have the capacity, are empowered and work collaboratively to reverse nature loss. Building the capacity of all actors to assess their impacts and dependencies on nature is key to mainstream nature into all of their decisions and actions. Examples from the governments of Africa, Spain, Brazil, United Kingdom (Scotland) and the European Union show how they are empowering everyone to act on nature.

Africa | The [Africa Natural Capital Accounting Community of Practice](#) (CoP) is a regional learning and knowledge platform that brings together professionals from governments institutions, nongovernmental organizations and academia that are interested in or working on Natural Capital Accounting (NCA) in Africa. The Africa CoP aims to build momentum and mainstream NCA into statistical production and policy in all African countries by supporting best practices through capacity building and knowledge sharing. To that end, and over the next few years, the community of practice intends to hold regular forums, share information, produce joint communications including case studies, share experiences through south-south exchanges and joint trainings, and build technical expertise through themed working groups. The CoP was initiated in November 2019, following the first Africa Forum on Natural Capital Accounting in Kampala, Uganda, and is supported by the World Bank.



Spain | The Spanish Business and Biodiversity Initiative (IEEB) is a public-private platform that works to better integrate biodiversity into business policy. At present the IEEB is engaged with the Spanish Green Growth Group in a [working group for the valuation of biodiversity using a natural capital approach](#). Both platforms represent more than 70 companies in Spain, including some of the biggest ones. The idea is to push for best practices by sharing experiences and aligning with current frameworks and methodologies.



Brazil | The National Strategy and Plan of Action for Biodiversity has been constructed and implemented through the [PainelBio Initiative](#). Throughout this process, important documents were generated, and knowledge was aggregated, and opportunities for synergy were created among the various sectors and governmental levels. Over 200 institutions and programs were invited to engage in the process to develop the National Biodiversity Strategy and Action Plan of Brazil, contributing to their institutional actions. Through this the national biodiversity strategy was strengthened and took on board different initiatives that work for biodiversity in Brazil.



United Kingdom (Scotland) | Has developed sectoral Sustainable Growth Agreements to work directly with businesses to engage them in [Scotland's One Planet Prosperity policy implementation](#). the Scottish Environment Protection Agency is working with businesses using new mechanisms such as Sustainable Growth Agreements and sector

plans. These help businesses, local authorities and whole sectors to work with SEPA to take action to consume less and use resources more productively. We are helping businesses and public sector to work together to build the case for investing in nature to achieve inclusive growth.



European Union | To increase applications by business, especially also SMEs, the European Union is funding a three-year We Value Nature campaign to support businesses and the natural capital community to make valuing nature the new normal for businesses across Europe. We Value Nature is supporting the natural capital community to share research, resources and best practice; helping businesses to improve their risk management, communication with investors, stakeholder engagement and anticipation of future legislation; and making a difference by targeting businesses and barriers where we expect to make the greatest impact. Also, the EU is also supporting Oppla, a web-based community and innovation hub for sharing knowledge about natural capital, ecosystem services and nature-based solutions.



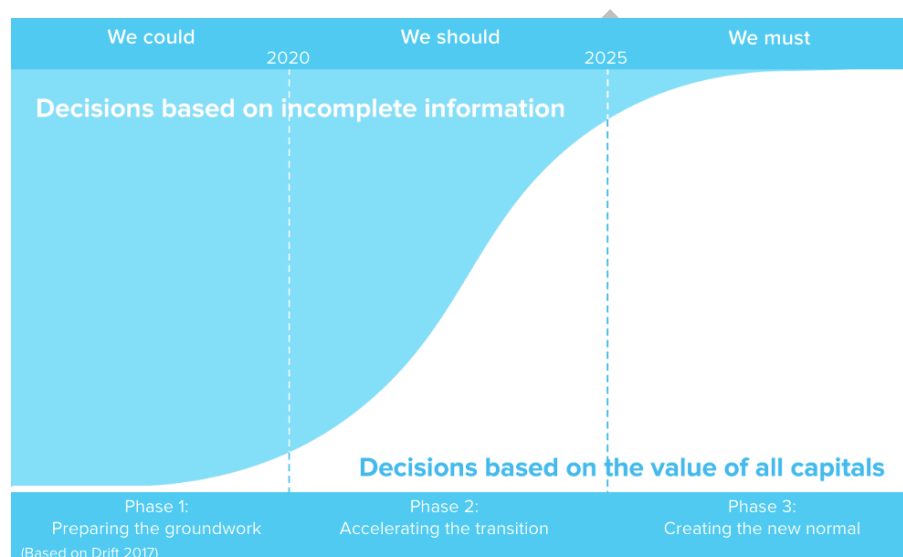
See the annex for these and additional applications of natural capital approaches to empower everyone to act (including examples from the European Union, Netherlands).

4. What's next?

Creating transformative change

Transformative change does not occur overnight. It takes three distinct phases, from preparing the groundwork and accelerating the transition to creating a new normal (Figure 5).

Figure 5
A model for enabling transformational change



As illustrated throughout this paper, framing nature as asset, as natural capital, has proven to be an effective route for change. Therefore, it makes sense to build this into the Post-2020 framework. The groundwork is prepared, and frameworks, methodologies and metrics are in place to start. What is now needed is to accelerate their uptake. It is crucial to strengthen the capacity around the world to ensure that in all geographies and on all levels of governments people are trained, empowered and rewarded to mainstream the value of nature into decisions.

To enable the acceleration we need, for the new normal to become a reality, the adoption of an ambitious Post-2020 Global Biodiversity Framework is a crucial incentive. Five levers of change have been described for effective government intervention. None of these levers of change is the silver bullet that will work in all contexts. Effectiveness of government interventions will differ depending on transformational progress made by a company, sector, geography, etcetera. But together these five types of potential government actions provide an inspirational palette for change that can help to make the Post-2020 Global Biodiversity Framework an enabler for change and would ensure that the value of nature is embedded in all decisions throughout society.







The challenge now is to use them.






Annex | A glossary of examples that show how natural capital approaches can inform change







This annex provides an overview of how policymakers across the globe, working in diverse policy areas – ranging from conservation to planning, economy and development – use natural capital approaches to take more informed decisions and help reversing nature loss. Together these examples testify the power of framing nature as an asset to promote better understanding of threats to nature as well as people’s needs of nature. And they provide a compelling library of best practices to help achieving the Sustainable Development Goals and mainstream nature into the policies of the whole of governments as well as of business and finance institutions.






Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
Africa	1. The Africa Natural Capital Accounting Community of Practice is a regional learning and knowledge platform that brings together professionals from governments institutions, nongovernmental organizations and academia that are interested in or working on Natural Capital Accounting (NCA) in Africa. This CoP was initiated in November 2019, following the first Africa Forum on Natural Capital Accounting in Kampala, Uganda, and is supported by the World Bank.			●				●	
Australia	2. The Australian government is using Natural Capital accounting to help prawn fisheries businesses assess the risks and opportunities associated with the ecosystem assets they rely on. A new study is looking at the prawn-producing habitat in Wallis Lake, on the New South Wales coast north of Newcastle, the estuary and adjacent catchment – made up of saltmarsh, seagrasses and mangroves – with a view to understanding how this natural capital supports the fishery’s productivity and to value its contribution through the use of natural capital accounting. The research is prepared as part of a larger national project, ‘Increasing farm gate profits: the role of natural capital accounts.’		●	●		●			






Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	3. Developing natural capital accounts for Marine and Coastal Ecosystems (Port Phillip Bay) . Including ecosystem accounting to assess the relationship between the environmental condition of the area and economic and other benefits in the Great Barrier Reef region. [ABS, 2015, 2017 WAVES Policy Forum 2018]		●	●					
	4. Developing natural capital accounts for Victoria's Parks . Including ecosystem accounting in the Central Highlands of Victoria to assess the economic and ecological impacts of conserving versus those of exploiting the area (Keith et al., 2017).	●		●			●		
	5. Supporting the development and implementation of an international Standard on Biodiversity Offsets (Together with Netherlands)						●		
Brazil	6. The Brazilian Institute of Geography and Statistics (IBGE) has developed massive efforts to collect land cover and use accounts with GIS tools. The Brazil government made the forest code mandatory in 2010. Each rural propriety should be registered in the Environmental Cadastre Rural, and each landowner needs to delimit a legal reserve and an area of permanent protection for native vegetation. In 2017, a law requiring the calculation of the Green Domestic Product, which include the national ecological capital, was enacted.	●						●	
	7. Developing Environmental-economic accounting for water and EEB-services . And building on that also developing a System of Incentives for Environmental Services . For example, the National Water Agency (ANA), in coordination with regional-local TEEB project have a pillar on Natural Capital Accounting with compiled and precise data about water accounts, an essential element for biodiversity. Since 2001, the water producer program , a national initiative of payment for ecosystem services in 38 watershed reward producers who are implementing practice to control erosion, to enhance water infiltration in water-table and to restore and preserve biodiversity.				●			●	
	8. The National Strategy and Plan of Action for Biodiversity has been constructed and implemented through the PainelBio Initiative								●
China	9. As part of its dream to become 'the ecological civilization of the 21st century', China is developing and piloting a new indicator: Gross Ecosystem Product (GEP) . The aim of the GES is to complement			●		●			

Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	<p>the indicators of GDP and the Human Development Index, to create a more complete picture of wellbeing. The GES is now implemented and tested in several provinces and counties of the Republic of China. One of the provinces where GEP is tested is the province of Qinghai, showing that the approach is tractable using available data. In this province, that is the source of the Mekong, Yangtze, and Yellow Rivers - water-related ecosystem services make up nearly two-thirds of the value of GEP for Qinghai. It has been shown that most of the benefits accrue downstream. In Qinghai, GEP was greater than GDP in 2000 and three-fourths as large as GDP in 2015 as its market economy grew (Zhiyun Ouyang, 2020).</p>								
	<p>10. At the beginning of the century the Chinese government has launched one of the largest payment-for-ecosystem-services programs in the world. Examples of these restoration programs are the Sloping Land Conversion Program and Natural Forest Conservation Program that together involve 120 million households, with payment exceeding USD \$100 billion in 2001-2010 (Guerry et.al., 2015, p. 2). Reforestation is considerable and soil erosion has decreased rapidly. However, in terms of social issues there still are challenges. Not in all places the payments were enough to compensate for loss of income from shifting livelihoods</p>	●				●	●		
Costa Rica	<p>11. Costa Rica's Payment for ecosystem services (PES) program is globally recognized as leading example for enhancing economic, environmental, and social returns from investments in integrated ecosystem management. It has provided innovative financial incentives for ecosystem services that are not usually monetized and paid for in the traditional market.</p>						●		
European Union	<p>12. Linking natural ecosystems and socio-economic systems through the flow of ecosystem services, in the context of the EU project Mapping and Assessment of Ecosystems and their Services (MAES).</p>			●					
	<p>13. As part of the EU Green Deal the European Union is developing environmental general accepted accounting principles in collaboration with partners from the private sector (Value Balancing Alliance, Capitals Coalition and the World Business Council on Sustainable Development). With the aim to establish a standardized measurement and valuation</p>			●					







Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	methodology enabling decision makers to create and protect long-term value for the company, society and nature. A sister project also proposed by the EU aims to make sure that biodiversity is adequately included in the eGAAP and will start late 2021.								
	14. Developing a Taxonomy for sustainable activities , starting with screening criteria for climate change mitigation or adaptation, later to be complemented with criteria for natural capital and circular economy.					●	●		
	15. Convening an EU Business@Biodiversity Platform , that brings together governments, business and non-government organizations to discuss experiences on natural capital accounting and biodiversity measurement approaches for businesses and financial institutions, engage with pioneering corporates and financials and promote the integration of biodiversity concerns within the decision-making processes of a growing number of businesses.			●				●	
	16. Funding the We Value Nature campaign to support businesses on their natural capital journey. And supporting Oppla , a web-based community and innovation hub for sharing knowledge about natural capital, ecosystem services and nature-based solutions.			●				●	
France	17. Implementing a National ecosystem assessment (the EFESE program), to influence decisions in all sectors.			●					
	18. Use of environmental accounts as basis for a Dashboard of 10 complementary wealth indicators , including a carbon footprint and soil sealing indicator. [Service d'information du Gouvernement, 2017]					●			
	19. Adoption of a National strategy to eliminate deforestation from the French supply chain that contains non-mandatory objectives about increasing the monitoring and reporting of deforestation by companies (all links refer to texts in French).							●	
Germany	20. PM Add Update the Environment Valuation factor examples on the basis of current NCC-projects]			●					




Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
India	21. In 2018, the Central Statistics Office of India has published the first Environmental Economic Accounts with asset of four natural resources: forests, land, minerals and water , and updated this report in 2019. It's revealed nuances of the state of India's natural capital stock and flows; with, for instance, areas with a net-positive increase in carbon stock and forests and other with unsustainable groundwater extraction. In parallel, the National Biodiversity Action Plan (NBAP) of India highlighted that policy decision for biodiversity preservation have been inadequate due to the undervaluation of natural resources and non-accounted or invisible negatives environmental impacts. The NBAP mention their essential target of "valuation of good and services provided by biodiversity and use of economic instruments for decision-making process." The 2019 NBAP report is available here .			●		●			
	22. Since 2015, the government of Andhra Pradesh state has been implementing the Zero budget Natural Farming (ZBNF) with 58 000 farmers to enhance people's welfare while conserving the environment. Part of TEEBAgriFood initiative (an UNEP programme), ZBNF consists of a set of regenerative agricultural practices that restore natural capital stocks and reduce farms costs. Historically, India faced food insecurity and farmers debts due to high costly chemical input model. ZBNF appear as an alternative that meets people's need for food, diversifies farmer's incomes with intercropping and reinforces ecosystems services. Thanks to engagement of local government, 260 000 hectares are part of ZBNF and soil fertility improvement, better water retention, higher biodiversity and climate change resilience have been demonstrated.		●			●			
Indonesia	23. Indonesia's Low Carbon Development Initiative illustrates that without changing its development course, Indonesia will not be able to continue to grow its economy due to environmental degradation and increased scarcity of environmental goods and services (Garrido et.al., 2019). The government of Indonesia has become increasingly aware that preserving and restoring natural resources is key to grow the economy sustainably and reduce pressure on natural capital. To achieve this the Low Carbon	●	●	●		●			

Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	Development Initiative for Indonesia (LCDI) explicitly incorporates Green House Gases (GHG) emissions reduction targets into the country's Mid-Term Development Plan (RPJMN 2020-2025), along with other interventions for preserving and restoring natural resources at the regional level and for particular ecosystem types.								
	24. Natural Capital Accounts for land, ecosystems and carbon developed with support from the WAVES program contributed to make a case for stronger government action on peat preservation and restoration. The accounts peatland accounts showed that the peatland area of Indonesia was much larger than expected. This had direct consequences for the expansion plans of oil palm plantations, as Indonesia introduced a moratorium on oil palm plantations on peatlands.	●			●				
	25. The government of Indonesia issued its first Islamic 'green' sovereign bond known as Green Sukuk in early 2018 listed in Singapore Stock Exchange and NASDAQ Dubai. It has attracted investment around US\$ 1.25 billion.								
Japan	26. To promote private sector applications on biodiversity and natural capital the government of Japan has developed Guidelines for Private Sector Engagement in Biodiversity and started a Community of Learning for Natural Capital Valuation .			●					
Netherlands	27. Creation of a Monitor of well-being , using a system of natural capital accounts based on implementing the UN-SEEA framework in the Netherlands.					●			
	28. Application of a SEEA-EEA based Natural Capital Account for the North Sea to link data on the extent and condition of ecosystems of the North Sea with that on ecosystem services provided by these ecosystems (in physical terms).		●	●					
	29. Establishment of a Community of Practice Financial Institutions & Natural Capital that supported natural capital approaches by the financial sector in the Netherlands.			●				●	
	30. PM Add Update the Environment Valuation factor examples on the basis of current NCC-projects]			●					

Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	31. As a supervisor for the Dutch financial system, the Dutch Central bank (DNB) explores how sustainability issues might affect the Dutch financial institutions and the financial system as a whole. In the report Indebted to nature: Exploring biodiversity risks for the Dutch financial sector (DNB & PBL, 2020) the central bank has investigated the exposure of the financial sector to different risk channels of biodiversity loss. Biodiversity loss is identified as a potential source of financial risks that threatens the availability of ecosystem services, such as wood, animal pollination and soil fertility, on which economic activities depend.	●		●		●			
	32. Supporting the development and implementation of an international Standard on Biodiversity Offsets (Together with Australia)					●			
New Zealand	33. In December 2018 the New Zealand Treasury released the Living Standards Framework Dashboard , that provides indicators and analysis to inform the Treasury's advice about wellbeing priorities. The framework builds on the OECD's Wellbeing Framework and uses four capitals (natural, human, social, and financial and physical) to shows how these generate wellbeing now and into the future.			●		●			
	34. Implementing a strategic approach to the government's science investment, by targeting long-term goals, e.g. for Sustainable Seas			●		●			
Nigeria	35. In the context of the GLOBE-UNEP-GEF Project; "GLOBE Legislators Advancing REDD+ and Natural Capital Governance Towards the Delivery of the 2030 Agenda" a workshop was held with the aim to advocate to authorities the importance of government driving a participatory approach to mainstream Biodiversity accounts into National Accounts . The workshop was predominantly led by staff of the Ministry of Budget and National Planning; participants were from the staff of relevant Ministries Departments and Agencies in the country. The workshop provided suggestions on how to mainstream NCA into the National Planning and Budgeting system, to enable a better understand how in Nigeria the environment underpins wealth and economic activity and to monitor environmental degradation and its costs.			●		●			







Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
Malaysia	36. In 2020, the Ministry of Water, Land, and Natural Resources organized the Business Forum with 50 representatives from the government, the private sector and NGO. The outcomes of the event were the creation of a working group to establish the Malaysian Platform for Business and Biodiversity to encourage the use of market-based and non-market-based tools to include biodiversity consideration and encourage behavioural change.							●	
Mexico	37. Application of Ecological Integrity Indicators within the natural capital index, to measure the ecological and economic value of the remnant natural capital of México.			●		●			
	38. Incorporating the International Open Data Charter principles into a National Decree for Open Data in 2015.			●				●	
Myanmar	39. The pilot of the 3Returns Framework (developed by the Green Growth Knowledge Platform and Global Green growth Institute) for the mangroves of the Ayeyarwady Delta shows how a natural capital approach helps to estimate the return on investment in environment, social, human and financial capital.		●			●			
Peru	40. To show how at local levels ecosystem degradation has created equity issues associated with access to resources, Conservation International has worked with Peruvian authorities on Natural capital accounts to assess the economy-wide local effects of ecosystem degradation (Vardon et al., 2019). The study also highlighted the impacts of land degradation, the trends of threatened species, and trends, both positive and negative, in the benefits we receive from nature. Indicators from the natural capital accounts can, for example, help to better understand linkages at local level between nature conservation and sustainable water use, allowing for more holistic resources management and policy implementation.	●							
Philippines	41. Using ecosystem accounts developed for the Laguna de Bay Basin —the watershed for the country's largest lake, in metropolitan Manila—the Laguna Lake Development Authority (LLDA) has created a scorecard for local government units to assess environmental conditions and is using the information to update the Laguna de Bay Master Plan. The accounts have been used to	●							




Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	simulate consequences of unabated deforestation and explore options for watershed measures with the greatest potential positive impacts on ecosystem protection and regeneration.								
	42. The Philippine government, with support from the World Bank WAVES program, developed accounts for the Laguna de Bay Basin adjacent to the capital Manila. The accounts highlight the tensions between the use of the lake for the production of fish (via aquaculture and open water fishing), water supply and water emissions. Estimates of resource rent for fisheries based on the accounts were used for revising the licensing and permit fees for aquaculture in the lake and Implementation of Laguna de Bay Watershed Greening Program.						●		
South Africa	43. Development of ecosystem extent accounts for spatial planning purposes like for locating new protected areas and for identifying strategic water source areas. [Driver et al., 2015]					●			
	44. Greening South Africa's tax policies , using insights from their natural capital accounts. [PM can this be updated? Did South Africa implement a carbon tax?]						●		
Sri Lanka	45. In 2019 the Central Bank of Sri Lanka launched a Roadmap for Sustainable Finance . This Roadmap provides a broad direction to financial regulators and financial institutions to effectively manage environmental, social and governance (ESG) risks associated with projects they finance and help increase assistance to businesses that are greener, climate-friendly and socially inclusive.						●		
Spain	46. The Spanish Business and Biodiversity Initiative (IEEB) is a public-private platform that works to better integrate biodiversity into business policy. At present the IEEB is engaged with the Spanish Green Growth Group in a working group for the valuation of biodiversity using a natural capital approach . Both platforms represent more than 70 companies in Spain, including some of the biggest ones. The idea is to push for best practices by sharing experiences and aligning with current frameworks and methodologies.							●	
Sweden	47. The Swedish government has used land accounts to identify which landowners are responsible for biodiversity management on a specific plot and has published Land accounts for ecosystem services , that		●			●			

Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	connect statistics on land use with economic actors (WAVES Policy Forum 2018). These breakdowns can be used for analyzing agricultural investments and help to learn more about the importance of the environment and ecosystems for the wider economy. These kinds of insights help to reorient agricultural practices and priorities towards more sustainable and regenerative ways that will help to reverse nature loss instead of driving it.								
	48. Building on its SEEA-implementation , Sweden has adopted a policy target to reduce emissions attributed to the Swedish consumption pattern . In this way, greenhouse gas emissions from Swedish consumption are made part of the country's environmental quality objectives. SEEA-based greenhouse gas emissions are used to estimate a consumption footprint indicator of consumption-related 'incorporated' greenhouse gas emissions. This combines domestically generated emissions with emissions incorporated in the goods that are produced in Sweden but consumed abroad. In this way Sweden shows its commitment to also reduce emissions outside of its national territory (Vardon et.al, 2019, Box 2.4; Statistics Sweden, 2015).				●		●		
	49. Greening Swedish tax policies , using insights from sector-by-sector accounting of CO2 emissions and energy use, in parallel with standard economic accounts.						●		
	50. To offer investors a transparent way to ensure that bonds are green, the government of Sweden has published Sweden's Sovereign Green Bond Framework (2020). This framework for Swedish sovereign green bonds has been developed in accordance with the guidelines in the Green Bond Principles (GBP), which was published in 2018 by the International Capital Market Association (ICMA). The work was carried out within the Government Offices in consultation with relevant expert agencies and reviewed by an independent expert. The Swedish National Debt Office will issue the bonds at an appropriate time during 2020.						●		



Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
Uganda	51. The government of Uganda is working with the World Bank's Global Program on Sustainability to develop accounts for land, forest and wetlands ecosystems. The aim is to inform economic planning of these wetlands and ensure its ecosystem health and resilience, as well as its continued provision of services for the wellbeing of people, ranging from food production and water supply to tourism services.		●						
	52. Using natural capital accounting, including regularly produced Water accounts , as a basis for mainstreaming of nature into policies for water and livelihoods . To restore the River Rwizi catchment area the district leadership has established a management committee comprising of district natural resource officers, private sector, civil society, elected leaders, youth, opinion leaders and the media. Collaboration with the private sector (including Coca Cola and ABInBev) has been set up to support the sustainable management of the catchment area.						●		
	53. The government of Uganda, with support of the WAVES program, has published an Issues paper on Adjusted Macroeconomic Indicators and Measures of Comprehensive Wealth . This paper presents the results of the adjusted macroeconomic indicators and wealth accounts for Uganda and identifies policy issues that need to be considered during government planning and budgeting. It spells out the Adjusted Net National Income (ANNI) and the Adjusted Net Savings (ANS) in addition to countries wealth measure indicators. All these measures are consistent with the System of National Accounts (SNA) but take into consideration natural capital use and formation.				●		●		
	54. The Ugandan Wood Assets and Forest Accounts (2020) show policy makers that if nothing changes national sustainable wood supplies from areas defined as forest will be fully depleted by 2025. An important driver for this is charcoal production, for which the high market supply is driven by value addition and margins equivalent to about 80 percent of the retail price, while charcoal producers' returns are usually between 12.5 percent and 20 percent of the retail price. The accounts show that the current structure of fiscal instruments do not internalize the externalities of wood production and that a new market structure is needed that includes e.g. wood extraction costs and resource rents for charcoal in the value chain,							●	

Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	and promotes the use of improved cooking stoves, kiln technologies and enhanced incentives for the adoption of alternative sources of energy for cooking, especially liquified petroleum gas and electricity.								
	55. The National Environment Management Authority has developed in collaboration with WWF a Payment for Watershed Services manual for catchments in the Rwenzori Mountains National Park.						●		
United Kingdom	56. Development of a National Ecosystem Assessment , that provides an example of how non-monetary techniques can be used to consider biodiversity's value alongside monetary values.		●						
	57. Integration of natural capital into The Green Book , the United Kingdom's central government's guidance on appraisal and evaluation of policies and policy decisions..					●			
	58. Running six biodiversity offsetting pilot areas from 2012 to 2014. Leading to a publication on results of the pilots, together with research into international experiences of biodiversity offsetting. [Is there an update possible? Are there more recent examples?]						●		
Scotland	59. Establishment of a National Performance Framework containing 'national outcomes' that describe the kind of Scotland its government aims to create. One of these desired outcomes is that people value, enjoy, protect and enhance their environment. This outcome includes the growth of its natural capital assets as indicator of success.			●	●	●			
	60. The government of Scotland is applying a four capitals approach, including natural capital, to build a strong strategy for achieving wellbeing for its citizens. It is now using the insights gathered from that to develop a robust economic strategy for Scotland that will enable a post-Covid recovery by creating a resilient wellbeing economy: An economy one that generates strong economic growth with the concomitant creation of quality jobs, and that does so with an unequivocal focus on climate change, fair work, diversity, and equality.						●		

Country / Region	Examples	Informing on....		Levering change....					SDGs
		Threats	People's needs	Value	Target	Integrate	Incentivize	Empower	
	61. To ensure that its policies are directed towards improving Scotland's natural capital assets the Scottish government has fully integrated nature in its regulatory framework (One Planet Prosperity Regulatory Strategy). It also has developed sectoral Sustainable Growth Agreements to work directly with businesses to engage them in Scotland's One Planet Prosperity policy implementation .					●		●	
United Kingdom and the Netherlands	62. As part of its international Biodiversity strategies, the governments of the United Kingdom and the Netherlands supports the explorations of an international group of stakeholders, including several financial institutions as well as UNDP, to establish a Taskforce on Nature Related Disclosures . Following the example of the Taskforce on Climate-Related Financial Disclosure, this new Taskforce would be tasked with developing guidelines for companies on biodiversity related disclosures.						●		
Biodiversity Finance Initiative	63. The Biodiversity Finance Initiative develops evidence-based Biodiversity Finance Plans and supports countries implement finance solutions to reach their national biodiversity targets. It promotes national platforms, regional and global dialogues enabling countries to accelerate the reduction of their finance needs to the point where these biodiversity targets are no longer hampered by the systemic lack of investment. A practical tool that has been created is the Finance Solution Map , an online "catalogue" and comprehensive list of instruments, tools and strategies that are applicable to the field of biodiversity finance. Biodiversity finance is not only about mobilizing new resources. It is concerned with delivering better on what is available, reallocating resources from where they harm to where they help and acting today to reduce the need for future investments.			●		●			

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The Capitals Coalition is a global collaboration transforming the way decisions are made by including the value provided by nature, people and society. Our ambition is that by 2030 the majority of business, finance and government will include all capitals in their decision-making, and that this will deliver a fairer, just and more sustainable world.

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