

The NCD Roadmap

Implementing the four commitments
of the Natural Capital Declaration



Natural
Capital
Declaration

Secretariat:



UNEP **Finance Initiative**
innovative financing for sustainability



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About UNEP Finance Initiative

The United Nations Environment Programme Finance Initiative (UNEP FI) is a unique global partnership between the United Nations Environment Programme (UNEP) and the global financial sector. UNEP FI works closely with over 200 financial institutions who are Signatories to the UNEP FI Statements, and a range of partner organisations to develop and promote linkages between sustainability and financial performance. Through peer-to-peer networks, research and training, UNEP FI carries out its mission to identify, promote, and realise the adoption of best environmental and sustainability practice at all levels of financial institution operations.

About the Global Canopy Programme

The Global Canopy Programme (GCP) is a tropical forest think tank working to demonstrate the scientific, political and business case for safeguarding forests as natural capital that underpins water, food, energy, health and climate security for all. We work through our international networks – of forest communities, science experts, policymakers, and finance and corporate leaders – to gather evidence, spark insight, and catalyse action to halt forest loss and improve human livelihoods dependent on forests.

About the Natural Capital Declaration

The Natural Capital Declaration (NCD) is a global finance-led initiative to integrate natural capital considerations into financial products and services, and to work towards their inclusion in financial accounting, disclosure and reporting. The NCD is the cumulative result of in-depth consultations with the finance community and other stakeholders and is signed by the CEOs of financial institutions. In Phase II of the initiative, signatory financial institutions are setting about implementing the commitments in the Declaration through the NCD Roadmap. This is to be done through a steering committee of signatories and supporters and four working groups, supported by a secretariat formed of the UNEP Finance Initiative and the Global Canopy Programme (GCP).

For further information please visit www.naturalcapitaldeclaration.org or write to info@naturalcapitaldeclaration.org

Contents

| | | | |
|----|---|----|---|
| 4 | Executive summary | 36 | Key natural capital initiatives across sectors |
| 8 | About this report | 39 | A timetable for action |
| 17 | The origins of the NCD | 40 | The NCD governance structure |
| 20 | Phase II: the NCD Roadmap | 41 | How to get involved |
| 22 | Commitment 1 Understanding impacts and dependencies on natural capital | 42 | Annex 1 The Natural Capital Declaration |
| 27 | Commitment 2 Embed natural capital considerations in loans, equities, bonds and insurance products | 45 | Annex 2 NCD Signatories and Supporters |
| 31 | Commitment 3 Embed natural capital in financial accounts | 47 | Annex 3 VfU – Biodiversity Principles for the Financial Sector |
| 34 | Commitment 4 Disclose and report on natural capital | 50 | Annex 4 What is ‘natural capital’? |
| | | 51 | Endnotes |

Executive Summary

Key messages

1. Natural capital issues have proven to be material for financial institutions on a growing number of occasions and for different types of products, including project finance, corporate finance, public equities, etc. Most of the evidence is on an anecdotal basis, although there is growing focus on systemic issues related to hidden natural capital risks.
2. This Roadmap marks the start of Phase II of the Natural Capital Declaration (NCD) and shows what implementation of the NCD can mean in practice for institutions that signed up or are interested in signing up. It also identifies gaps and options to structure work under the NCD.
3. The core objectives of Phase II of the NCD are to:
 - a. **Stimulate financial institutions** that have signed up to the NCD to show progress towards implementing the NCD commitments.
 - b. **Develop practical tools and metrics** to integrate natural capital in all asset classes and relevant financial products.
 - c. **Increase the number of signatories** so as to build a greater level of acknowledgement within the financial sector about the materiality of natural capital.
4. Mainstreaming natural capital throughout the financial sector will only work if it makes business sense. More and stronger evidence on the risk side is needed, while the NCD also needs to actively work on the opportunity side.

Background

Although natural capital underpins global wealth creation, it does not appear on the balance sheets of financial institutions, and

it is largely invisible in financial decision-making. The Natural Capital Declaration (NCD) is a finance-led initiative which seeks to address this gap by integrating natural capital considerations into the financial sector.

Phase I of the initiative focused on building momentum around this topic, and was successfully concluded with the official launch of the Declaration at the 'Rio+20' Summit in June 1992. As of April 2013, the Declaration has been signed by the CEOs of 41 financial institutions.

Signatories of the Declaration commit to work towards:

1. understanding the impacts and dependencies of financial institutions on natural capital (directly and through customers) which can translate into material risks or opportunities;
2. embedding natural capital considerations in financial products and services;
3. achieving a global consensus for the integration of natural capital in private sector accounting and decision-making; and
4. achieving a global consensus on integrated reporting and disclosure.

Now, in Phase II, signatory financial institutions are setting about implementing the four commitments in the Declaration, through the NCD Roadmap described in this paper. A lean management structure has been set up, jointly managed by UNEP FI and the Global Canopy Programme, to help financial institutions implement the NCD. Four working groups will tackle the critical challenges to incorporating natural capital considerations in the financial industry.

This report explains how the Declaration can be implemented, and what this can mean in practice for signatory financial institutions. It also identifies other government and corporate sector initiatives with a focus on natural capital and with whom the Natural Capital Declaration is seeking to collaborate - to ensure complementarity rather than overlap. Lastly, it provides a timetable for action.

Why natural capital is important for the financial sector

Financial institutions that endorse the NCD are part of a growing group of investors, banks and insurance firms that recognise the need for a broader understanding of emerging natural capital risks in bond and equity markets, as well as in insurance and lending.

Natural capital is material for the financial sector

Increasing pressures on natural resources in the past decade alone has reversed a 100-year decline in resource prices. Reduction in water quality, scarcity of water, loss of species, and degradation of ecosystems are material not only to project finance, but also to asset classes such as fixed income, public and private equity and debt, as well as various insurance lines.

Natural capital risks can be hidden in company supply chains

Risks associated with ecosystem degradation are often hidden in supply chains, for example through impacts on companies serviced by the financial sector. Clothing company H&M faces increasing prices for cotton for its products due to water shortages, which could be a problem if such costs cannot be passed on to customers and if other manufacturers don't face similar increases. And consumer products giant Unilever has estimated publicly that climate change is leading to a net cost to the company of around \$265m annually.

Hidden natural capital risks can become material for financial institutions – sometimes suddenly

This includes reputational, regulatory and materiality risks related to ecosystem degradation. In early 2013, the Norwegian Government's Pension Fund, the largest pension fund in the world (as of June 2011), announced disinvestment from 40% of its holdings in palm oil related investments, stating they were incompatible with the Government's stated aim of curbing deforestation as a means of mitigating climate risk. Expansion of palm oil plantations is a major cause of the clearance and burning of rainforests, which is responsible for around 13-17% of global carbon emissions.

Defining Natural Capital

For the purpose of the Natural Capital Declaration, natural capital refers to the stock of ecosystems that yields a renewable flow of goods and services. It provides the ecosystem products and services that underpin our economy and provide inputs

and direct and indirect benefits to businesses and society in general.

See Annex 4 for more detail.

Natural capital can also become a systemic risk for investors with long-term investment horizons

A study commissioned to Trucost by the Principles for Responsible Investment (PRI) and UNEP FI used the 'universal owner theory' which says that a portfolio investor benefiting from a company externalising costs might experience a reduction in overall return, as environmental externalities adversely affect other investments in the portfolio and overall market return. The largest 3000 listed companies in Trucost's database, which represent a major part of the global equity market, were responsible for USD 2.15 trillion in environmental costs in 2008. It found that for a typical portfolio the unaccounted value of such externalities for investee companies can amount to 50% of combined earnings and 7% of profits. (As stock duration has slightly increased over the past three decades - stock turnover has increased by a factor three - this issue is relevant for investors that hold stocks for a significant period of time, while short-term focused investors are passing 'the buck' to the next.)

Such examples show that our world is increasingly experiencing complex environmental phenomena that can impact investors, banks and insurance firms in different ways.

How to make the Natural Capital Declaration a success

1. Focus on opportunities as well as risks

Most importantly, Phase II needs to demonstrate how and when natural capital is financially relevant on the risk side, while at the same time identifying the ways in which considering natural capital can lead to business opportunities. There is a role for governments and financial regulators to make certain types of financial products

more attractive either by having it count more positively towards Tier 1 capital ratios, by taking away some of the credit risk through guarantees or options, or through other de-risking manners.

2. Practical metrics analysis must be developed for specific asset classes and financial products

Integrating natural capital will require a different process depending on the type of asset class and financial product. While this is largely known for project finance, and to a lesser extent in corporate finance and in public equities, it is much less clear how it can be done for many other products.

3. Actual change must be demonstrated

For the NCD to be effective, financial institutions need to show how they are meeting the commitments to integrate natural capital factors into their business operations.

4. Greater endorsement from the financial sector is needed

Greater endorsement of the Natural Capital Declaration by the CEOs of financial institutions, both from developed and emerging markets, would increase the level of recognition and help drive this initiative forward.

What does implementation mean for financial institutions and the global monetary and financial system?

Table 1 opposite shows what implementation of the NCD can mean in practice and what sort of ripple effects can be expected in the global monetary and financial system. It also offers guidance how to structure the four Working Groups that are being set up to implement each of the NCD commitments, in the period from 2013 until 2015.

| NCD Commitment | What does implementation mean for financial institutions? | What does implementation mean in terms of changes to the global monetary and financial system? |
|---|---|---|
| 1. Understand "Build an understanding of the impacts and dependencies of natural capital relevant to our operations, risk profiles, customer portfolios, supply chains and business opportunities." | This work stream seeks to develop a quantitative or qualitative framework for financial institutions to better understand risk exposure related to impacts and dependencies on natural capital. | Visualisation of impacts and dependencies related to natural capital will lead to a greater degree of understanding about the potential risk exposure for a bank or investment firm. This may also help insurance firms understand linkages with existing and/or future insurance schemes. |
| 2. Embed "Support the development of methodologies that can integrate natural capital considerations into the decision making process of all financial products and services - including in loans, investments and insurance policies." | | |
| 2a. (Investment) "Apply a holistic approach to evaluate bonds and equities through the integration of natural capital considerations in short, medium and long-term forecasts of investee companies." | This work stream seeks to develop metrics for bond and equity products that allow investors to assess, value and incorporate natural capital factors in credit risk models while providing the financial rationale for doing so. | The incorporation of natural capital and other ESG factors in mainstream credit risk analysis, stock picking, weighting and bond analysis, will send a signal from capital markets to investee companies, whose stocks are traded on exchanges or which issue bonds, to rethink their own impact and exposure with respect to natural capital. This may ultimately be reflected in the cost of capital. |
| 2b. (Lending) "Systemically consider and value natural capital in credit policies of specific sectors, including commodities, that directly or through the supply chain affect natural capital." | One possible output of this work stream could be a set of guidelines establishing: 1) for what types of environmentally sensitive sectors credit policies need to be developed; 2) what requirements should be asked of clients; and 3) what industry standards or principles the credit policies can refer to. | An increase in and alignment of credit policies for the entire lending business of banks may lead to a strong signal to corporations to better understand how impacts on the environment are related to reputational, regulatory or credit risk exposure and adjust their business practices accordingly. |
| 2c. (Insurance) "Systemically consider and value natural capital in core insurance business strategies and operations, including risk management, risk underwriting, product and service development, and investment management." | This work stream aims to integrate natural capital in all relevant non-life insurance products, primarily in risk management and underwriting alongside other material ESG factors. | Clients that actively mitigate environmental risk exposure could benefit from lower insurance premiums. |
| 3. Account "Work towards integrating natural capital into private sector accounting and decision-making." | This work stream seeks to develop industry standards and well-defined metrics for financial institutions by which they can value and account for natural capital. | By visualising natural capital on a company's balance sheet, financial institutions can directly encourage companies to examine and reduce their exposure to natural capital and other environmental risks by reducing impacts and using natural resources more efficiently. |
| 4. Report/disclose "Work towards building a global consensus for the integration of natural capital into private sector accounting and decision-making, supporting, when appropriate, the related work of the TEEB for Business Coalition, and other stakeholders." | Ultimately, the financial sector needs data and commonly agreed metrics to assess exposure, and to value and price natural capital. Disclosure is an important instrument for this. In addition, embedding natural capital in integrated reporting frameworks can ensure that third parties have a better understanding of natural capital risk exposure and opportunities for individual companies and financial institutions. | |

About this report

This report sets out the proposed NCD Roadmap, showing how the four commitments in the Natural Capital Declaration can be implemented by the finance industry. It provides preliminary guidance to financial institutions which have endorsed the Natural Capital Declaration and which seek ways to implement the commitments in the Declaration, in collaboration with other stakeholders.

This NCD Roadmap marks the transition from phase I of the NCD to phase II. Phase I refers to the preparation period that included six consultation workshops over an 18 month period in 2010 and 2011, which led to the launch of the Natural Capital Declaration at the Rio+20 Earth Summit in June 2012. By the time of the launch, the NCD had been endorsed by the CEOs of 37 financial institutions. Phase II of the NCD focuses on enabling financial institutions to implement the four core commitments through the development of metrics and tools.

What is the Natural Capital Declaration?

- The Natural Capital Declaration (NCD) is a finance-led initiative through which financial institutions commit to:
1. Understand the impacts and dependencies of financial institutions on natural capital (directly and through customers) which can translate into material risks or opportunities;
 2. Embed natural capital considerations in financial products and services;
 3. Work towards a global consensus on integrated reporting and disclosure;

Why account for nature in the financial sector?

Although natural capital underpins global wealth creation, it is largely invisible in financial decision-making. As a result it does not appear on the balance sheets of businesses and it is largely not accounted for, whether in everyday or specialised financial products. For example, an investor in London or New York can finance a palm oil development scheme in Indonesia or Africa, which results in clearance of a large area of natural tropical rainforest. The value of the impacts of this investment on climate, food, energy, water and livelihood security are rarely included in the cost of capital or debt, in credit ratings on fixed income products, in investment analysis, or in insurance premiums. Yet loss of forests affects water supplies vital to agriculture and hydropower; greenhouse gas (GHG) emissions from forest clearance account for about 12-17% of global GHG emissions; local species loss is immense; community conflicts can result. Economists estimate deforestation alone is eroding natural capital and ecosystem

4. Work towards a global consensus for the integration of natural capital in private sector accounting and decision-making.
- Endorsing financial institutions also call upon governments to develop a robust policy framework enabling the implementation of these commitments and making the shift towards a green economy possible.
- The CEOs of financial institutions active in banking, investment and insurance are invited to endorse the NCD, and implementation involves active participation across signatory financial institutions, to embed the NCD principles in their business activities.

services valued at US\$1.2 -4.7 trillion per year. Financial institutions began to address natural capital issues prior to 2012, through their adoption of the Equator Principles and the development of sector-specific policies for environmentally sensitive sectors such as mining, oil and gas, forestry and chemicals. Leading companies are taking commitments to ‘green’ their supply chains and some governments are making plans to account for natural capital nationally. However, a systematic approach to understand how a bank, an investment firm or an insurance company impacts and depends on natural capital – indirectly through corporate customers, or directly through say, project finance – is currently lacking. Many institutions are unsure of how to integrate natural capital considerations beyond project finance.

The finance sector has an enormous indirect impact by providing debt, equity or insurance to clients with significant use of natural capital such as through the conversion of tropical forests for land, the abstraction of clean water, or the removal of ocean feed stocks (consider the food and beverage, fisheries, forestry, mining, and oil and gas sectors). It also has a risk exposure to such clients in terms of reputational, regulatory and credit risks. Therefore there is an inherent self-interest within the finance sector to better understand and value the risks and opportunities related to natural capital.

The NCD aims to help financial institutions understand how to account for, and therefore value, the risks and opportunities related to natural capital in their portfolios.

It aims to develop metrics, tools and frameworks to enable financial institutions to integrate natural capital in a broad range of financial products including in lending, fixed income, public and private equity and insurance, and to encourage the development of new financial

products and services that include aspects of natural capital that are in demand with both corporate and retail clients. It seeks to help catalyse a systemic change in the finance industry, encouraging banks, investors and insurance firms to assess their natural capital impacts and dependencies through clients and to enable financial institutions to integrate these considerations in bonds, equities, loans and insurance products. Furthermore, the Roadmap aims to work towards integrating natural capital considerations in the accounting and reporting frameworks.

Why financial institutions?

Financial institutions are what they finance. When a financial institution takes a position on a company or a project, it assumes the systemic and idiosyncratic risks of that company or project. As such, financial institutions have an inherent interest in addressing emerging risks and subsequent opportunities linked to natural capital, in order to remain competitive over the medium and long-term while being proactive in addressing short-term shocks. Without a full understanding of the complex and often interlinking factors relating to natural capital and ecosystem services, institutions with large exposures or client bases in industries directly dependent on natural capital (such as fisheries, agriculture and tourism, and industries with major footprints, such as the extractive sectors) stand particularly exposed.

While there is an obvious need to better understand and quantify the risks to natural capital for financial institutions in the face of increasing pressure from population growth and socioeconomic change, at the same time these global changes, when fully understood, can manifest themselves as tremendous opportunities: with an estimated nine billion mouths to feed by 2050, the need to balance maintenance of natural capital with the growing demand for land and resources will require a transformation

in agriculture. Similarly, the use of the ocean to create sustainable protein and the use of genetic materials offers opportunities in developing new markets, realigning products and services, and investing in suitable technological innovations. Each of these opportunities, and many more, requires a full understanding of the complex issues surrounding natural capital in order to inspire its intelligent use.

Why natural capital is material for financial institutions

The loss of biodiversity and ecosystem services, which erodes global natural capital, is increasingly leading to business challenges, whether in the form of legal liability, credit risk, reputational or regulatory risks and even market or systemic risks. Examples of such risks to financial institutions might be declining hydro-power linked to water shortages (exacerbated by increasing droughts), political restrictions on the export of genetic material, an unexpected and irreversible collapse of fish stocks, or stranded assets resulting from changing energy legislation. There is a substantial body of empirical evidence to support this.

The 2010 UNEP FI CEO Briefing ‘Demystifying Materiality’ highlighted that changing environmental phenomena translate into tangible risks, but these are little understood in terms of financial materiality. The E-RISC (Environmental Risk Integration in Sovereign Credit) analysis found that natural resource and environmental risks are financially relevant in the context of sovereign credit risk. The VfU¹ Biodiversity Principles, in collaboration with UNEP FI, provided a first glance at how to integrate biodiversity in asset management, retail banking, insurance and reinsurance, corporate banking, investment banking and global markets as well as project finance. On a more generic level, The Economics of Ecosystems and Biodiversity (or the ‘TEEB’ study) indicated

the tremendous costs to society, businesses and nations of the continuing loss of biodiversity and its ecosystem services². Risks and opportunities make natural capital financially relevant for financial institutions:

Credit risk: A study by the World Resources Institute (WRI)³ assessed the financial implications of potentially restricted access due to global support for conservation, and/or local opposition to oil and gas development, to reserves owned by 16 oil and gas companies in ecologically important and protected areas⁴. WRI calculated that these new constraints could lead to negative impacts on the shareholder value of these companies of up to 5%. It is questionable whether conventional risk models that are commonly used in the market place sufficiently account for and adjust share prices for these types of risks. The BP oil spill in the Gulf of Mexico provides a clear – albeit extreme – example of how misinterpreted risks in relation to natural capital can lead to serious financial consequences for both firms in extractive sectors and shareholders.

Legal liability risk: A UNEP FI report on the complex relationships between fiduciary law, ESG issues and institutional investment, often referred to as the ‘Freshfields Report’, covered nine major capital market jurisdictions and concluded that “integrating ESG considerations into an investment analysis so as to more reliably predict financial performance is clearly permissible and is arguably required in all jurisdictions”⁸. A follow up report – known as ‘Fiduciary II’ – states that asset managers and investment consultants have a duty to proactively raise ESG issues with their clients and that failure to do so presents “a very real risk that they will be sued for negligence on the ground that they failed to discharge their professional duty of care to the client”⁹.

Case Study 1 Sumitomo Mitsui Trust Bank’s innovative approach to integrate natural capital in loan products⁵

Sumitomo Mitsui Trust Bank in collaboration with PricewaterhouseCoopers Aarata Sustainability Certification Co., Ltd. has developed a new sustainable finance product which quantifies environmental, social and governance (ESG) analysis, focusing particularly on a credit taker’s natural capital exposure through its supply chain. The aim of the product is to conserve natural capital but also ensure credit worthiness by reinforcing the credit taker’s risk management strategy on the risk in raw material procurement. Sumitomo Mitsui Trust Bank, Limited has started to provide Sanden Corporation with this new product, the first case in the world which adopts such evaluation with regard to the borrower’s activities for the preservation of natural capital according to Sumitomo Mitsui Trust Bank.

The evaluation focuses on elements of natural capital such as soil, greenhouse gas emission, and water consumption, occupation of land surfaces, etc. in the upstream supply chain classified by area, country and by item procured. The information is then integrated back into the credit product’s original calculations. By considering these issues, Sumitomo Mitsui is able to mitigate risk, whilst making it possible to ensure the requirements of disclosures such as SCOPE 3 in the Carbon Disclosure Project. Up to now, such data had been difficult for corporations to calculate.

Sumitomo Mitsui Trust Holdings became a NCD signatory in June 2012.

Case Study 2

Credit Rating Agencies start to focus on natural capital risks

Standard and Poor's (S&P) issued an update of its criteria factored in for corporate entities and insurers stating, for the first time, that "The management of environmental and social risk is included under subfactor 27 (Comprehensiveness of risk management standards and tolerances for corporate enterprises).

To give an example of such a risk: in 2010 the UK Environment Agency declared that seven regions in the east of England were officially in drought status. A paper by S&P explored the impact that water scarcity may have on the economy, industry and electricity prices in the east of England over the coming decades⁶. The report concluded that water shortages may increase the cost of both power and electricity tariffs. For example, EDF Energy PLC could incur water scarcity costs totalling an additional £1.7 million per year for Sizewell B, the largest power station on the east coast in Suffolk, based on 2010 water consumption. RWE Npower PLC, which owns the second-largest power station in the region, Tilbury B in Essex, could face costs of more than £51 million annually, based on the power station's estimated water usage in 2010. Water scarcity costs reflect the financial impact that water extraction has on freshwater replenishment, ecosystem maintenance, and the return of nutrients to the water cycle.

The report showed that if all nine power plants operating in the east were to internalise water scarcity costs and pass them through in higher power prices, median industrial electricity prices could increase by around 6% from 2011 levels. Infrastructure investment alone may not be sufficient to resolve predicted long-term water shortages. Without increased national and local focus on the management of water demand, water and power companies operating in the

region are likely to face both continued water shortages with a direct effect on operating and capital costs. If not sufficiently mitigated, these costs could harm the utilities' credit quality over the long term, increasing the cost of finance for the utilities.

This study highlights the potential impact on credit worthiness through the effect of natural capital by demonstrating how water scarcity may add a new dimension to credit risk for investors in critical infrastructure such as power stations and water utilities.

A report by Moody's Investors Service on the mining sector⁷ concluded that "[w]e think water scarcity and broader environmental risks will continue to push up development and operating costs in the global mining industry as these trends become more pronounced. Smaller, less-diversified mining companies in water scarce regions such as South America are the most vulnerable. However "[t]he large, globally diversified mining companies, such as Rio Tinto (A3 stable), Anglo America plc (Baa1 stable) and BHP Billiton Limited (A1 stable), will continue to be adversely affected given their global footprints and willingness to operate in the most remote and arid regions".

Market and systemic risks: The E-RISC project found that natural resource and environmental risks are of a large enough magnitude to affect sovereign credit risk through trade-related impacts of up to 5% of a country's GDP. Hence, for the five countries researched (Brazil, France, India, Japan and Turkey) such currently unaccounted for risks can affect the price of the underlying bond security. Furthermore, a study by Trucost, commissioned by the Principles for Responsible Investment (PRI) and UNEP FI, analysed the magnitude of global environmental externalities¹⁰. It found that the largest 3000 listed companies in Trucost's database, which represents a major part of the global equity market, are responsible for externalising USD 2.15 trillion in environmental costs in 2008. This equates to 7% of their combined revenues and about a third of their profit. A portfolio investor benefiting from a company externalising costs might experience an overall market return, through taxes, insurance premiums, inflated input prices and the physical costs of disasters¹¹.

Regulatory risks: Increasingly, governments are moving to outlaw products and practices related to natural capital depletion, especially if it is illegal. The [2010] US Lacey Act makes companies and their supply chains liable to prosecution if they import timber into the US that has been sourced illegally under the laws of the countries where it was grown, whether they know it or not. The EU's Forest Law Enforcement, Governance and Trade (FLEGT) legislation, is seeking to prevent the importation of illegal timber across its borders, and intends to extend this to other commodities associated with deforestation such as soy and palm oil. Regulations related to natural capital, such as for clean oceans or clean air, can create very significant impacts and opportunities for banks, insurers and investors and the pace of introduction is likely to quicken and tighten.

Reputational risks: This type of risk is arguably the most widely acknowledged one, and also the one that banks are most accustomed to. Though often short lived, these can significantly affect the share price of a company. In the last two years, investor action was linked to the biodiversity impacts of Anglo American's Pebble mine in Alaska¹², a high profile campaign waged by Greenpeace against Cairn Energy's proposed activities in Greenland¹³ and the withdrawal of investments in Barrick Gold, Freeport McMoRan and Rio Tinto¹⁴. Although multiple factors were at play in these incidents, biodiversity and ecosystem services issues were fundamental issues in all of these exposures.¹⁵

Opportunities: Financial institutions can profit from holding equity in companies which, say, take serious measures to sustainably and responsibly fish, or which make paper in a long term sustainable way, as stocks would be less prone to market slumps once natural resources upon which the business depends run out. The case to integrate environmental factors in bonds continues to grow with the recent release of the E-RISC report on sovereign fixed income and markets for ecosystems markets, such as the carbon markets, will continue to grow. Equally, as the corporate sector develops its natural capital agenda, integration of natural capital into business accounting standards will make it easier for financial institutions to discern profitable investments. Investments in new technologies which increase efficiency and cut consumption will prove highly lucrative, as will low impact industrial processes. Financial institutions can strengthen their brand by being leaders in this space, and help develop markets for certified products that are gaining ever increasing market share amongst conscientious consumers. Natural capital is therefore very much a risk and reward game – risk mitigation juxtaposed with opportunity expansion - which makes for a smart and attractive proposition.

Case Study 3
Systemic water risks in the cotton industry¹⁶

In developing countries around the globe, population growth and urbanisation are eroding available agricultural land, putting pressure on water resources and decreasing the availability of farm labour. In China, the resulting price increases of agricultural commodities have created inflationary problems for economic policy makers (Financial Times, March 12, 2013, p 17), whilst for many industries, global supply chains are left exposed to operational risk as a result of the increasing challenges of natural capital. Of these, one example is the global textile industry:

The textile industry is heavily dependent on cotton as a raw material, and as a result highly sensitive to any changes in price. Yarn can make up about 55% of fabric cost of sale, and fabric, in turn, can be around 50% of garment costs of sale. In this way cotton prices rise and are passed along the supply chain to clothing brands. A 50% increase in yarn cost would raise the fabric freight on board (FOB) price by 27.5% and garment FOB price by 13.8%¹⁷. In the face of increasing environmental challenges, it is highly likely that production costs along the supply chain will experience considerable upward pressure in the coming years.

Water and pollution

Water scarcity and increasing efforts to tackle environmental pollution are likely to add to the costs of cotton production. Agriculture already accounts for 70% of global water use and is thus highly exposed to water stresses. Around half of the world's 35 million hectares of cotton production are irrigated which accounts for roughly three quarters of global cotton production. Water abstraction for cotton production has already had noticeable impacts on the river basins where cotton is produced, particularly in already water stressed regions:

- Over the last 40 years the volume of Aral Sea (in central Asia) has decreased by 85% due to irrigated cotton cultivation in Uzbekistan and Turkmenistan.
- In Gujarat (India), in the 1950s, water could be tapped at a depth of 10 meters, in contrast boreholes today drilled as deep as 400 meters may run dry.

The yield reduction to China's domestic cotton yields as a result of a drought during 2009/2010 increased China's import requirements. As a result, in order to protect its domestic supply and prices, India was forced to restrict its cotton exports. At the same time, Pakistan (another major cotton producer) was hit by devastating floods reducing its cotton harvest. The combination of these events combined with signs of upward movement in the global economy driving global demand resulted in a spike in cotton prices.

At the other end of the supply chain aquatic pollution resulting from manufacturing activities (e.g. dyeing) is a cost still to be internalised, as emerging countries increasingly see the benefit of reduced environmental pollution, this will become a further cost for manufacturers in many emerging markets.

Pesticide use

The cotton industry accounts for around 8–10% of global pesticide use (up to 50% of all pesticide use in some developing countries) and, as a result, pesticides constitute a significant production cost (around 10%), not to mention adding to the overall environmental impact of production. Pesticide use is regulated, but it will not always be enforced and the negative impacts of poor pesticide use could lead to increasing environmental regulation especially as access to fresh water reserves in many cotton producing countries decreases due to the combined impacts of pollution and

over-consumption. In addition, pesticide use can lead to resistance in target species, leading to increased pesticide application (further increasing costs) as well as contributing to reduction of natural enemies, whose economic value in controlling pests is provided free of charge.

Banks and investors with exposure to the textile industry are faced with increasing costs and challenges throughout their supply chains. In the coming years, these challenges will need to be navigated in order to maintain the long-term profitability of their positions.

Case study 4 Rabobank's innovative lending policies in Brazil

Rabobank International Brazil S.A is one of the main banks operating in the Brazilian food and agribusiness sectors. Rabobank Brazil operates predominantly in the agricultural sector, within which it has held a substantial share of the small and medium enterprise (SME) market of the country since 2005, when the bank turned its attention to rural financing.

The bank has been adopting lending policies related to agribusiness in Brazil that can be considered innovative to the extent that they not only enhance compliance with legislation and promote good practices among their clients, but may also reward them with more favourable financing conditions by establishing additional incentives for business to improve their functioning.

The bank's lending policies in Brazil are guided by a set of social and environmental policies that operate on two levels. First, it defines social and environmental criteria that applicants must comply with to be eligible to receive financing (called exclusion criteria). Some examples of exclusion criteria are the "involvement with illegal deforestation", or "mis-compliance with environmental requirements such as establishing minimum protected areas and legal forest reserves". Second, it defines eligibility criteria and best practices that finally qualify the applicant to receive funding, according to a system of risk management which assesses the applicants based on the "level of sustainability" against certain social and environmental criteria established by the bank.

To motivate farmers to adopt social and environmental assumptions, Rabobank promotes so-called "sustainability field days", when farmers and ranchers - clients and

non-clients - are invited to spend a morning on a "model farm". The rationale adopted by Rabobank is that lending money to a client that fully complies with environmental laws reduces the credit risk. A customer who has illegally polluted, for example, can be fined and, according to Brazilian legislation, the parties involved, such as banks, can be held co-responsible. Furthermore, clients may be unable to continue their activity due to socio-environmental infractions and can thus be incapable of generating the needed resources to repay their creditors.

The Origins of the NCD

The Natural Capital Declaration emerged from an idea within UNEP FI that financial institutions could benefit from greater guidance to embed *specific aspects* of ESG factors in risk management, due diligence, loans, investments and insurance products. The NCD is *not* proposing that financial institutions begin to pay large sums of money because, for example, a rainforest has suddenly been valued at \$15,000 USD per hectare. Rather, by developing metrics to enable financial institutions to **assess, value and possibly price the risks and opportunities related to natural capital in relation to financial products**, it enables individual institutions to incorporate such issues in their own business lines alongside other material ESG factors.

Phase I of the Declaration process began following the CBD COP 10¹⁸ in Nagoya, Japan, in October 2010, where a CEO Briefing 'Demystifying Materiality'¹⁹ was launched that summarised the business case for financial institutions with respect to biodiversity and ecosystem services. The process received fresh momentum when it was joined in 2011 by the Global Canopy Programme, an Oxford-based think-tank which had gained considerable financial sector support following the launch, with UK Government support, of its Forest Footprint Disclosure (FFD) project in 2009 (now operating as 'CDP's forests program'), and by the Sustainability Study Center of FGV, a prominent Brazilian business school. Since then, the idea has partnered with many institutions in a growing cross-sectoral effort to address the invisibility of nature in the global economy. The NCD compliments other initiatives already underway for governments to account for natural capital under the World Bank-led initiative Wealth Assessment and Valuation of Ecosystem Services (WAVES) and a number of related corporate sector initiatives including the TEEB for Business Coalition,

the Prince's Accounting for Sustainability (A4S) initiative, the International Institute for Sustainable Development's (IISD) Natural Capital Superpower Initiative, the World Business Council for Sustainable Development's (WBCSD) Business Action for Sustainable Development coalition, the University of Cambridge Leadership Compact on Natural Capital, and many others.

The NCD was officially launched to the business sector on the 16th of June 2012 at the UN Global Compact's Corporate Sustainability Forum in Rio, where a number of CEOs described their reasons for endorsing the Declaration. The NCD was then launched to governments by the UK Deputy Prime Minister, Nick Clegg, other heads of state and senior business executives during an official side-event at the 'Rio+20' Earth Summit with Presidents and Prime Ministers of five countries alongside the CEOs of Unilever, Caisse des Dépôts and other private sector and civil society institutions. The World Bank played a prominent role in highlighting the need for Governments to account for natural capital as part of their 50:50 campaign, and this message was echoed by CEOs indicating the need for companies and the financial sector to work together on these issues. The NCD was widely reported in the media and was hailed as one of the most hopeful initiatives to emerge from the Rio Earth Summit. In all 39 financial sector institutions signed up the NCD prior to and during the Rio Earth Summit, and two more have joined since.

The NCD Timeline



Phase II: the NCD Roadmap

Phase I saw a very successful start-up of the NCD. Overall, 41 financial institutions have endorsed it thus far, and limited funding has been procured for NCD's advancement. Working groups are being set up to advance the NCD aims, and many calls and meetings have helped to develop the Phase II "NCD Roadmap" agenda. In October and November 2012 the secretariat organised four conference calls to get feedback from signatories (FIs) and supporters (non-FIs) on the draft NCD Business Plan, and began reviewing the first phase of the NCD, with a view to moving forwards into Phase II. Phase II has three concrete goals:

1. Stimulate financial institutions that have signed up to make and show progress towards implementing the NCD commitments;
2. Develop practical tools and metrics to integrate natural capital in all asset classes and relevant financial products; and
3. Increase the number of financial institutions that endorse the NCD at CEO level so as to generate a greater level of awareness and acceptance about the importance of this topic for the sector.

An important note on the NCD methodology and the Roadmap steps

It is important to stress that, despite the large amount of work that has already been done on understanding natural capital, some of which is discussed above, the work of the NCD seeks to answer questions not yet fully answered. How exactly do financial institutions depend on natural capital? What risks and opportunities does it present? How can it be integrated into financial products and services? And how can it be integrated into accounting standards? The NCD does not at present have the perfect answers: if we did, there would be no need for further work. The methodology for answering

these vital questions is therefore laid out here in the Roadmap, and the NCD working groups will be organised to answer these questions. It is further envisaged that the working group results will lead to a gradual building up of knowledge.

The NCD Roadmap: an approach to value, integrate and account for natural capital

There are different ways through which natural capital considerations can be addressed by financial institutions. The Natural Capital Declaration focuses on four basic commitments or steps in a framework to work towards integrating, valuing and accounting for valuing natural capital in risk management, financial products and services, corporate reporting and financial accounting.

These four commitments are:

1. **Understand impacts and dependencies in relation to natural capital**
"Build an understanding of the impacts and dependencies of natural capital relevant to our operations, risk profiles, customer portfolios, supply chains and business opportunities;"
2. **Embed natural capital considerations in financial products and services**
"Support the development of methodologies that can integrate natural capital considerations into the decision making process of all financial products and services - including in loans, investments and insurance policies. We recognise that given the diversity of the financial sector, embedding natural capital considerations will differ across asset classes and types of financial institutions. We therefore aim to build on work undertaken through other initiatives, such as the UN-backed Principles for Responsible Investment, the Equator Principles, the United Nations

Environment Programme Finance Initiative (UNEP FI) Principles for Sustainable Insurance, and The Economics of Ecosystems and Biodiversity (TEEB), so that we can develop methodologies to:

- a. Apply a holistic approach to evaluating bonds and equities through the integration of natural capital considerations in environmental, social and governance (ESG) risk analysis in short, medium and long-term growth forecasts of investee companies;
 - b. Systematically consider and value natural capital in the credit policies of specific sectors, including commodities, that may have a major impact on natural capital either directly or through the supply chain;
 - c. Systematically consider and value natural capital in core insurance business strategies and operations including risk management, risk underwriting, product and service development, claims management, sales and marketing, and investment management."
3. **Account for natural capital financially in accounting frameworks**
"Work towards building a global consensus for the integration of natural capital into private sector accounting and decision-making; supporting, when appropriate, the related work of the TEEB for Business Coalition, and other stakeholders."
 4. **Report/disclose on natural capital**
"Collaborate, when appropriate, with the International Integrated Reporting Committee (IIRC) and other stakeholders to build a global consensus around the

development of Integrated Reporting, which includes natural capital as part of the wider definition of resources and relationships key to an organisation's success."

Note: Disclosure can be regarded as a first commitment in moving towards *integrated reporting* embedding non-financial [ESG information] into mainstream financial reporting frameworks. To this extent disclosure initiatives such as the Carbon, Water and Forest Footprint Disclosure Projects, are relevant in adding relevant information to investors and contributing to corporate transparency concerning the use of natural capital.

Commitment 1 Understanding impacts and dependencies on natural capital

“Build an understanding of the impacts and dependencies of natural capital relevant to our operations, risk profiles, customer portfolios, supply chains and business opportunities.”

The first commitment is to better understand how financial institutions depend on and impacts natural capital, predominately through their clients in environmentally sensitive sectors, and how this can translate into business risks but also business opportunities. A considerable body of work has been undertaken – including but not limited to the Natural Value Initiative - to enhance business’ understanding how they impact and depend on natural capital from an operational perspective and how this translates into various types of risks.

Impacts may not be obvious: The risks may not be so noticeable in direct operations, but are present within the ‘corporate value chain, defined as the interconnectivity or relationship between companies and society which encompasses all the activities a company engages in while doing business’²⁰. Applying this approach to natural capital and financial institutions, it becomes apparent that financial institutions have both a primary and secondary impact on natural capital through their business operations. The direct impacts and dependencies constitute the use of land for buildings, energy consumption, transport, paper use and waste. Though financial institutions can better control these than indirect impacts and dependencies, risks here are much less important or even negligible, compared to indirect impacts and dependencies in the financial institution ‘supply chain’. These secondary impacts of higher risk concern the provision of debt,

equity or other forms of capital to companies that then have considerable direct or indirect impacts on natural capital through their operations or supply chains (Figure 1)²¹.

This specifically applies to three types of private sectors:

- Land based impacts:** Sectors with significant *direct impacts on natural capital through land-based operations*, such as agriculture, forestry, construction, oil and gas, mining, cement and utilities.
- Operational dependencies:** Sectors *dependent on biodiversity for their operations*, such as agriculture, forestry, fisheries and aquaculture, and leisure and tourism. The fisheries sector is, for example, dependent on the ‘production’ or ‘provisioning’ services of marine ecosystems. The tourism sector is, to a certain extent, dependent on the ‘scenic beauty’ of the environment surrounding hotels and resorts.
- Supply chain impacts:** Sectors that *indirectly impact natural capital through their supply chains*. All companies have varying impacts on the natural environment through their supply chain. High impacts may be expected by those companies that source raw materials from areas with pristine eco-systems, such as the food producing and processing sector when sourcing palm oil from companies that clear tropical rainforests for its production.

The first commitment for financial institutions is to understand how the allocation of debt, or use and issuance of bonds and equity and the development of insurance products, can lead to impacts and dependencies of clients that financial

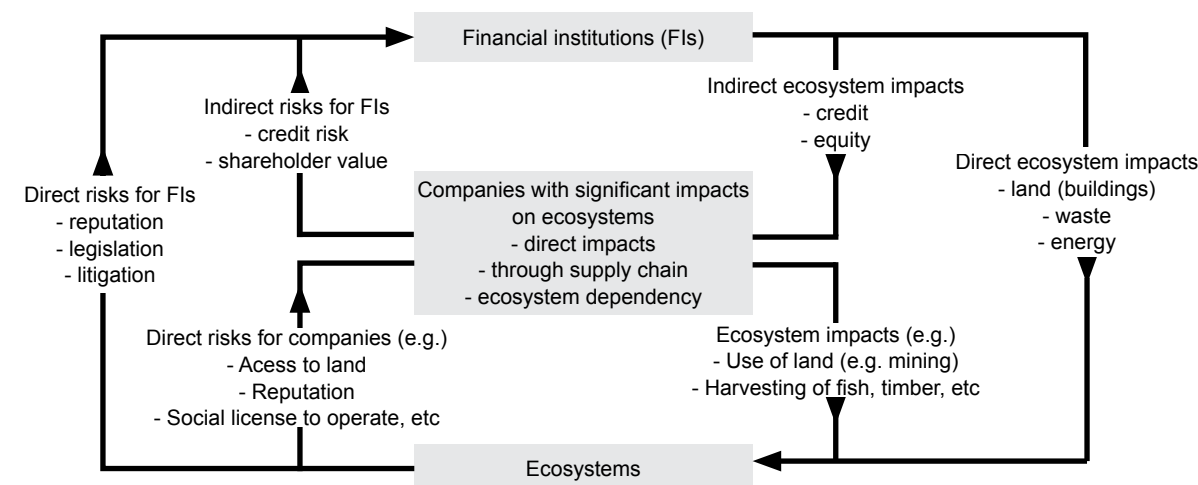


Figure 1: Linking ecosystem impacts with risks faced by companies, including financial institutions

institutions service. This is particularly relevant for institutions that have a large exposure or client base in industries directly dependent on natural capital, such as fisheries, agriculture and tourism. It is also relevant for financial institutions with major footprints on natural capital, such as extractive sectors.

The financial sector is currently poorly prepared. Evidence suggests the banking sector is lagging behind other sectors. A report by KPMG, Fauna and Flora International and UNEP FI²², *The Nature of Ecosystem Service Risks to Business*, provided a preliminary glance at how businesses in different sectors are currently prepared to deal with these risks. The ‘level of risk’ was analysed by assessing the exposure of a number of companies in a given sector on 1) reputational risk; 2) regulatory risk; 3) operational risk; 4) market/product risk; and 5) financing. The ‘level of ‘preparedness’ was analysed by assessing how companies deal with natural capital issues in their operations, specifically the extent to which companies in a given sector have the following in place:

1) competitive advantage; 2) governance; 3) policy and strategy; 4) management and implementation; and 5) reporting. Compared to other sectors with a ‘moderate risk profile’ such as the pharmaceutical and food retail sectors, the banking sector shows a surprisingly low level of preparedness, compared to their risk exposure.

The Natural Value Initiative, among other initiatives, has already carried a great deal of significant work in this area²³. The initiative aims to build awareness of corporate dependence on biodiversity and ecosystem services and impact on biodiversity and the links these have to corporate risk and value. In addition, it aims to build expertise both in companies and with investors to evaluate and manage biodiversity and ecosystem services risks and opportunities which should lead to improved performance and greater reward for responsible behaviour by demonstrating the link between natural and shareholder value. Benchmarking studies have been carried out – using the Ecosystem Services Benchmark – for companies in the agribusiness sector (food,

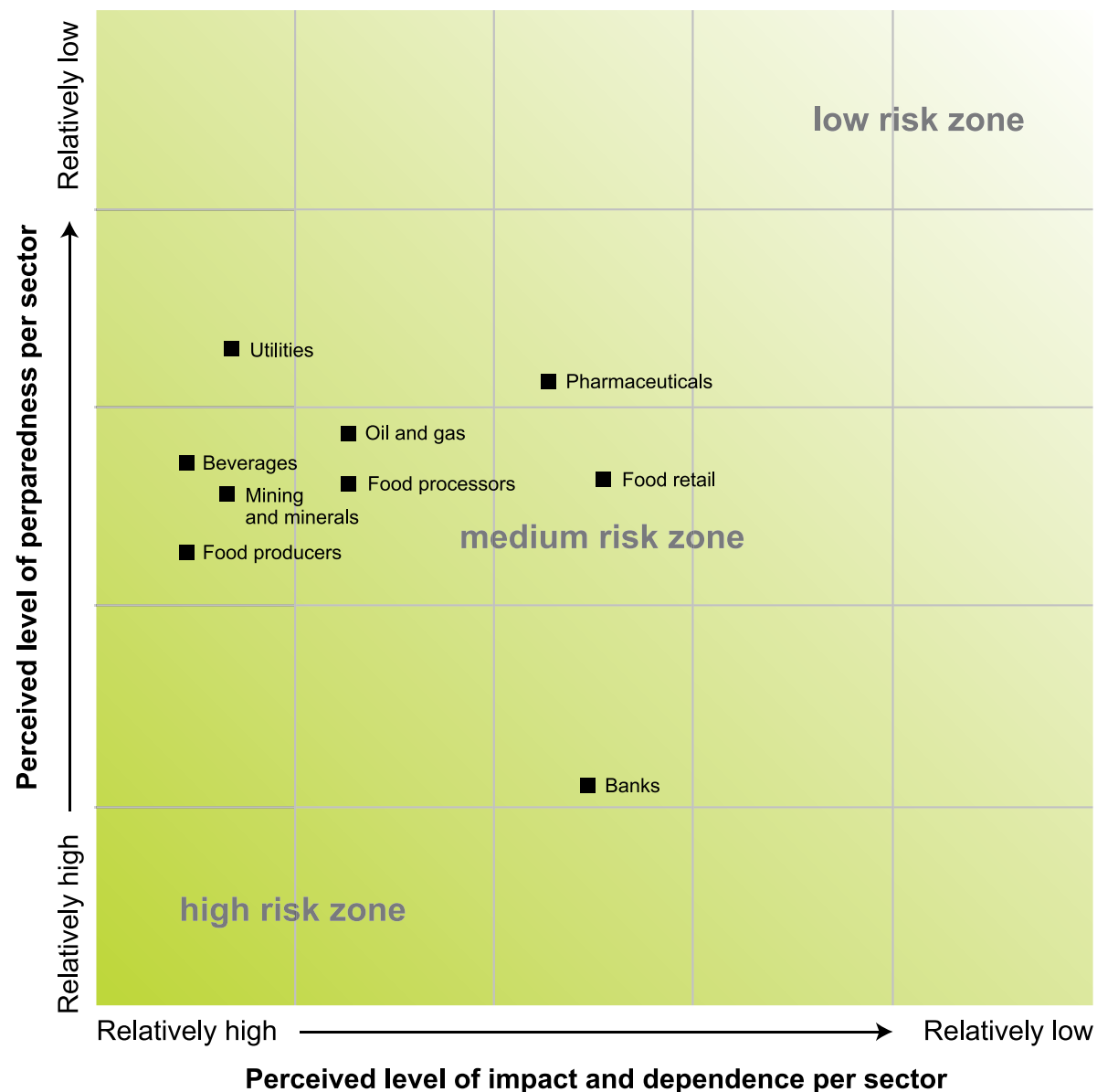


Figure 2: Comparing the perceived level of impact and dependence with the level of preparedness for nine subsectors.

beverage, and tobacco), mining and oil and gas as well as the pharmaceutical industry. Those types of analysis allow investors to factor in relevant biodiversity-related information in their investment decision-making processes, in engagement and policy development. A recent review of the oil and gas as well as mining sectors, involving 30 publicly-listed companies, revealed that biodiversity and ecosystem services issues were considered significant for 27 out of the 30 companies.²⁴

Addressing natural capital considerations is not only about managing risk. It can also present business opportunities for financial institutions linked to bolstering the organisation's brand, creating value for marketing purposes, or building capacity in-house to advise clients on how to integrate natural capital considerations into supply chain management. Such actions can lead to cost reductions or offer new opportunities in emerging environmental markets. Novel financial instruments such as Green Bonds for climate, water or forests are emerging.

Gaps and options to structure work on

Commitment 1

Understanding impacts and dependencies on natural capital

- A number of financial institutions have set up environmental and social due diligence procedures, especially in relation with project finance.
- It is possible to direct loans or investments to assess the potential impacts and dependencies on natural capital via clients. However, this becomes exponentially more difficult for indirect / synthetic products.
- There is very limited understanding of the exposure to natural capital-related risks on a balance sheet level for a bank, investor or insurance firm.
- There is a need for a more comprehensive and systematic methodology to calculate or assess the 'natural capital materiality score' to enable different types of financial institutions, whether active in banking, investment or insurance, to assess this for their own institution at both a company or balance sheet as well as a product level.

What implementation can mean for financial institutions

This work stream seeks to develop a quantitative or qualitative framework for financial institutions to better understand risk exposure related to impacts and dependencies on natural capital.

Commitment 2

Embed natural capital considerations in loans, equities, bonds and insurance products

“Support the development of methodologies that can integrate natural capital considerations into the decision making process of all financial products and services – including loans, investments and insurance policies. We recognise that given the diversity of the financial sector, embedding natural capital considerations will differ across asset classes and types of financial institutions.”

Integrating natural capital into financial products and services is a challenge, but research has shown that tools, guidelines, and frameworks are currently being developed and put into practice. This section aims to provide a brief overview of the different work being carried out in this area. Figure 3 shows how natural capital issues can be embedded in different business lines²⁵:

Lending: integration can begin with the credit approval process: ensuring questions are asked to corporate clients in environmentally sensitive sectors, followed with a due diligence procedure in case certain concerns remain. According to an IUCN study²⁶, natural capital considerations can be integrated in lending business through Environmental and Social Risk Analysis, credit policies, due diligence, and engagement.

Investment: integration can take the form of a developed ESG screening policy, developing different types of screening criteria, focused voting at annual meetings of portfolio companies, or direct engagement. Specifically:

Equities: In equity investment, natural capital can be embedded through screening criteria, (proxy) voting during annual general meetings of portfolio companies, engagement, and investment analysis.

Bonds: UNEP FI has recently published an E-RISC report, about the materiality of environmental issues to national bond issuances. Countries depending on levels of natural resources for GDP consumption may find that these are no longer there in the future, posing risks to growth models and therefore credit ratings and the availability to borrow on the international capital markets. There is also a similarity of E-RISC to corporate debt.

Derivatives and other financial Products: to be determined by the Working Groups

Insurance: integration can take the form of systematically considering natural capital considerations in risk management, underwriting, product development and claims management. Within the insurance businesses, natural capital can be embedded by systematically considering it in risk management underwriting, product development, and claims management.

Several publications have been written on this topic, including Mulder and Koellner (2011), Mulder (2007) and VfU (2011). Appendix 3 shows the basic Biodiversity Principles developed by the Association for Environmental Management and Sustainability in Financial Institutions (VfU). It focuses on how corporate banks, investment banks, insurers, and asset managers can go about implementing these issues in their own products and operations.

- Biodiversity policy
- Management and/or governance system
- Engagement policy on BES
- Monitoring and reporting on BES
- BES training

| Lending | Investment (manager) | Investment (owner) | Insurance |
|--|---|---|--|
| Environmental and Social Risk Analysis (e.g. build on IFC, World Bank model) | Investment analysis (R&D) | Include BES in investment policies | Assess BES materiality across lines of insurance, products and services |
| Credit policies for BES-sensitive industries | Best-in-class | Require asset managers to engage in and report on BES in investment management agreements | Systematically consider BES in risk management underwriting, product development and claims management |
| Due diligence | Exclusion of certain unacceptable BES impacts | | |
| Engagement | (Proxy) voting during AGM | | |
| | Engagement | | |

Figure 3: How biodiversity and ecosystem services can be factored in business operations and products of different types of financial institutions

Rabobank Group's Forestry Policy

Rabobank Group, one of the early endorsers of the NCD and a major global food and agribusiness bank, has written 12 policy papers which it uses to advise and assess customers acting in environmentally and socially sensitive sectors such as aquaculture, biofuels, cocoa, coffee, cotton, forestry, mining, oil and gas, palm oil, soy, sugarcane and wild catch.

The Forest Supply Chain Policy²⁷ embraces some binding conditions between the bank and the clients based on material issues the bank has determined in the forestry sector. It applies to all commercial banking services such as credit facilities, project finance, advisory services and trade finance provided by Rabobank in the forestry sector. The core of the policy is provided below:

Rabobank requests a company with regard to:

- certification to certify the company and the wood products of the company according to the FSC scheme or one of the PEFC national certifications schemes;
- if certification is not yet fully accomplished, Rabobank will request a company with regard to:
- legality to show the legality of the operations and comply with all applicable local, national and international ratified laws and regulations;
- protection of preserved areas not to operate in national or international legally-protected or preserved areas and areas containing globally, regionally or nationally significant concentrations of biodiversity values;

- deforestation to refrain from deforestation of primary forests or wetlands in temperate, boreal and tropical zones;
- sustainable forest management to adopt practices that avoid negative impacts on the environment;
- burning: to avoid all uncontrolled and illegal use of forest fires for clearance;
- endangered species to refrain from harvesting and trading of timber from endangered species that are protected under CITES without the necessary permits;
- human rights to work in accordance with the human rights guidelines as described in the Human Rights policy of the Rabobank Group;
- social and environmental impact assessment (SEIA) to undertake a SEIA prior to establishing new plantings or operations;
- prior consultation to involve affected stakeholders before establishing new operations (process of free, prior, and informed consultation).

Gaps and options to structure work on Commitment 2

Embed natural capital considerations in loans, equities, bonds and insurance products

- Natural capital issues are well understood and accounted for in project finance through the Equator Principles and especially the use of the IFC Performance Standard 6 on Biodiversity Conservation and Sustainable Management of Living.
 - A number of banks have gone beyond the Equator Principles by developing sector or credit policies for environmentally-sensitive sectors such as oil and gas, mining, forestry, and agribusiness.
 - Understanding how natural capital can be integrated beyond project finance, which often only accounts for a minor part of a financial institution's balance sheet, to the broader range of lending products, bonds, equities and insurance products, is much less well understood.
 - Financial institutions would benefit from metrics that would enable them to integrate natural capital for different types of asset classes including corporate finance, sovereign and corporate fixed income, public and private equities and insurance.
- **Lending:** One output could be a set of guidelines on: 1) for what types of environmentally sensitive sectors credit policies would need to be developed; 2) what requirements are asked of clients; and 3) what industry standards or principles the credit policies can refer to.
 - **Insurance:** This work stream aims to integrate natural capital in all relevant non-life insurance products, primarily in risk management and underwriting alongside other material ESG factors.

What implementation can mean for financial institutions

- **Investment:** Developing metrics and analysis for bond and equity products that allow investors to assess, value and integrate natural capital factors in investment products, such as the recent E-RISC project for sovereign debt.

Commitment 3 Embed natural capital in financial accounts

A methodology to allow companies to account for natural capital in financial statements that are published on a quarterly and/or annual basis does not exist yet. At present, such methodologies are still in their infancy. It boils down to the recognition that natural capital can be material to certain clients that financial institutions service, and hence to the bank, investor or insurance company itself. The systematic quantifying and valuation are some of the key barriers at present. A number of initiatives such as the Corporate Ecosystem Valuation (CEV) have developed frameworks to help corporations start valuing ecosystem services. This is a first commitment in the right direction.

A second possibility includes the monetary valuation of a company's impacts and

dependencies on natural capital. Puma, with the support of Trucost and PwC, recently produced the world's first environmental profit and loss account. As Peter Bakkar, Chairman of the World Business Council for Sustainable Development, said at the Business for Environment Summit in Berlin in May 2012, *"none of this will change until it gets on the P&L"*.

A more systematic approach is needed to embed natural capital, alongside other material ESG issues, in financial accounts. There is both a need to identify how this can be done by financial institutions themselves as well as to work with ongoing initiatives to see how natural capital can ultimately be embedded alongside other material ESG factors in Generally Accepted Accounting Principles (GAAP).

WBCSD's Corporate Ecosystem Valuation (Cev)²⁹

In April 2011, WBCSD published the Guide to Corporate Ecosystem Valuation (CEV), together with International Union for Conservation of Nature (IUCN), the World Resources Institute (WRI), ERM, and PwC. This guide consists of a framework to help companies value ecosystem services, as well as show the benefits of doing so. For example, some benefits include but are not limited to: reducing costs, reducing taxes, revaluing assets and increasing revenues. This is one of the three tools elaborated by WBCSD to help corporations understand their ecosystem dependency. The other two tools are: The business ecosystems training (BET), and the corporate ecosystem services review (ESR).

Puma Published The World's First Environmental Profit and Loss Account³⁰

In May, 2011, Puma launched their first environmental profit and loss account. In order to do so Puma, PWC, and Trucost developed a methodology to quantify the amount of water consumed, GHG emissions, land use, and waste impacts of their direct operations and supply chain, and consequently applied values to account for their respective economic impacts. To estimate these values, Puma used a Total Economic Value Framework (TEV), taking into account criteria such as how water is replenished in relation to how it is withdrawn. A combination of these criteria attributed a value to water. A similar process was undertaken to value GHG emissions. With this new method of valuing natural resources, Puma will better understand its dependence on these natural resources, how to capture opportunities and guarantee its sustainable operation.

The System of Environmental-Economic Accounts (SEEA) ³¹

These contain the internationally agreed standard concepts, definitions, classifications, accounting rules and tables for producing internationally comparable statistics on the environment and its relationship with the economy. The SEEA framework follows a similar accounting structure as the System of National Accounts (SNA) and uses concepts, definitions and classifications consistent with the SNA in order to facilitate the integration of environmental and economic statistics.

The SEEA is a system for organising statistical data for the derivation of coherent indicators and descriptive statistics to monitor the interactions between the economy and the environment and the state of the environment to better inform decision-making. The SEEA does not propose any single headline indicator. Rather it is a multi-purpose system that generates a wide range of statistics and indicators with many different potential analytical applications. It is a flexible system in that its implementation can be adapted to countries' priorities and policy needs while at the same time providing a common framework and common concepts, terms and definitions. The SEEA brochure provides additional information on what environmental accounting has to offer.

A multi-year process of revision to the System of Environmental-Economic Accounts was initiated by the United Nations Statistical Commission. The revised SEEA consists of three parts: the central framework, which was adopted by the UN Statistical Commission as the first international standard for environmental-economic accounting; experimental accounts for ecosystems and extensions and applications of the SEEA. Subsystems of the SEEA framework

elaborate on specific resources or sectors, including: Energy, Water, Fisheries, Land and Ecosystems, and Agriculture. These subsystems are fully consistent with the over-arching SEEA, but provide further details on specific topics and try to build bridges between the accounting community and the community of experts in each specific subject area.

Gaps and options to structure work on

Commitment 3

Embed natural capital in financial accounts

- Natural capital is currently unaccounted for in the way publicly listed or private companies are valued. The cost of natural capital depletion continues to be socialised (rather than taken up as a 'cost' by businesses) as a result of this inadequacy. Given that natural resource scarcity will increasingly become financially material for societies at large and businesses specifically, there is a need for an accounting standard or principles that include natural capital.
- Work in this area can include mapping what work has been undertaken to date, including on the valuation of ecosystem services on a company level, environmental profit and loss accounts (e.g. Puma).
- Work with accounting bodies and firms to scope a methodological accounting approach to quantify natural capital impacts and opportunities for the wider corporate sector that something that is adoptable by financial institutions.
- Outputs: A database of existing approaches; working group 3 work plan to develop accounting framework for financial institutions by 2015; a scoping report on developing a possible global standard by 2020.
- Ideally the work should lead to a sort of Generally Accepted Accounting Principles for Natural Capital (GAAPNC) via coalition of financial institutions and accounting bodies and firms to integrate natural capital in private sector accounting and decision-making.

What implementation can mean for financial institutions

Develop industry standards and well-defined metrics for financial institutions by which the sector can value and account for natural capital in its operations.

Commitment 4
Disclose and report on natural capital

Reporting means different things to different people. What this commitment requires is an increasing level of transparency, disclosure, and external reporting about the use of natural capital within operations and ‘supply chains’ of financial institutions. This might, at one level, mean an annual briefing attached within the Annual Report. At another level, it might be engagement with a disclosure process related to natural capital such as the Carbon Disclosure Project (CDP) or the Global Reporting Initiative. Ultimately, however, the objective is to build a global consensus around the development of integrated reporting, which includes natural capital as part of the wider definition of resources and relationships key to an organisation’s success. It builds on the previous commitment of working towards an accounting framework that embeds aspects of ESG, including natural capital, which would enable accountants and other professionals to reflect non-financial information (ESG issues) in mainstream financial reporting (financial information). There is a long road ahead for the integration of natural capital considerations in mainstream financial

reporting. Indeed, working group 3 would determine how to build on and advance the existing ESG screening tools and indices to incorporate natural capital.

The TEEB for Business report outlines both opportunities and challenges to address natural capital systematically in reporting. The commitment to address natural capital systematically starts at the level of corporate governance, the system by which any organisation’s decisions are made and implemented. It basically boils down to deciding the level of control or influence that a company has and the significance or materiality of ESG issues. At present, many companies set narrow measurement and reporting boundaries. Issues that companies can address when broadening the boundaries include 1) no-go areas; 2) precautionary principle; 3) no net loss or net positive impact. The challenges should not be underestimated as this involves collecting, managing and tracking relevant information within a company at a level of detail that can influence corporate financial analysis and decision-making. The NCD Roadmap aims to work together with these initiatives to advance in this area, ultimately leading to the achievement of commitment 3.²⁸

Relevant Reporting Initiatives

1. International Integrated Reporting Council (IIRC): The International Integrated Reporting Council (IIRC) leads the development of a global framework for Integrated Reporting, which includes natural capital considerations. www.theiirc.org

2. Global Reporting Initiative (GRI): The Global Reporting Initiative (GRI) provides organisations with a globally known sustainability reporting framework, which includes natural capital considerations. www.globalreporting.org
3. CDP (formerly the Carbon Disclosure Project) engages - through shareholders, customers, and governments - companies and cities throughout the world to measure and report on their GHG emissions, climate risk, and use of water and forest risk commodities (the latter through the GCP project formerly known as the Forest Footprint Disclosure Project, or FFD). www.cdproject.net

Gaps and options to structure work on
Commitment 4
Disclose and report on natural capital

- Given the growing number of initiatives in this space, it is paramount to develop a coalition of financial institutions, disclosure and reporting initiatives and organisations to jointly identify how natural capital can be included – among other material ESG factors – in disclosure and reporting standards.
- This can include the development of templates for natural capital disclosure and reporting for financial institutions in association with relevant bodies such as the Global Reporting Initiative, the International Integrated Reporting Council, and the Carbon Disclosure Project among others.
- Outputs could be structured through publishing (a) methodology(ies) on natural capital disclosure and (b) reporting from the perspective of financial institutions.

What implementation can mean for financial institutions

Ultimately we need data and commonly agreed metrics to assess exposure, and to value and price natural capital. Disclosure is an important instrument for this. In addition, related to the previous work stream on accounting, embedding natural capital in integrated reporting frameworks can ensure that third parties have a better understanding of natural capital risk exposure and opportunities for individual companies, but also for financial institutions.

Key natural capital initiatives across sectors

There are a number of other relevant initiatives that have been started alongside the Natural Capital Declaration, to advance the adoption, integration and valuation of natural capital in business operations, financial accounts and governments' national accounts. This list is not exhaustive, but highlights the different pieces of the puzzle that ultimately need to fit together.

Financial sector

Natural Capital Declaration (NCD):

The NCD is a statement by and for the financial sector demonstrating its leadership and commitment at the Rio+20 Earth Summit to work towards integrating natural capital considerations into lending, investment and insurance products and services. It is also a call by financial institutions to governments to develop the regulatory frameworks to stimulate businesses - including in financial institutions - to integrate, value and account for natural capital in a company's business operations by means of disclosure, reporting and fiscal measures.

www.naturalcapitaldeclaration.org

Principles for Responsible Investment (PRI) is an international network of investors working together to put the six Principles for Responsible Investment into practice. Its goal is to understand the implications of sustainability for investors and support signatories to incorporate these issues into their investment decision making and ownership practices. In implementing the Principles, signatories contribute to the development of a more sustainable global financial system.

Principles for Sustainable Insurance (PSI) is a global sustainability framework and initiative of the United Nations Environment Programme Finance Initiative (UNEP FI), built on four

core principles to mainstream the integration of environmental, social and governance (ESG) factors in the insurance industry.

Equator Principles (EPs) is a credit risk management framework for determining, assessing and managing environmental and social risk in Project Finance transactions. Project Finance is often used to fund the development and construction of major infrastructure and industrial projects.

Wider corporate sector

TEEB for Business Coalition: TEEB for Business Coalition brings a range of leading businesses, not-for-profit organizations and consultants together to work towards a global consensus for the integration of natural capital into private sector accounting and decision-making. It is led by the Institute of Chartered Accountants of England and Wales (ICAEW).

The Prince of Wales' Accounting for Sustainability (A4S) initiative focuses on developing practical tools to enable environmental and social performance to be better connected with strategy and financial performance.

www.accountingforsustainability.org

Natural Capital Leadership Compact: Convened by the University of Cambridge Programme for Sustainability Leadership (CPSL), it is an initiative by and for the corporate sector calling for leadership and action to properly value and maintain the earth's natural capital.
www.cpsl.cam.ac.uk/Leaders-Groups/Cambridge-Natural-Capital-Leaders-Platform/Natural-Capital-Leadership-Compact.aspx
PUMA/PwC/Trucost EP&L Account: PUMA's initiative together with PwC and Trucost is the first global business to put on natural resources and their environmental

impact, by making an environmental profit and loss account.

about.puma.com

World Business Council on Sustainable Development is a CEO-led organization of forward-thinking companies that galvanizes the global business community to create a sustainable future for business, society and the environment. One of its programmes focuses on ecosystems, supporting its corporate members to build capacity and develop tools to assess risks and opportunities related to business impacts and dependencies on ecosystems.

ACCA / KPMG / Fauna and Flora

International: The Association of Chartered Certified Accountants) is the global body for professional accountants. Their research includes environmental accountability as well as integrated sustainability reporting. www.accaglobal.com/accountants_business. It is currently conducting work on assessing the materiality of natural capital from for accountants together with KPMG and Fauna and Flora International.

Government

World Bank-led WAVES Initiative: A coalition of organizations, led by the World Bank, has created an initiative called 'WAVES' (Wealth Accounting and Valuation of Ecosystem Services) to work with a number of countries around the world to focus on integrating the value of ecosystem services into a nation's national accounts.
www.wavespartnership.org/waves

TEEB. A global study that initiated the process of analysing the global economic benefit of biological diversity, the costs of the loss of biodiversity and the failure to take protective measures versus the costs

of effective conservation. The launch of the TEEB reports has led to numerous requests by governments, in both developed and developing countries, for support in the implementation of TEEB national projects. Phase 3 of TEEB has been designed to meet this demand and at its heart is the aim to support the implementation of TEEB projects, particularly in developing countries by building national, regional and local government capacity to produce tailored economic assessments of ecosystems and biodiversity and supporting the mainstreaming of this information in policymaking processes

System of Environmental-Economic Accounting (SEEA)

contains the internationally agreed standard concepts, definitions, classifications, accounting rules and tables for producing internationally comparable statistics on the environment and its relationship with the economy. The SEEA framework follows a similar accounting structure as the System of National Accounts (SNA) and uses concepts, definitions and classifications consistent with the SNA in order to facilitate the integration of environmental and economic statistics. SEEA vol. 2 develops guidance for experimental ecosystem accounts. It includes a proposed Common International Classification of Ecosystem Services (CICES).

UK Natural Capital Committee is designed to ensure that Government has a better informed understanding of the value of natural capital, and will help it to prioritise actions to support and improve the UK's natural assets. By reporting into the EA Committee and the Chancellor, this Committee has the opportunity to truly influence the economic policy of the UK for the good of the natural environment.

A timetable for action

Beyond GDP: international initiative (the five host organisations are the European Commission, European Parliament, Club of Rome, OECD and WWF) about developing indicators that are as clear and appealing as GDP, but more inclusive of environmental and social aspects of progress.

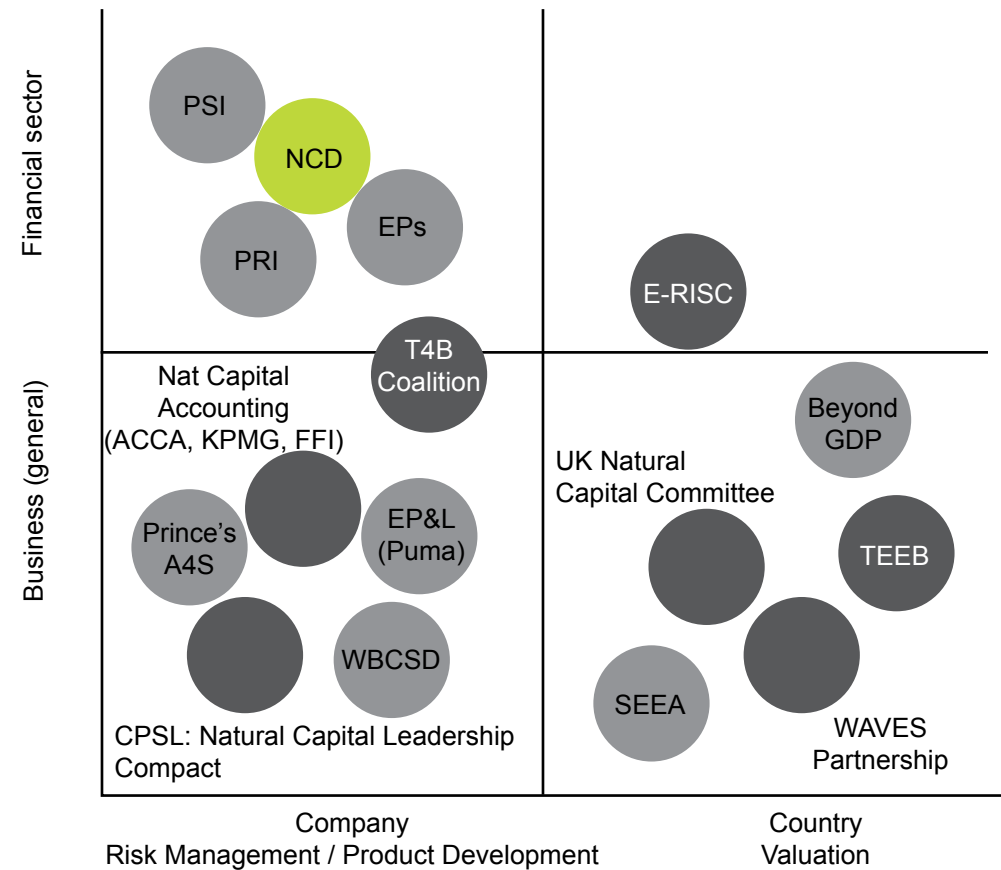


Figure 4: How the NCD fits with some other initiatives. Light grey are initiatives or organisations that focus on a broader set of environmental and social issues. Dark grey are initiatives or organisations that focus specifically on natural capital. Please note that the list is not exhaustive.

To keep the political momentum and to address the urgency to integrate natural capital considerations in financial products and accounts, the NCD Roadmap proposes a fast track timetable. The aspiration is to advance on all four areas within this decade leading up to 2020. Given the inherent methodological challenges around Commitment 3 (disclosure and reporting) and Commitment 4 (financial

accounting) we believe that an eight year process is likely to be necessary to develop a standard to account and report on natural capital by the corporate – including financial – sector. Figure 5 highlights suggested outputs in the following years.

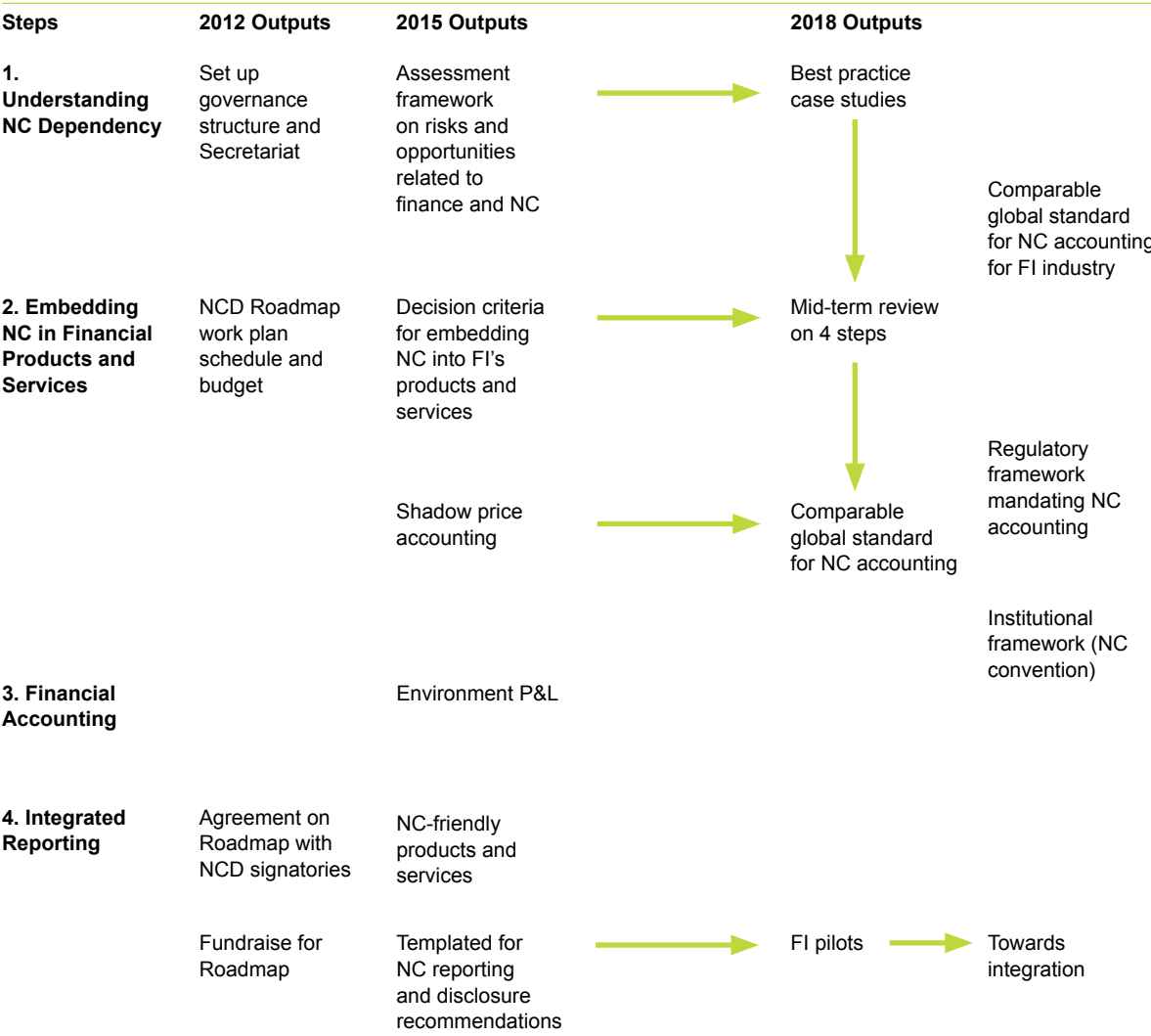


Figure 5: Proposed timetable with outputs for the NCD Roadmap

The NCD governance structure

In order to build on the work that was started in 2010 when the NCD started to take shape, a good structure is necessary to govern the implementation. The governance structure as portrayed in Figure 6 is currently under development, but the aim is to make it simple yet effective (see chart below) consisting of a Board, a Secretariat, an Advisory Network, and the Working Groups for each of the five commitments. All financial institutions that have endorsed the NCD, as well as any non-financial institutions that support the NCD are welcome to collaborate in the Roadmap work post Rio+20. Please note that the final structure will need to be agreed with all signatories and supporters of the NCD.

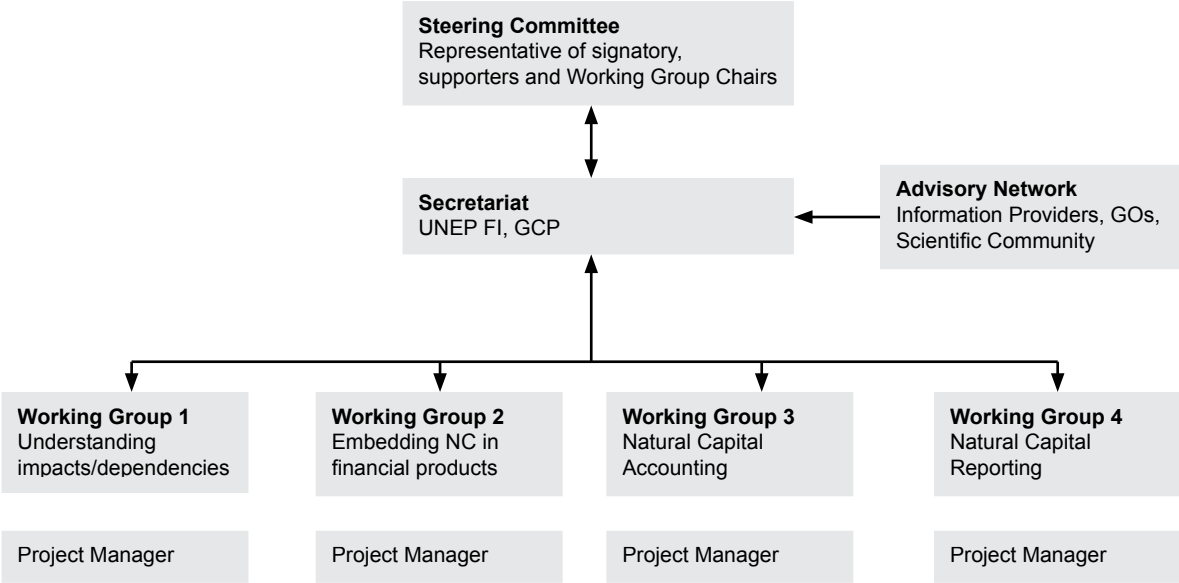


Figure 6: Suggested NCD governance structure

How to get involved

Financial institutions that are interested in endorsing the NCD at CEO-level are invited to provide the following information:

1. Signed letter by your company’s CEO (the signatory letter can be obtained from the Secretariat);
2. A quote from your CEO on motivations for the endorsement;
3. A head shot of your CEO;
4. A high-resolution image of your company’s logo.

Financial institutions interested in signing up to the NCD are invited to contact info@naturalcapitaldeclaration.org after which all relevant documents, including the Business Plan, will be sent. Please note that a small contribution will be required in order to cover the costs of running phase II of the NCD.

Contribution: UNEP FI Members

- < \$5bn total assets: US\$ 2000 / yr
- > \$5bn total assets: US\$ 4000 / yr

Non UNEP FI Members

- < \$5bn total assets: US\$ 5000 / yr
- > \$5bn total assets: US\$ 10,000 / yr

Non-financial companies and organisations that work in this field are invited to support the NCD, by providing:

1. A letter signed by your company’s director (the supporter letter can be obtained from the Secretariat)
2. A high-resolution image of your organisation’s logo

Both endorsing financial institutions and supporting organisations are encouraged to become actively involved with the implementation phase of the NCD.

The Natural Capital Declaration

A declaration by the financial sector demonstrating our commitment at the Rio+20 Earth Summit to work towards integrating natural capital considerations into our financial products and services for the 21st century

The Roadmap to a Green Economy

Twenty years ago the first Earth Summit in Rio de Janeiro focused on the importance of the natural environment and the services it provides (collectively, Earth's "natural capital") in sustaining human existence. As we approach the twentieth anniversary of this great event, the international community looks to the forthcoming United Nations Conference on Sustainable Development in 2012 (also called "Rio +20") to make headway on key issues including – the green economy and an institutional framework for sustainable development.

Today, we the undersigned financial institutions wish to acknowledge and re-affirm the importance of natural capital in maintaining a sustainable global economy. This declaration calls upon the private and public sectors to work together to create the conditions necessary to maintain and enhance natural capital as a critical economic, ecological and social asset. We present this declaration to the world community at Rio +20, as a private sector finance response to the conference theme of working towards a green economy'. This declaration has been developed based on an extensive consultation process with the financial community over the course of 2010 and 2011, including meetings in London, Nagoya, Hong Kong, Munich, Washington D.C. and São Paulo.

The Importance of Natural Capital

Natural Capital³² comprises Earth's natural assets (soil, air, water, flora and fauna), and the ecosystem services resulting from them, which make human life possible. Ecosystem

goods and services from natural capital are worth trillions of US dollars per year and constitute food, fiber, water, health, energy, climate security and other essential services for everyone. Neither these services, nor the stock of natural capital that provides them, are adequately valued compared to social and financial capital. Despite being fundamental to our wellbeing, their daily use remains almost undetected within our economic system. Using natural capital this way is not sustainable. The private sector, governments, all of us, must increasingly understand and account for our use of natural capital and recognize the true cost of economic growth and sustaining human wellbeing today and into the future.

Leadership from the Financial Sector

Financial institutions are an integral part of the economy and society. As the engine of global economic growth, the financial sector can provide some of the tools required to support a transition to sustainable development and eradicating poverty by providing loans, equity, insurance and other financial products and services needed by companies, governments, organizations and individuals. Since virtually every economic activity can have an impact on natural capital either directly or indirectly, through a supply chain, financial institutions have considerable indirect ecological footprints through their customers and directly through their purchasing decisions. These impacts can lead to material financial risks, but also to relevant business opportunities.

At present many financial institutions do not sufficiently understand, account for and therefore value, the risks and opportunities related to natural capital in their financial products and services (loans, investments and insurance products) and in their supply chains. Building this knowledge, as well as appropriate valuation and risk management tools to take natural capital

into account within financial decision-making, are important early commitments to be undertaken by the financial sector.

As members of the financial sector, we consider ourselves key stakeholders in future discussions about valuing and protecting natural capital and we recognize that we have a key role to play in the reforms needed to create a financial system that reports on and ultimately accounts for the use, maintenance, and restoration of natural capital in the global economy. However, we must do this in consultation with government and supported by appropriate legislation and regulation.

Why Government Action is Essential Now

Because natural capital is a part of the 'global commons' and is treated largely as a free 'good', governments must act to create a framework regulating and incentivizing the private sector – including the financial sector – to operate responsibly regarding its sustainable use. We therefore call upon governments to develop clear, credible, and long-term policy frameworks that support and incentivize organizations – including financial institutions – to value and report on their use of natural capital and thereby working towards internalizing environmental costs.

This can be done by:

- a. Requiring companies to disclose the nature of their dependence and impact on Natural Capital through transparent qualitative and quantitative reporting,
- b. Using enforceable fiscal measures to discourage business from eroding Natural Capital, while at the same time offering incentives to companies that integrate, value and account for natural capital in their business model;
- c. Endorsing and implementing international

agreements, including but not limited to, those agreed through the Convention on Biological Diversity;

- d. Setting an example through requiring public spending and procurement to report and eventually account for its use of Natural Capital;

We welcome the World Bank's Wealth Accounting and Valuation of Ecosystem Services (WAVES) initiative and encourage governments to participate.

Our Commitment at the Rio +20 Earth Summit

Anticipating that such a framework will emerge, and noting that no methodology yet exists to adequately report or account for natural capital in the global financial system, we the endorsing financial institutions wish to demonstrate leadership by undertaking to collaborate globally through working groups and engagement with our customers, investee companies, suppliers, civil society, and other stakeholders as appropriate to:

- 1. Build an understanding of the impacts and dependencies of natural capital relevant to our operations, risk profiles, customer portfolios, supply chains and business opportunities;
- 2. Support the development of methodologies that can integrate natural capital considerations into the decision making process of all financial products and services – including in loans, investments and insurance policies. We recognize that given the diversity of the financial sector, embedding natural capital considerations will differ across asset classes and types of financial institutions. We therefore aim to build on work undertaken through other

initiatives, such as the UN-backed Principles for Responsible Investment, the Equator Principles, the United Nations Environment Programme Finance Initiative (UNEP FI) Principles for Sustainable Insurance, and The Economics of Ecosystems and Biodiversity (TEEB), so that we can develop methodologies to:

natural capital as part of the wider definition of resources and relationships key to an organization's success.

By endorsement of this declaration, we wish to demonstrate our commitment to the eventual integration of natural capital considerations into private sector reporting, accounting and decision-making, with appropriate and adequate standardization of measurement and disclosure of natural capital use by the private sector.

- a. Apply a holistic approach to evaluating bonds and equities through the integration of natural capital considerations in environmental, social and governance (ESG) risk analysis in short, medium and long-term growth forecasts of investee companies;
 - b. Systematically consider and value natural capital in the credit policies of specific sectors, including commodities, that may have a major impact on natural capital either directly or through the supply chain;
 - c. Systematically consider and value natural capital in core insurance business strategies and operations including risk management, risk underwriting, product and service development, claims management, sales and marketing, and investment management;
3. Work towards building a global consensus for the integration of natural capital into private sector accounting and decision-making; supporting, when appropriate, the related work of the TEEB for Business Coalition, and other stakeholders.
 4. Collaborate, when appropriate, with the International Integrated Reporting Committee and other stakeholders to build a global consensus around the development of Integrated Reporting, which includes

Annex 2

NCD Signatories and Supporters

The following financial institutions (in alphabetical order) have *endorsed* the Natural Capital Declaration at CEO level as of April 2013.



The following non-financial organisations and companies *support* the Natural Capital Declaration as of April 2013.



ACCA



Aldersgate Group



Carbon Disclosure Project



CECODES



Conservation International



Corporate Knights



Eurosif



Fauna & Flora International



Forum for the Future



Fundação Grupo Boticário



Global Footprint Network



Global Reporting Initiative



Institute of Chartered Accountants in England and Wales



International Institute for Sustainable Development



Quercus



Social Investment Forum Japan



Social Investment Organization



SPVS



The Natural Value Initiative



Trucost



UK Sustainable Investment and Finance Association



UNDP



US SIF



VBDO



WWF

Annex 3

VfU – Biodiversity Principles for the Financial Sector³³

Incorporation into the Management System

Integrating the aim to “conserve biodiversity” into strategic business operations leads to its long-term incorporation, and consequently, to the continuous alleviation of negative effects on biodiversity caused by business activities. In this way, companies can serve as role models.

1. A biodiversity strategy, corresponding sustainability policy, or guideline that includes biodiversity-related aims, supports the aim – “to preserve biodiversity” – within strategic and operational decision processes.
2. The biodiversity strategy, corresponding sustainability policy, or guideline should include clearly defined objectives.
3. It is vital that the management board, or the senior management, clearly commits itself to the aim of “conserving biodiversity” by means of a voluntary agreement or as an element of the sustainability policy. Moreover, the management board or senior management should designate one of their members as responsible for the implementation and realization of the biodiversity strategy, sustainability policy, or guideline that includes biodiversity-related aims, and any ensuing goals.
4. The implementation of the biodiversity strategy, sustainability policy, or guideline should be regularly reported on, both within the company and to the public.
5. Whenever possible, operational processes should exclude the use of products and services that have clear and recognizable negative impacts on biodiversity.
6. Staff members must be informed about the issue of biodiversity and must be offered support in their attempts to implement the

biodiversity strategy, sustainability policy, or guideline into their everyday business activities.

Incorporation into Business Areas

Research Activities

Integrating aspects of biodiversity into company research activities encourages new product- and service-related insights. The results are beneficial for both the clients and the environment.

Asset Management

1. There are different risks and opportunities when it comes to aspects of biodiversity. Asset managers should therefore be capable of including possible biodiversity impacts into their analysis and investment decisions.
2. Clients should be informed if investments involve considerable biodiversity-related opportunities or risks.
3. Products and services must be designed so that risks emerging in the context of biodiversity can be managed and business opportunities can be acted upon.
4. Institutional investors should act according to the best long-term interest of their beneficiaries. This fiduciary responsibility also includes the acknowledgement of biodiversity.

Retail Banking

1. Ensuring client readiness and commitment to the preservation and sustainable use of biodiversity is highly recommended.

2. Suitable communications methods help raise awareness among clients.
3. By means of offering the corresponding products, support should be given to client contributions to preserving biodiversity.

Insurance and Reinsurance

1. When consulting, supporting and insuring clients, it is imperative to acknowledge their potential liability for direct and indirect damage to biodiversity, and In order to prevent illegitimate claims in the event of a loss, comprehensive consultancy services for the customers should be ensured via active and passive legal protection.
2. Whenever possible, clients should be provided with information on ecological risks and alternative courses of action, and enjoy support when attempting to avoid or alleviate negative impacts on biodiversity.
3. Product development should be based on current and future client demands, as well as on the protection of natural resources. In this way, product development can reduce the clients' economic and financial risks, and make an important contribution to a society's economic growth.

Corporate Banking

1. Day-to-day business demands the development of functional methods for better quality management of biodiversity risks and opportunities.
2. Financial solutions that support investments compatible with and beneficial to biodiversity should be developed and offered.

3. Clients should be encouraged to deliberately think about their specific biodiversity risks and opportunities, as well as about the preservation of biodiversity.
4. Provided that client business activities have a negative impact on biodiversity, they should be presented with suggested biodiversity offset schemes.
5. Staff members must be provided with training and information in order to help them assess biodiversity-related client risks and opportunities.

Investment Banking and Global Markets

1. It is imperative to compile schemes and tools that reveal biodiversity risks and opportunities to clients regarding their planned business activities.
2. In the Structured Lending and Venture Capital business divisions, investments in biodiversity-friendly technologies and environmentally friendly projects should be supported by functional financial solutions.
3. In trade, biodiversity expertise should be indirectly incorporated in the fields of weather derivatives, renewable energies or other environmentally relevant commodities.

Project Finance

In the context of projects with high impact on biodiversity (for example, in mining and mineral extraction, agriculture and forestry, tourism and hydropower), clients should be encouraged to:

1. Incorporate the conservation of biodiversity into their project design and follow the criteria defined in the IFC Biodiversity Performance Standards

2. Evaluate technical and financial options in order to avoid, minimize, replace or offset negative impacts on biodiversity to a sufficient degree
3. Include biodiversity into project progress reports in order to monitor the success of biodiversity preservation schemes
4. The IFC Performance Standards 6 – Biodiversity Conservation and Sustainable Natural

Resource Management (www.ifc.org) provide guidance for project finance. This helps support the preservation of areas that are particularly in need of protection, such as tropical rainforest, swamps and wetlands, and other old-growth forests.

What is ‘natural capital’?

Definition of terms

Natural capital

For the purpose of the Natural Capital Declaration, **natural capital** refers to **the stock of ecosystems that yields a renewable flow of goods and services**. It provides the ecosystem products and services that underpin our economy and provide inputs and direct and indirect benefits to businesses and society in general.

In summary, natural capital focuses on **biodiversity** and **ecosystems**, specific constituents of natural capital that give rise to **ecosystem services**. Natural capital is a subset of what is generally termed ‘environmental, social and governance’ (ESG) factors that are material for financial institutions.

Natural capital is not only relevant from an economic and financial perspective but equally from a **cultural and social perspective** – based on, for example, the work of the World Intellectual Property Organisation (WIPO) on indigenous community knowledge as a key facilitator of our understanding of natural capital, such as unlocking medicines for pharmaceutical production. However, the Natural Capital Declaration does not intend to quantify human capital depletion/degradation such as that associated with the loss of livelihoods.

Depending on the type of stakeholder group being considered, **natural capital can include both living and renewable natural resources, as well as non-renewable natural resources** such as fossil fuels, minerals and metals. While the value to the economy of non-renewable resources to the economy is often important, its value is also often already accounted for in the valuation of companies and the strength and potential growth of a nation’s economy. For that reason the **Natural Capital Declaration focuses specifically on renewable natural capital**.

Biodiversity: is defined by the Convention on Biological Diversity as “the diversity of life on Earth” and is essential for the functioning of ecosystems that underpin the provisioning of ecosystem services that ultimately affect human well-being. This is the world’s stock of Natural Capital.

Ecosystem services: The Millennium Ecosystem Assessment defines ecosystems services as ‘the benefits people obtain from ecosystems’. An ecosystem is an ever-changing complex of living things interacting with the non-living environment. Human beings are integral parts of ecosystems; our actions shape ecosystems and our well-being is tied to them. For example, a forest ecosystem is more than just trees – it is the trees, the soil, the water, the rain, and everything that allows people to harvest its timber, communities to receive clean water from its filtering process, and countries to increase economic activity through eco-tourism. Ecosystems can vary enormously: a city block, farmland, a forest, and an ocean basin can all be ecosystems. Ecosystem services are the flows of natural capital.

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- Source: www.about.puma.com
- Source SEEA website: <https://unstats.un.org/unsd/envaccounting/seea.asp>
- Natural capital: The term ‘capital’ has been borrowed from the financial sector to describe the value of the resources and ability of ecosystems to provide flows of goods and services such as water, medicines and food. Flows of goods and services that benefit people are called ‘ecosystem services’. Much as an investor will use financial capital to generate profits, a stock of forest or fish will provide a future flow of timber or food, which if used sustainably will provide long-term benefits to people. For the purpose of this Declaration, natural capital is referred to as the stock of ecosystems that yields a renewable flow of goods and services.

