

COLOPHON

FINANCE FOR ONE PLANET

CoP Financial Institutions and Natural Capital

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"Presencing is helping the future to emerge"

Otto Scharmer



PREFACE

Studies clearly show that 15 years from now there will be an additional 3 billion middle class consumers joining the global economy wanting access to electricity, transportation, communication and health care. The world will need three times more resources than it currently consumes. The demand for food, feed and fibre is projected to increase by 70%. However already 60% of the world's major ecosystems - on which these resources depend - are already degraded or are used unsustainably. Climate change is accelerating. If we don't change our global production and consumption patterns, the world will head towards an 'ecological credit crunch' far worse than the financial crisis of 2008.

These vital threats are deeply rooted in the way our economic growth is financed. Even though our societies and economies rely on a limited stock of natural capital, the value of the resources - goods and services provided by ecosystems - has been underestimated and usually considered as 'invisible' assets. The failure to price our natural capital, on which our wealth and well-being depends, is a serious failure in the global capital market. Worth many trillions of dollars in financial assets, the global capital market shapes the world we live in, and which our children will inherit. As a whole, the financial sector faces high systemic and product-specific risks related to natural capital. Natural resource scarcity and climate change impact and even jeopardize return on investment. There are inherent risks when the financial sector doesn't anticipate and adapt sustainability. The urgent need for shifting away from fossil fuels to mitigate climate change implies that reserves on the balance sheets may end up being 'stranded assets' and could lead to a new financial crisis – the 'carbon bubble'.

Yet the financial sector is also in a unique position to become the driving force in moving entire markets towards sustainability. Investing in green projects, and pioneering how to include natural capital in decision-making not only reduces risk, it allows financial institutions to become frontrunners of a new economy. Many studies underscore that this is economically rational. To paraphrase Nanno Kleiterp's book 'Banking for a better world': "Sustainable investing and supporting smart use of natural capital offers financial institutions a new investment stream and more resilient risk return profiles." To achieve sustainable investment at scale, the worlds of 'nature' and 'finance' need to be better connected. That is what this book is about. I hope it will inspire environmental activists and financial investors to work together. May they be guided by the wise words of Henry Ford:

Coming together is a beginning Keeping together is progress Working together is success <u>Kitty van der Heijden</u> Director, World Resource Institute (WRI) Europe and Africa

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SUMMARY

- The value of nature is gaining attention in the policy and decision making processes of financial institutions. In transition terms, the sector is in the second so called 'first movers phase'. The Community of Practice Financial Institutions and Natural Capital (CoP FINC), formed by a group of 15 financial organisations, motivated to share and learn from each other, is an instrument to accelerate the transition to third critical mass phase.
- Natural capital involves all the goods and services provided by ecosystems that people depend on, such as water purification, food and relaxation in nature. Ecosystems have characteristics such as scale and time. Their resilience is dependent on biodiversity. Biodiversity is the variety of all life forms on the planet and is in urgent decline. Some economic sectors have a bigger impact than others.
- Natural capital issues are becoming material for financial institutions. The CoP FINC consisted of members with a variety of initiatives related to natural capital. The business case, related to new risks and opportunities, is developing.

- Prior to choosing an impact measurement approach for natural capital, the aim and focus should be determined. Natural Capital Accounting and Environmental Footprint Analyses show that the main factors (80%) influencing the resilience of ecosystems are: 1. greenhouse gas emissions, 2. fresh water use and 3. land use. Financial institutions can use them as indicators for measuring the impact of their investments.
- by frontrunners and international campaigns, while responsible investors are stepping up their engagement on climate change. Financial institutions acknowledge that their carbon emissions should be lowered and some have developed climate related ambitions. In the Netherlands the Platform Carbon Accounting Financials works on climate related methodologies and data.
 - Fresh water is an important ecosystem service under increasing stress and growing demand. Banks and investors start to see a direct link between water and financial risks. They are developing water stress tools and using maps to investigate the relationship of investments with water ecosystems. They use it in engagement with investees but, the availability of data on corporate water risks is a big barrier.

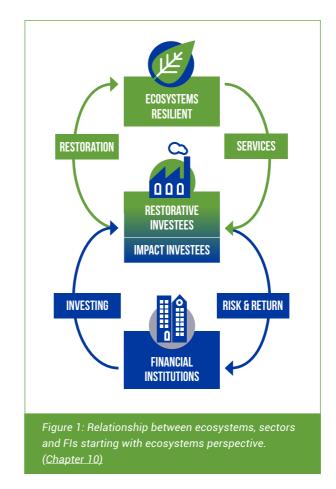
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- Land use is a large contributor to biodiversity loss, and nature conservation is of growing interest to investors. Tools to indicate whether a company is involved in deforestation or how to measure the biodiversity footprint are being developed, but there is a lack of disclosed land use data. For land ecosystems a landscape approach is needed and financial coordination on the scale of the ecosystem is key. For ecorestoration blended finance is necessary to spread the risks.
- Collaboration should be a fourth theme in addition to climate, water and land. Co-creation in the financial sector on effective investment strategies and collaboration with NGOs, scientific organisations, governments and business on better disclosure of data is needed. Collaboration from a landscape or watershed perspective will lead to new partners. Innovative financial instruments such as Green Bonds and crowdfunding can accelerate the transition to a green economy.
- The value of natural capital is at risk as the underlying ecosystems are degrading. Risk management in the financial sector has to become more future oriented: True Risk. Science based targets like the 2 degrees scenario for climate change are starting to act as an instrument to track risks

New concepts are surfacing to help highly ambitious financial organisations to set natural capital related targets. With the collaboration in the financial sector as well as with NGOs, science and governments, the sector is entering phase 3 of the transition. We propose One Planet Thinking for the financial sector;

Finance For One Planet



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NATURAL CAPITAL RELEVANT IN DIFFERENT ASSET CLASSES



ABN AMRO is a mainstream retail bank & corporate bank with EUR 275 bn in lending to companies and households, of which approximately EUR 190 bn is for mortgages and real estate. ABN AMRO serves the whole economy, from dark green to grey, from very sustainable to mainstream business, and tries to inspire everybody to take the next step towards becoming more sustainable. ABN AMRO's impact is caused via their relationship with clients. Inclusion as a methodology is most important for the bank, to co-create with clients on financial improvement plans with milestones. They are searching for ways to take their responsibility.

Search for natural capital in specific asset classes

Richard started by asking himself how natural capital could be made relevant for the bank. "We were not familiar with the relationship with biodiversity or natural capital in our business. It's a very important topic, so I started with some fact-finding: do we have activities related to biodiversity? I found a lot of potential opportunities, and some initiatives that where not being taken advantage of. For instance there were some activities with beehives and biodiverse gardening: some nice, but quite marginal, activities. I thought about our role in this Community of Practice and came to the conclusion that we needed to facilitate companies with a more direct impact, like agri-business and real estate developers, by engaging conversations about biodiversity, supporting them to create a healthy business case and, obviously, by funding them financially."

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Resilient business in agriculture

"An important part of ABN AMRO's business in Brazil is to provide credit to agri-business, like sugar cane and soy. We got into contact with <u>Instituto Life</u>, together we analysed the biodiversity impact of our own operations in Brazil. We started a research project with them and IUCN to analyse how biodiversity contributes to the (financial) resilience of agri-companies. Extreme weather conditions and/or diseases put entire agri-industries at risk. Our hypothesis is that areas with more different species of plants and trees are more resilient and therefore have

"Because of the awareness and support of the group, I was able to move ABN AMRO towards an integrated agenda much quicker."

a higher resistance to droughts, storms and diseases. This should lead to more stable cash flows and therefore a lower credit risk. If this is true, biodiversity leads to a more resilient environment for businesses and biodiversity becomes relevant for credit risk assessment of financiers and thus the cost of financing. The analysis of our own impact is done and we are now looking for compensation projects to turn our Brazilian bank into the first 'biodiversity neutral bank' in the world.

The research into our hypothesis is currently taking place. So we started to map the product chains in which we operate. Natural capital is not always one of the most material risks. In the cocoa chain, for example, the true human capital costs are much larger than the natural capital costs. The consequences of poverty, forced labour, and child labour overshadow the hidden natural capital costs. This kind of research is conducted in cooperation with SHIFT and True Price."

Start with pioneers in real estate

"In the Netherlands over 60% of the loans of ABN AMBO are in real estate, both residential and offices. The agenda for sustainable commercial real estate is focused on achieving reductions in energy consumption. A dialogue with clients is organised and clear targets are being set. The next step is to stimulate the circular economy. We financed a number of circular projects in which our clients included biodiversity. We saw, for example, the relationship between circular real estate and biodiversity in the use of bio-based materials, saving energy and the avoidance of waste. Another relationship is the value of increasing biodiversity in and around buildings; the price of houses goes up if they are close to nature. It is a guest that we are undertaking starting with some of our trendsetting clients. Our experience is that Real Estate CEO's with a vision on sustainability create a better return on investment. The benefits are higher whilst the risk is lower. In addition, we are going to experiment with one of our own buildings, as a result of the Green Deal Circular Buildings (in Dutch) that we participate in. The good thing about these developments is the positive agenda, it's about creating impact and that energizes people."

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1 THE DUTCH COP FINC

"Real change occurs from the bottom up; it occurs person to person, and it almost always occurs in small groups and locales and then bubbles up and aggregates to larger vectors of change."

Paul Hawken

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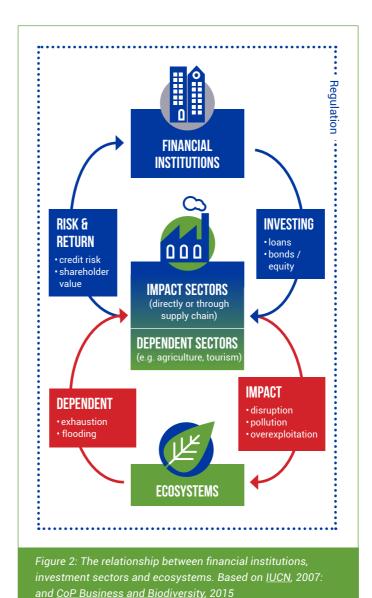
COP FINC

The role of finance in greening the economy

More and more companies understand the value of the resources provided by the planet's ecosystems, such as fresh water or fertile soils. Not using Earth's natural capital wisely has irreversible consequences for the environment, the economy and society. Financial institutions are in a unique position to be a driving force in the transition to a green economy. As figure 2 shows, FIs influence the impact sectors and dependent sectors when investing.

Over the past 30 years, finance pioneers have begun to integrate social and environmental factors into specific financing instruments, assets and institutions. The value of capital committed to more responsible financial practices continues to grow. The <u>UNEP Inquiry</u> demonstrates that sustainability factors can contribute positively to financial performance. Frontrunners in the sector already started to exclude certain investments more than half a decade ago, others integrated principles for responsible investment at the start of the <u>Global Compact</u> in 2000 or UN-PRI in 2006.

These days more mainstream banks, pension funds and insurance companies are starting to take natural capital into account when making investment and lending decisions. Frontrunners are formulating ambitions in quantitative terms and are developing tools to measure impact in numbers.



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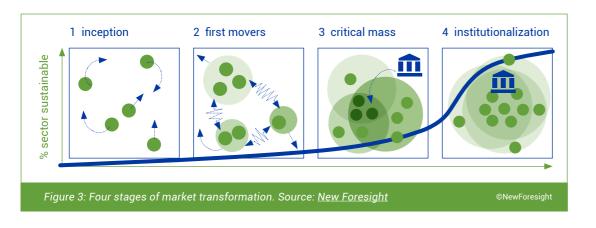
Morgan Stanley calculated that in 2012, out of every nine dollars, only one dollar was invested in a sustainable way. Two years later, this was already one in six. More and more investors see a strong link between corporate sustainably performance and financial performance. They are using sustainability related data as a rationale for investment decisions like never before (source: MIT Sloan Management Review). The market for green financial products has grown and since the Climate Summit in Paris in December 2015, the call on the financial sector to integrate natural capital in decision-making is becoming louder and louder.

Theory of change and CoP FINC

In general, a market's transition towards sustainability follows the sustainable transformation curve (S-curve) as depicted in figure 3. In the first inception phase there is no comprehensive approach to sustainability within the market. Frontrunners are small, value driven and work in isolation. In the second first movers phase, market demand leads to the emergence of more organized and visible sustainability initiatives. Inclusive and structural change takes place in the third critical mass phase.

Stakeholders collaborate to tackle obstacles that inhibit sustainability and governments institutionalize the agenda and expand the drivers of change. In the fourth and final phase, institutionalization, the sector has effectively put an end to practices that are environmentally damaging or socially undesirable. For more information on transition management visit www.transitiepraktijk.nl/en.

The development of sustainable investment in The Netherlands shows the same pattern: a first phase with small specialized retail banks and some small private investors and a second phase with large retail banks entering the arena (source: Journal of <u>Sustainable Finance and Investment</u>. A study of transformation consultancy <u>New Foresight</u> on the state of the green transition in finance, found that with regards to climate change, the financial sector is in phase 2 of transformation: the phase of take-off. There are highly ambitious frontrunners and some mainstream players are moving slowly. Now it is time to move to phase 3; the phase of critical mass. Read the full <u>paper</u>.



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The Dutch Community of Practice Financial Institutions and Natural Capital (CoP FINC) was formed to accelerate the shift to transition phase 3. Initiators ASN Bank and the Dutch development bank FMO wanted to learn more about the relationship between investments and natural capital in conjunction with others in the sector (website RVO). ASN Bank had been a member of the former CoP Business and Biodiversity and had positive experiences with learning from other companies. The Dutch Ministry of Economic Affairs assigned the Netherlands Enterprise Agency to be the process facilitator. A CoP is a network of people who are intrinsically motivated, open to cooperate and who want to discover new pathways. In a CoP people bring knowledge, learn from each other and take the insights back to their daily practice. See tip 4 in ten tips for Clever Change. For a transition to succeed changes on a more systemic level are also needed. One should therefore include system players in the context of the CoP. For the Ministry of Economic Affairs CoP FINC is a policy instrument to accelerate the green growth policy for natural capital.

Transition management is not only about different phases (multi-phase) or levels (multi-level) but also about different actors (multi-actor). After months of creating a diverse group of members and collecting topics for the meetings, CoP FINC started in February 2014 with a group of 15 different people from front running and mainstream banks, a pension fund, two insurance companies, a private equity company and a crowd funder.

The members of the CoP FINC were: ABN AMRO, Achmea, ACTIAM, ASN Bank, De Friesland Zorgverzekeraar, FMO (the Dutch Development Bank), ING Bank, MN, pension fund SPF Beheer, J. Safra Sarasin Bank, SNS Bank N.V., StartGreen Capital,



Triodos Bank and Triodos Foundation. The main challenges and questions for members were: what level of ambitions do I choose, how to measure negative and positive impact and how to finance green projects within the existing system rules?

Some financial institutions were also working on the concept of a circular economy. Although we see such an economic concept as a prerequisite for lowering the impact of our economy on the planets natural capital, it is not part of this publication.

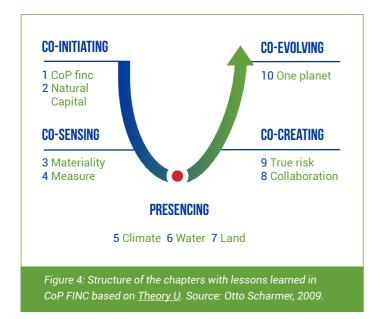
CoP FINC started with a kick-off meeting to set the strategic agenda for the meetings that followed. The group was set to meet 10 times. Every meeting had a full day program and was organised at a location related to natural capital and the business of one of the members. All members prepared for each meeting by doing homework and for some meetings speakers

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were invited. Next to regular meetings, a few extra workshops were organised; one on the phase of transformation of the sector and an event on learning from nature (see chapter 9). A <u>summary</u> was made publicly available after each meeting. The insights of the meetings are the basis for this publication. In the summer of 2016 the 10th meeting was organized.



How to read

During the Community of Practice a deep-dive was made into the natural capital practice of the participants. The generic lessons are described in this publication. Looking back at the process, a similarity can be seen with Otto Scharmers <u>Theory U</u>. The process of Theory U is a journey with five movements,

"We move down one side of the U (connecting us to the world that is outside of our institutional bubble) to the bottom of the U (connecting us to the world that emerges from within) and up the other side of the U (bringing forth the new into the world)". Using Theory U as a source of inspiration, the lessons learned in the CoP are structured likewise in this publication.

This publication begins at the system level, the start of CoP FINC and the topic of natural capital (co-initiating in chapter 1 and 2). The following chapters focus on the materiality of natural capital for finance and how to measure impact and dependencies (cosensing in chapter 3 and 4). Then we arrive at the bottom of the U. This phase of the process is described in the three following chapters on specific impact indicators (5 climate change, 6 water and 7 land-use). The lessons learned and insights that emerged in these sections are summarized as deep learning at the end of each section. Chapter 8 focuses on the need for promising initiatives of collaboration and innovation (co-creating on scale). In chapter 9 co-creating on the time dimension is proposed to tackle True Risk. Finally chapter 10 describes the next steps in the transition towards a nature enhancing financial system, 'Finance For One Planet'.

Each chapter is accompanied with stories from practice. They are the personal narratives from the members, describing what they discovered in the CoP-process, and how they used it in their practice. The chapters with general content are the responsibility of the authors. The content in the last three chapters is based on both the CoP insights and the recent field developments. We as authors felt the need to crystalize this into a new emerging perspective 'Finance for One Planet'.

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CLIMATE RISKS CHANGE INSURANCE BUSINESS

As the largest insurance group in the Netherlands, <u>Achmea</u> covers the risks of 10 million clients. The group holds more than EUR 100 bn assets under management. Achmea's core business is providing insurance to cover its clients' potential risks. Corporate Social Responsibility is an important driver for Achmea. As a result it has an ambitious responsible investment policy with a focus on health, nature, human rights, labour rights and climate change. As climate change emerges as a serious risk for insurers and their clients, the insurance sector is looking for ways to manage these risks. During the Community of Practice a possible role in the uptake of green roofs to protect buildings and households from increased flood damages was explored.



Changing risks changes business

Liesbeth van der Kruit: "Climate change is an emerging risk for the insurance industry, its clients and for society at large. We are already facing increasing damages as a result of extreme weather events and it is expected to get worse. That is why climate change is high on the agenda of the insurance industry and its – international – organizations. It is key for the industry to come up with risk solutions for both its individual clients and society at large. Improving resilience by preventative measures, on an individual and collective level, reduces the risks and keeps insurance affordable. We don't have all the answers yet, but Achmea is looking for ways to prevent damage and thus lowering risks for our customers and our company."

Green Roofs

Menno van Lieshout: "The uptake of nature based solutions could be a way to adapt to the changing risk landscape. When I came across the <u>Green Deal Green Roofs</u>. I decided to use this as a specific case. I wanted to know about the benefits of green roofs for an insurance company and its clients. As such I started researching, asked a colleague from the damage insurance

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department for help and began connecting the dots. I discovered that as a nature based solution, green roofs can play an important role in buffering water. This prevents considerable damage caused by climate change related weather events. I am convinced that nature based solutions are essential for climate adaptation and thus play an important role in the resilience of households, companies and public infrastructure. I see it as my job to raise awareness among my colleagues that we can truly contribute to climate adaptation and have to develop products to realize that."



Improved water management due to engagement

"The Enhanced Engagement Program is one of the pillars of Achmea's responsible investment policy. In this program specific ESG-targets are defined in an agreement with a specific investee. The investee has to improve its practices within three years. These agreements are binding, meaning that if the company falls short, it can be excluded from further investment. Biodiversity — one of the investment criteria within the core theme 'nature' - is an important topic under the Enhanced Engagement Program.

"I now realize that the uptake of nature based solutions could be a way to adapt to the risks of climate change."

Under the Enhanced Engagement programme, we engaged with Mondelez International (Kraft) on its water usage, this has led to water management and improved reporting on water use. Due to our involvement, the snack producer has mapped its dependency on water and made an overview of other water users in the regions where they are operating. We requested a blueprint of water costs for their own production as well of their suppliers', including the financial and reputational risks they are facing. As a result of this successful engagement, the company now has structural reporting on around water issues. The enhanced engagement has shown the importance of managing the water related risks in our investments. Our next step is to do an assessment with the Natural Capital Guide of the VBDO and CREM."

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2 WHAT IS NATURAL CAPITAL?

"The wealth of the nation is its air, water, soil, forests, minerals, rivers, lakes, oceans, scenic beauty, wildlife habitats and biodiversity... that's all there is. That's where all the economic activity and jobs come from. These biological systems are the sustaining wealth of the world."

Gaylord Nelson

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NATURAL CAPITAL

All ecosystem services

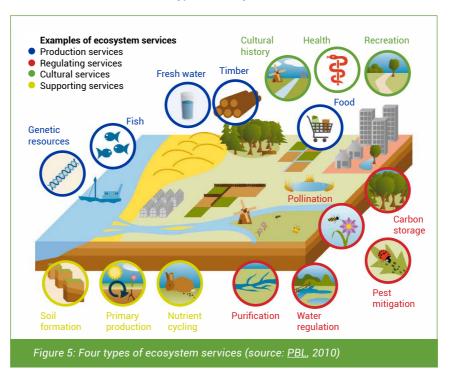
In the <u>Natural Capital Protocol</u> natural capital is another term for "the stock of renewable and non-renewable natural resources (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people". The <u>Natural Capital Declaration</u> defines natural capital as: "the total of the world's natural assets that ensures a renewable flow of goods and services for our economy and that offers advantages to businesses and communities".

A central concept in these definitions is that natural capital comprises all the ecosystem goods and services combined, and that the natural production of ecosystems is fundamental for the basis for our economy. People and economies depend on ecosystem services and influence them.

Bouma and van den Beukering write in their book 'Ecosystem Services: from Concept to Practice' (2015) that: "Ecosystem services are hot, and that they have been hot for a while. In 1998, Constanza et al. published a famous article about the societal value produced by ecosystems through ecosystem service delivery, which has been cited more than 10.000 times. Later on, in 2005 the Millennium Ecosystem Assessment framed the need to protect biodyeristy and the world's ecosystems in terms

of ecosystem services. In 2009, <u>The Economics of Ecosystems and Biodiversity</u> (TEEB) followed up by presenting an approach to help decision-makers recognize, demonstrate, and capture the values of ecosystem services and biodiversity". Examples of ecosystem services are dunes that purify water, pollination by bees, food and timber production or relaxation in nature. They are part of more than one <u>Sustainable Development Goal</u>, including the SDG 1 on poverty, SDG 2 on hunger and SDG 4 on health. Also SDG 6 on fresh water, 7 on energy and 13 on climate action. Finally goals 14 and 15 are completely devoted to ecosystems; life below water and life on land.

There are four types of ecosystem services:



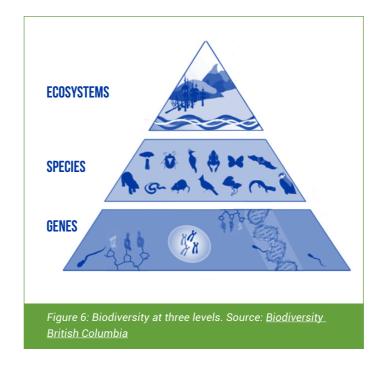
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At the European ecosystem services conference (2016) entitled 'Helping nature to help us' more than 250 mostly scientific presentations were given, 80 poster sessions could be visited and 38 stands were present at the ecosystem services fair. During a whole week case studies, methods, data and governance topics were shared with little attendance of people from companies or the financial sector.

Characteristics of ecosystems

An ecosystem of sustaining services is a defined unit consisting of living organisms and non-living material. An important feature of an ecosystem is the connection and interaction between all organisms, and between inanimate objects like rocks and minerals. One of their characteristics is scale or spatial dimension. An ecosystem delivers services at a local, regional and sometimes global scale (source: Ecosystem Services, from Concept to Practice, Bouma and van den Beukering). Our atmosphere is an ecosystem on a global scale, fresh water as a service is provided by more regional or local ecosystems such as watersheds, lakes, ponds and rivers. Also ecosystems on land vary in scale; some examples are as diverse as forests, meadows, deserts and tundra's. Recently more and more research and practice is being developed in the field of mapping ecosystems and services to identify hotspots of change and for the better provisioning of ecosystem services through the spatial configuration of landscapes. Bouma and van den Beukering state that the concept of ecosystem services (and thus natural capital, red.) implies a shift from resource-focused strategies (water, energy, palm oil) to ecosystem-focused approaches (i.e. forests, wetlands).

Ecosystems with great diversity of species (biodiversity) are usually more resilient than systems with fewer species. So biodiversity is a prerequisite for the ecosystem services and lowers the risk of the collapse of a system. In 1992 the UN formulated a definition of biodiversity as part of the Convention on Biological Diversity: "life in all its manifestations or the variety of all life forms". These life forms are divided into three levels. The first level relates to the genetic material in the world, the second level is about species and the third level about the variety of ecosystems. Research shows that in the Netherlands, Europe wide, and globally biodiversity has declined on all three levels and on all scales.



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In The Netherlands a quantitative sector analysis for six Dutch sectors reveals that food and stimulant industry has a global impact of 26% on the loss of biodiversity, agriculture 19%, timber industry 8%, chemical industry 8%, energy industry 8% and metal industry 8%. The study also reveals that biodiversity seems stable in The Netherlands, but is decreasing in tropical areas. Over 70% of the Dutch biodiversity impact is caused the import of natural resources like soy and palm oil from abroad.

Business, sectors and finance

Ecosystem degradation is mainly caused by the food and the timber sectors, for which land productivity is a key aspect for future survival. More and more businesses realise that ecosystem services form our natural capital. In 2010 Tineke Lambooij described interesting cases of AkzoNobel, Vitel and Heineken and their work on watershed management on specific production sites. In a previous CoP on Business and Biodiversity



we featured 12 companies and their activities on biodiversity; from energy producer Eneco to carpet tile producer Interface, from a harbour to a conference location. One of the main findings was that an ecosystem perspective leads to innovation and that through an ecosystem perspective new partners are found. One of the fist publications on the relationship between biodiversity and the financial sector 'Biodiversity, the next challenges for financial institutions?' concluded that although biodiversity is of growing relevance for the private sector, only a few instruments, guiding principles and best practices were available. More recently the UNEP-FI signals that biodiversity and ecosystem services will increasingly become more and more part of risk analyses and management systems.

During the process period of CoP FINC the Ministry assigned the Dutch Organisation od Investors for Sustainable Development (VBDO) and consultant CREM to develop a guide on natural capital for financial institutions. CoP FINC was involved in giving comments and feedback. In the Natural Capital Guide for Financial Institutions a description of the relation between business sectors and natural capital can be found.

The guide also describes relevant principles for financial organisations, such as the Equator Principles, and standards, such as the IFC Performance Standard 6. The two main international programs aiming to value natural capital are also included; The Economics of Ecosystems and Biodiversity and Wealth Accounting and the Valuation of Ecosystem Services. In 2017 the VBDO will develop in cooperation with the NCD and the NCP a natural capital protocol for the financial sector.

The Netherlands Environmental Assessment Agency (PBL) concludes after a two-year <u>research programme</u> on natural

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capital in the Netherlands and its value, that it is a relatively new concept and that actors such as government, companies and non-governmental organisations are still in the process of discovering what natural capital means for them and how it could be employed in practice. Natural capital is being utilised in such a large variety of ways and is so much still being developed

that no standard approach to success could be determined. One of the main conclusions of the study is that a natural capital perspective leads to innovation and that many policy fields can enhance its further development. The financial sector is not specifically included in this programme.

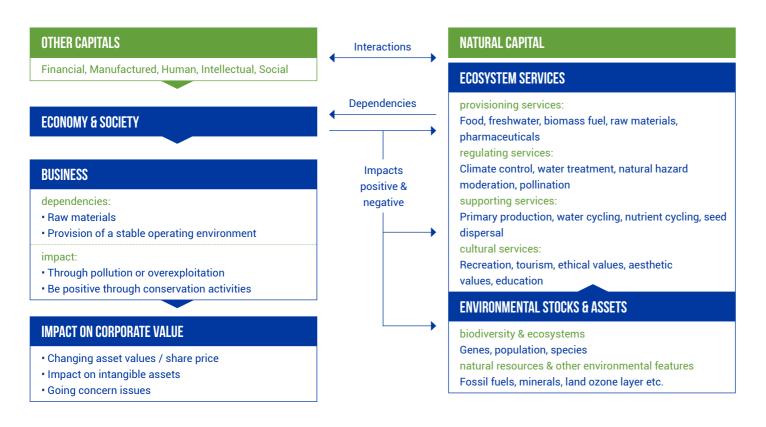


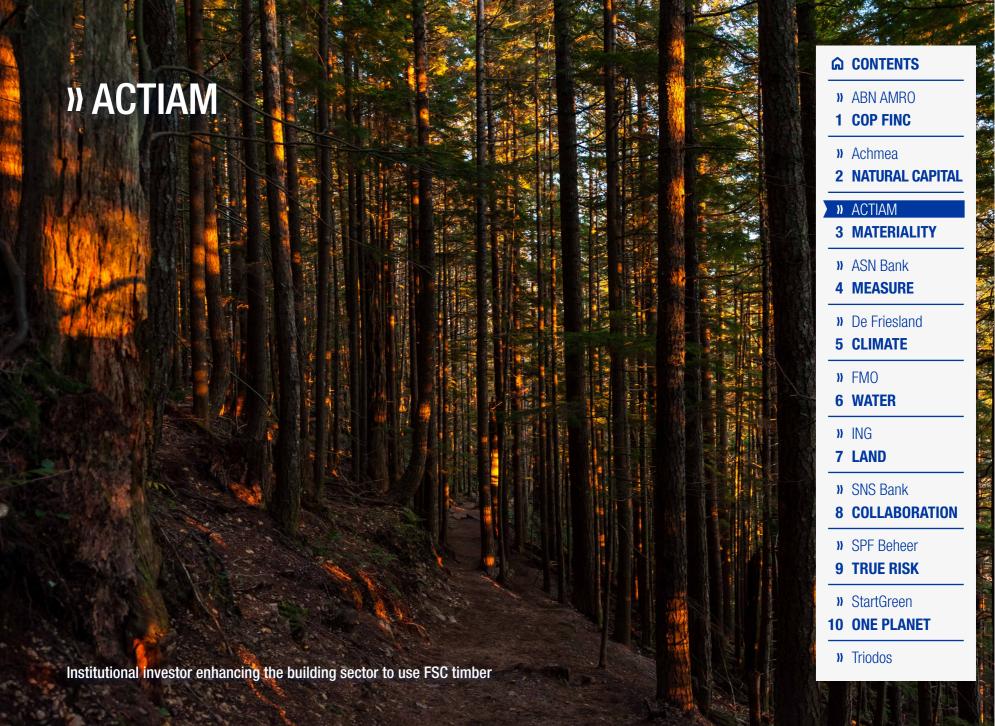
Figure 7: Relationship between natural capital, business and corporate value. Source: VBDO and CREM, 2015 (adapted from Acca, FFI and KPMG, 2012).

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FOCUS ON WATER, CLIMATE AND LAND

As a responsible fund and asset manager, <u>ACTIAM</u> has EUR 52 bn in assets under management (2015) for insurers, investment funds, pension funds and banks such as the ASN Bank and the SNS Bank. ACTIAM is part of VIVAT N.V. The investment categories include fixed income, equities and alternatives. ACTIAM's responsible investment policy is based on its <u>Fundamental Investment Principles</u> as well as several sectoral and thematic position papers. Active ownership is central in ACTIAM's responsible investment strategy. ACTIAM achieved the highest possible score for active ownership in the 2016 PRI assessment, positioning them among the top 10% of investment managers worldwide. By identifying focus themes, ACTIAM wants to gain insight into the natural capital risks and opportunities of the companies they invest in, and simultaneously have impact on the major challenges confronting the world.



Active ownership based on natural capital

Maxime Molenaar: "We started working with the focus themes climate, water and land in 2016. These themes are based on global trends and challenges such as population growth, and the materiality for our investments. Our goal for all themes is to contribute to the Sustainable Development Goals. In order to do so, we are developing quantitative indicators and measurable targets. Besides investment decisions, our active ownership tools (voting and engagement) are very important in achieving these goals. Merely adjusting our portfolio doesn't change the world; we need to see behavioural change of companies and societies. On behalf of our clients, we want to use our influence as a partial owner or lender to a company to stimulate that behavioural change. We are also actively involved in the green bonds market to help finance those activities that are needed to achieve the SDGs, such as renewable energy.

Our collaboration with other (financial) institutions is very valuable. Through initiatives such as the <u>Multi Stakeholder Dialogue</u>

<u>Landgovernance</u>, Pilot Circular Economy, the <u>FAIRR initiative</u>, and of course CoP FiNC, we can work on improvements at the sector level and use our joint influence to achieve positive change."

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Better investment in climate

Kristel Verhoef: "Climate change is one of the biggest challenges of the coming decades. That's why we signed the Paris Pledge for Action, stating our commitment to the Paris Agreement. And we joined the <u>Platform Carbon Accounting Financials</u> (PCAF) to try to set a standard on the carbon foot-printing of investments in 2016. This will help financial institutions measure their impact on climate change and make the results comparable. We also actively collaborate with other organisations on the topic of climate change. This collaboration goes beyond financial



institutions. For example, we organised a stakeholder meeting on investing in companies that drill oil in the Artic, which included NGOs and academics."

Helping to achieve the SDGs

"To help to achieve the Sustainable Development Goal on clean water and sanitation, we want to optimise the integration of water-related factors in our investment decisions. ACTIAM has great interest in comparing companies by the present and future water risks they face by looking at: a) their dependency on water and impact on their surroundings; b) the physical and regulatory

"What is more important: the impact or the quality of the data?"

environment in which they operate; and c) their water risk resilience strategies. However, this remains a challenge due to limited and / or unreliable data. To solve this we collaborate with different stakeholders like CDP, WRI, CERES and other investors. We use engagement and voting to improve water disclosure and water stewardship, especially in high risk sectors like mining, utilities and food & beverages. We want companies to understand and monitor their water risks and to act upon that risk. ACTIAM is part of the PRI Water Risks Advisory Committee. This year we also collaborated with PGGM to send a letter to 37 companies asking them to disclose information through the CDP Water Disclosure questionnaire and invited other investors to send the letter as well."

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3 THE MATERIALITY OF NATURAL CAPITAL

"We use nature because it's valuable, but we lose it because it's free."

Pavan Sukhdev, director TEEB

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MATERIALITY

Signs of relevance in the financial sector

The first studies on Environmental, Social and corporate Governance (ESG) integration found that especially the E of Environment showed a strong correlation with better financial performance (Sustainable Investing; establishing Long-Term Value and Performance and Demystifying Responsible Investment Performance.

The World Wildlife Fund published a <u>guide for banks</u> in 2014 on how to develop and implement an ESG strategy. It pointed out the following key drivers for ESG integration: The Impact Investor Survey 'Spotlight on the Market' published by the Global Impact Investing Network (GIIN) saw a growth of 19% in impact investing between 2013 (USD 10.6 bn) and 2014 (USD 12.7 bn). Sonen Capital states in its Annual Impact Report of 2014 that it expects impact investing in asset classes such as fixed income, public equity and public markets to grow. The growth is related to the rise of the millennials: 28% of millennials surveyed now use impact investing, up from 17% a year ago (source: Impact Investments by Millennials Growing Rapidly. The impact investing market today is large enough to publish special guides on impact investing such as Catalysing Wealth for Change by Julia Balandina Jaquier (Benelux launch facilitated by Triodos Investment Management in May 2016).

Signs of the materiality of natural capital themes can also be

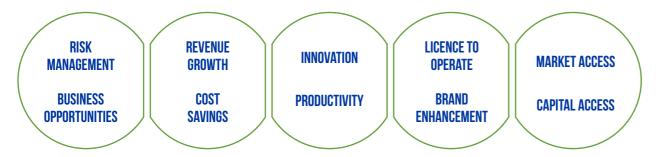


Figure 8: CDC ESG value drivers. Source: CDC, 2010 and WWF, 2014

The <u>Global Sustainable Investment Review of 2012</u> found that 21.8% of the total assets managed in the regions covered in the research incorporated ESG concerns in their investment selection and management (source: <u>The Global Sustainable Investment</u> Alliance). The 2014 review shows a rise to 30.2 %.

seen in the financial data service industry. Data providers such as <u>Sustainalytics</u> is reporting more on issues such as water and land use and <u>Morningstar</u> (in collaboration with Sustainalytics) started to screen funds on sustainability in general, but also published insights on specific topics in relation to climate change.

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Natural capital related initiatives in CoP FINC

The FINC community consisted of a variety of financial players. For some financial institutions the business opportunity has always been to bring prosperity through sustainable investing. For example Triodos Bank, FMO, the Dutch Development Bank and the ASN Bank. They have high ambitions on sustainability and a long tradition in excluding ecosystem damaging activities. Strategies vary from developing impact investing, to bringing economic growth in developing countries while halving its ecological footprint or becoming the first climate neutral bank. The business case of these frontrunners is in finding new customers through innovation in financial instruments and strategies. This appears to be an effective strategy for the ASN Bank and Triodos Bank, for they are both growing. SNS Bank N.V. follows suit. Other members, like SPF Beheer, are experimenting with an impact investing fund and health assurance company De Friesland Zorgverzekeraar is looking at innovative ways for prevention of diseases by 'using' nature. StartGreen launched a crowdfunding platform, only accepting projects with a positive green impact. ACTIAM and J. Safra Sarasin Bank have been integrating ESG criteria and shifted from a risk perspective to a more integrated approach. ACTIAM aims to achieve positive impact through active ownership, as well as developing and applying quantitative measurements and targets for their investments. ABN AMRO sees risks in investing in high carbon real estate and in commodities that are not produced according to certain sustainability criteria. ING identified too much or too little water to be a risk for certain investments, while insurer Achmea faces the risk of high insurance costs because of climate change.

The business case for financials

In the <u>Guide on Natural Capital for Financial Institutions</u> the following overview of the business case for financial institutions is given:

WHY IS NATURAL CAPITAL MATERIAL TO FINANCIAL

Credit and investment risk

- Loss of investment returns
- For sponsors and clients operating in some sectors (including oil, gas and mining, and agribusiness), access to existing and new assets is increasingly influenced by demonstration that companies can manage impacts on biodiversity and ecosystem services.

Business opportunities

- Differentiation and branding
- Opportunities for new financial products
- · New investment opportunities

Legal liability risk

Market and systemic risk

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

Regulatory risk

• Decline in biodiversity and ecosystem services is likely to result in increased regulation

Reputational risk

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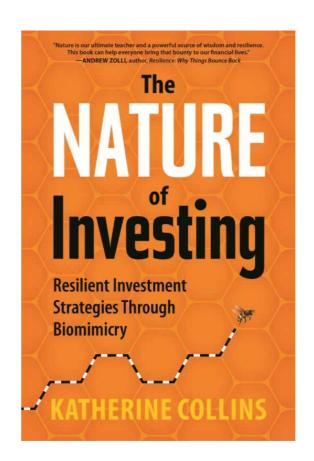
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So there are risks and opportunities. A financial institution can have positive natural capital impact considerations or wanting to make financial return without doing too much harm. Many financial institutions apply a combination of these strategies also known as 'doing good' or 'doing less harm'. In general, over the last decade the sector has made a lot of progress with respect to integrating natural capital in investment decisions. These days the financial organisations that have been working on ESG integration for some time, are becoming more value driven and frontrunners on impact investing are discovering that even they are doing harm to certain ecosystems.

The planet's natural capital is also material for finance because we can learn from the way nature works. At the invitation of CoP FINC, Katherine Collins, author of <u>The Nature of Investing</u>: What the financial sector can learn from nature, visited The Netherlands. In this <u>special meeting</u> with 140 financial professionals, she taught us to ask the question "what would nature do?".

According to Collins: "All is connected in nature. But the financial sector has grown out of proportion in relation to the underlying economies. Increasingly abstract and synthetic financial vehicles have created a sense of false separation between finance and the real world. This has implications for the distinction between risk and uncertainty. While current risk models can be helpful in dealing with certain types of risk, they do a poor job of dealing with 'fat tail' risks i.e. extreme and unexpected market events." In order to understand more about the risks related to impact on and dependency of ecosystems, financial institutions need to measure the impacts and dependencies of their investments. More on the art of biomimicry can be found on the Bloomberg platform.



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SMALL BANK PROVOKES GREEN FINANCE TRANSITION

Being one of the two initiators of CoP FiNC, <u>ASN Bank</u> is convinced that biodiversity is the basis for our well-being from an economic, social and cultural point of view. Alongside human rights and climate change, biodiversity is one of the three main topics of its sustainability policy for its total investment of EUR 13 bn (2015). Starting with the ambition to be climate neutral with all of its investments by 2030, it is now exploring a quantitative goal for its impact on biodiversity. By doing so, ASN Bank aspires to be an accelerator for the sustainable transition in finance.



Climate goal needs collaboration

Jeroen Loots: "In the previous <u>Community of Practice on Business & Biodiversity</u>, we learned from carpet producer Interface about the power of setting a quantitative goal. Since then we have been working on the ambition to become <u>climate neutral</u> with all of our investments by 2030. The ambition is based on what is necessary to keep climate change under 2 degrees, not on what is possible. We want to work in an open-source way, in collaboration with other FIs in developing a method and standard for carbon accounting. In 2015 ASN Bank initiated the Dutch Carbon Pledge and launched the Dutch Carbon Accounting Platform Financials (<u>PCAF</u>) together with a group of 11 leading Dutch financial organisations at the Climate Summit in Paris. In this document, we called on negotiators to pay due regard to the role that investors and financial institutions can play in the achievement of climate change objectives."

A quantitative goal for biodiversity

Irene de Jong: "In CoP FiNC we started the quest on how to truly include biodiversity in all aspects of our financial business, including the impact of investments. Many questions were discussed with a group of experts like: How to formulate the goal?

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As a bank, is it even possible to determine the impact of our investments on biodiversity, on the basis of scientific data? How do you calculate and describe this impact? What can we do to reach your goal? We asked for help from consultants <u>CREM</u> and <u>PRé</u> and with the <u>ReCiPe method</u>, they calculated the impact of the ASN Bank: 7.000 square kilometres of nature disappear annually, which is the size of the provinces of North-Holland and South-Holland combined. The asset with the largest impact was government loans, accounting for 4000 square kilometres of biodiversity loss. This is only a first indication and probably on the high side; the method is not perfect yet and needs fine-tuning in collaboration with other FIs and a broader range of stakeholders.



We are working to set a long term goal on biodiversity like we did with climate. A no-net loss goal for 2030 with all our investments could be an ambition. Actions like actively investing in nature and engaging on biodiversity impact with investees with a high impact are part of the way forward. The quest for a rightly formulated goal and a clear path has just started, but we made important steps and there is a shared enthusiasm and enough trust to proceed."

"The CoP was an excellent opportunity and practical platform to inspire and team up with finance colleagues towards a sustainable society."

Game-changer in finance

Piet Sprengers: "In the meantime, our mother SNS Bank N.V. is following up with us in setting quantitative sustainability goals, so the question is: How can we still be distinctive? We want to inspire and engage other FIs to set long term goals. To stop climate change and loss of biodiversity, we need to be opensource and create bottom-up collaboration processes with all relevant stakeholders. We believe that, even though we are a small bank, it is possible to accelerate change as a pioneer. The CoP was a driving force for us. A place where we could reflect and learn from other FIs and facilitated by professional and neutral transition managers."

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4 HOW TO MEASURE IMPACT?

"Taking action on natural capital requires developing and articulating a strong internal business case for doing so, clear objectives around measurement, and valuation and application in decision-making."

Mark Gough, Executive Director, Natural Capital Coalition

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MEASURE

Why measure impact?

Prior to choosing an approach on how to measure impact on natural capital, it is important to decide on the aim and focus of the exercise. Reasons in CoP FINC varied from the ambition to develop quantitative impact goals on climate and biodiversity, to halving a FI's ecological footprint. Others wanted to lower their contribution to climate change or to understand their exposure to reputational and regulatory risks associated with natural capital. One participant was looking for ways to research the positive impact of nature on human health. Through this it is possible to see that the answer relates to the ambition and sense of responsibility of a financial organisation. Is it to measure positive impact or to find risk areas, or both? What will the scope of the measurement be; a specific fund, asset class or the whole portfolio? Who is the target group for the outcome? Are the results for internal use, for engagement or for public communication? Answers to these questions are not only related to the overall sustainability strategy of the organisation, but also to the availability of time, data and resources.

Natural capital accounting

Natural Capital accounting started to get traction when Puma published the first the <u>Environmental Profit and Loss</u> (EP&L) Account in 2010.

An EP&L measures in monetary terms the impacts business activities have on the ecosystem services they use, like clean water, fertile soil etc. For Puma it turned out that most costs for

ecosystem services were made by the <u>production of leather</u>
Kering just finished the <u>third EP&L</u> for Puma. Other companies
followed also in the Netherlands. <u>AkzoNobel</u> reported on the
basis of an EP&L in a pilot for pulp and performance chemicals in
its 2014 annual report. The impact on natural capital was largely
negative, mainly due to the use of oil and natural gas and
emissions such as carbon dioxide, sulfur dioxide and nitrogen
dioxide to air across the value chain. The <u>Dutch Railway</u>
<u>Company</u> decided on basis of its EP&L to make a deal with
energy company Eneco to run all trains on 50% renewable energy
in 2015 and to increase that to 100% in 2018.

To determine the natural capital a business uses, a special protocol was developed by the World Business Council on Sustainable Development together with IUCN and an international coalition of businesses. This cooperation is known as the Natural Capital Coalition. They launched the first Natural Capital Protocol in the summer of 2016. The protocol is an international framework developed to support managers in companies to obtain reliable, credible and action-orientated information about their impact on and dependency on natural capital. Besides a general protocol, two sector guides for beverages and apparel were published and tested.

Three indicators for eighty percent impact

In 2014 the Dutch Ministry of Infrastructure & Environment supported the development of the <u>Benchmark Biodiversity</u>. The benchmark commissioned by CE Delft allows for the comparison of economic sectors. The main conclusion was that the <u>ReCiPe</u> indicator, supplemented with the Pfister method for water stress, is a useful way to measure the impact of companies on

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biodiversity. Three main indicators were found to cover 80% of the impact on biodiversity: 1. greenhouse gas emissions (GHG), 2. fresh water use, and 3. land use. GHG emissions and land use have the largest impact on biodiversity and are therefore strong indicators for biodiversity loss. The method was tested by three company cases, Dow Benelux, Tata Steel and Unilever, by using publicly available data from their annual reports. One of the findings was that they did report in on scope 3 level in key sectors on CO2-eq, that water was sometimes included and that there is almost no reporting on land use. A study by the Dutch Environmental planning agency found that many sustainable certification schemes and reporting frameworks such as the GRI framework do not cover all impact on ecosystem services. (source: PBL) After the first EP&L for Puma, consultant TruCost has done similar studies for more than 100 small and multinational companies as outlined in its report Natural Capital

at Risk. Based on the findings the report concludes that the majority of unpriced natural capital costs are from greenhouse gas (GHG) emissions (38%) followed by water use (25%), landuse (24%), air pollution (7%), land and water pollution (5%) and waste (1%).

So it can be concluded that financial institutions, wanting to measure the impact of their portfolio on natural capital, should focus on three (interlinked) main indicators:

- a. GHG emissions for air,
- b. Dependency of and impact on fresh water
- c. Dependency of and impact on land

To follow the process of Theory U (chapter 1), at each of the following sections on climate (chapter 5), water (chapter 6) and land (chapter 7), the gained insights and lessons are described under the header of 'deep learning'.

Table 1: Ranking of the 5 region-sectors by ekpi with the greatest impact across all EKPIs when measured in monetary terms. Source: <u>TruCost</u>.

RANK	IMPACT	SECTOR	REGION	NATURAL CAPITAL COST, USD BN	REVENUE, USD BN	IMPACT RATIO
1	GHG	Coal power generation	Eastern Asia	361.0	443.1	0.8
2	Land use	Cattle ranching and farming	South America	312.1	16.6	18.7
3	GHG	Iron and steel mills	Eastern Asia	216.1	604.7	0.4
4	Water	Wheat farming	Southern Asia	214.4	31.8	6.7
5	GHG	Coal power generation	Northern America	201.0	246.7	0.8

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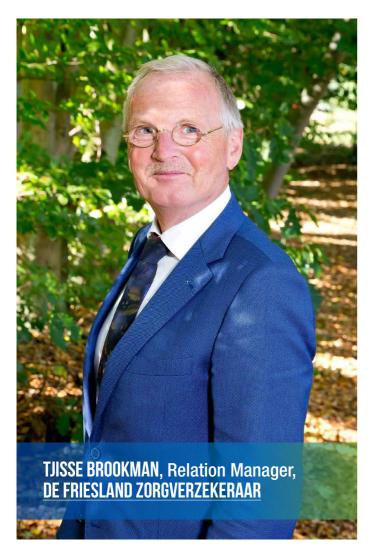
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USING THE VALUE OF NATURE



De Friesland Zorgverzekeraar with 600.000 insured clients, is the fifth largest health insurer in the Netherlands. De Friesland creates an unique added value by making profitable use of nature to prevent the need for clients to use more regular forms of health care. It is expected that, with current policies, 23% of the GDP in 2030 in the Netherlands will be spent on health care. Costs will rise as a result of an aging population and more people having chronic diseases. Change is needed by bringing care closer to people, rearranging the (financial) structure and by investing in prevention. De Friesland Zorgverzekeraar is a frontrunner in reforming the health sector. Minister Schippers of the Dutch Ministry of Health, gave the organization an experimental status to create innovation and change towards a sustainable future in health care. Tjisse Brookman is looking for innovative ways that contribute to structural improvements of quality and efficiency of health care by making use of the benefits of nature.

Nature for health care

Tjisse Brookman: "When the competition increased in health insurance, we thought long and hard about the added value of our services for our clients. We very naturally came to the relationship between nature and health as the two are inextricably interconnected. Exercising or unwinding in nature has a preventative and healing impact. Research has shown that people recover significantly more quickly when overlooking green surroundings. Sometimes it's as if people are completely different beings during weekdays, compared to their spare time.

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In weekends we walk on the beach, go biking and realize that nature has positive effects. However, in our professional life we often do not take that in consideration. It's about raising awareness of the influence people personally have on their own living and working environment and their health. Our ambition is to create awareness both publicly and among health providers. We started multiple initiatives with several partners in which the relationship between nature and health is key. Mindfulness training within companies, coaching sessions through walking and 'Healthy Walks in Nature' with volunteers that help combining exercising and social benefits. Another initiative which is supported by De Friesland is www.beterinhetgroen.nl. This matchmaking widget helps citizens, schools, doctors and other health professionals to find healthy services in green surroundings."

"Nature requires thinking from the perspective of benefits instead of the costs."

From costs to benefits

"We need to start to think differently about our business models. We have to move from 'what does it cost' to 'what does it deliver?' and from 'sickness & health care' to 'health & behaviour'. The financial system in the health sector is based on the paradigm of reducing costs. Care providers such as doctors want scientific proof on the assumption that nature contributes to our wellbeing. We invest in specific activities to get health care to a

higher level and we conduct research into behavioural aspects. I work for example with Agnes van den Berg (University of Groningen), who researches the influence of a green environment on the health and wellbeing of the Dutch population. We hope to find the mechanisms in this relationship, so we can develop our services. And I hope that awareness leads to healthy behaviour, but I do notice that financial interests often prevail for our clients."

Collaboration for innovation

"A question we ask ourselves is whether we should give compensation for preventive measures. I don't know, it truly is a quest to discover our role and responsibility. The dilemma we have to deal with is that we need budget to invest in knowledge on prevention and nature in order to save costs in a later stage. But at the same time we cannot increase the insurance contributions. It's a continuous search between short-term investments versus long-term returns, both for our clients and for us. Because of my participation in the Community of Practice I realized I'm not alone in this quest. In my opinion, an integral approach, creating consistency and synergy, can help finding the solutions for current issues. We need to collaborate with other stakeholders to find innovative finance mechanisms and revenue models."

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5 CLIMATE CHANGE AND CARBON ACCOUNTING

"The warnings about global warming have been extremely clear for a long time. We are facing a global climate crisis. It is deepening. We are entering a period of consequences."

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CLIMATE

Divesting and engaging

Climate change leads to extreme weather in the form of typhoons and flooding, has huge impact on biodiversity and contributes to the decline of natural capital. Climate ambitions have been on the agenda of green banks for some time. Financial frontrunners never invested in the fossil fuel sector or started to divest years ago and also green funds of mainstream players excluded investing in coal, oil and gas companies. Responsible investors have been engaging with companies in the fossil fuel sector on themes such as drilling in the Artic.

Excluding these kinds of investments got a fresh push by the rise of the divestment movement started by the ${
m NGO~350.org}$. They call on the world to keep the amount of ${
m CO}_2$ in the atmosphere under 350 parts per million for more will lead to irreversible changes in our climate. The divestment movement was strengthened by The Guardian who as a major newspaper started to campaign against climate change under the title 'keep it in the ground'. Also after Al Gore celebrities, like Leonardo di Caprio, author Naomi Klein and world leaders as the Pope and President Obama, started to speak out. Cities like Amsterdam put pressure on institutional investors to divest.

One of the largest family funds, The Rockefeller Foundation, and institutional investors like the Norwegian Pension Funds were among the first financial institutions to answer the call and divested from or coal or the whole fossil fuel sector. As result of all the media attention, the number of fund managers who decided to divest in fossil fuels rose fast.



Workers checking the salt water coming through the drainage system at Miami Beach. Its believed that this area needs to be evacuated by 2060. Photo: Kadir van Lohuizen / NOOR

Because of all the scientific evidence and media attention a vast array of initiatives directed partly or completely to finance have been developed in recent years. Organizations like <u>Carbon Tracker</u>, <u>Carbon Disclosure Project</u> and <u>Asset Owner Disclosure Project</u> have emerged. The first organisation analyses stranded assets and the last benchmarks institutional investors on the transparency of the carbon footprint from assets in their portfolio.

For the financial sector the <u>statement</u> made by Mark Carney, the Governor of the Bank of England that climate risks are material for the financial sector, has been very influential. And in the wake of climate change CoP 21 in Paris in December 2015, many

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financial organisations signed the Montreal Pledge. This is an initiative of the UN- PRI by which investors promise to disclose their carbon footprint on at least an annual basis. Parallel to the development of the divestment movement, front running institutional investors have been engaging with their investees in the fossil sector. During annual shareholder meetings and in bilateral talks, they have been urging them to change course to a green energy system. After divesting it is about investing in the green transition. Like The Rockefeller foundation, that took a share in a green electricity company as part of their divest/invest strategy.

Carbon accounting for a 2 degree scenario

Divesting from the fossil fuel sector is important in the combat of climate change. But there are more sectors, projects and companies that cause greenhouse gas emissions, like automotive and aviation. So financial players, excluding fossil companies from their investment spectrum, are still contributing to climate change.

Carpet and floor tile company Interface has formulated a <u>zero</u> <u>emission strategy</u>. This inspired the ASN Bank, as both were sharing natural capital practice in the <u>CoP Business & Biodiversity</u> during the course of CoP FINC to take a step further by not investing in fossil fuels. It refined its strategy from what is possible for a bank to what is necessary for the planet. It formulated a quantitative and science based target in accordance with the findings of the <u>IPCC</u> and the political ambition to keep the rise of global temperature under 2 degrees. With the help of <u>Ecofys</u> it developed a <u>carbon accounting method</u> and made it open source available on its website. With this ambition and

method, the ASN Bank is the first bank in the world to announce that it will be climate neutral by 2030 including all of its investments and lending. The UNEP FI has programmed the ASN Bank as one of the key-note speakers during the Round Table in October 2016 in Dubai. Other financial institutions followed suit and published their carbon footprint and in some cases formulated targets as well, such as PGGM, ACTIAM and APG. In the meantime, BlackRock published a white paper on adapting portfolios to climate change.

The Dutch Platform Carbon Accounting Financials

In 2015 SNS Bank N.V. started working with the ASN Bank Carbon P&L Methodology. In 2016 it adopted the ambition to be carbon neutral by 2030 as well. ASN Bank initiated the <u>Platform Carbon Accounting Financials (PCAF)</u> and nine Dutch financial institutions joined. Together they will develop harmonized methods to measure the impact that their investments and loans have on climate change. In the platform, ABN AMRO, ACTIAM, ASN Bank, FMO, MN Services, SNS Bank N.V. and Triodos Bank collaborate with Dutch pension funds.

In the wake of COP 21 the ASN Bank initiated the <u>Dutch Carbon Pledge</u> when it called on negotiators to pay due regard to the role that investors and financial institutions can play in the achievement of climate change objectives. SNS Bank N.V. adopted the climate goals of ASN Bank to become climate neutral in 2030 as well. It also called on the Dutch Banking Association to publish a 10 point action plan on the responsibility of banks in relation to climate change.

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During the climate summit in Paris two events were organised in The Netherlands pavilion. One was a panel of the CEOs and CFOs of the members of PCAF. With Dutch pension funds such as ABP, PGGM and MN Services, next to the CIO of institutional investors ACTIAM and CEO of ASN Bank, a total of EUR 640 bn was represented. They were asked about their ambitions and commitment regarding the reduction of CO₂. Some had set quantitative goals while others were in the process of setting one. On average the ambition of the panel was 25% less CO₂ in portfolio by 2020. This relates to some EUR 150 bn that has to be invested differently in 4 years. They started carbon accounting because of social pressure from the fossil free movement, out of ethical reasons and because of better financial returns.

To accelerate the transition the financial institutions called on governments to set an ambitious price on CO_2 , to end subsidies for the fossil industry and to help them to cooperate in obtaining the necessary data. The second event was a workshop with experts on the methodology for carbon accounting. The main challenges were the availability, validity and quality of data. They called for validated open source data. The need for this call is strengthened by three former Treasury secretaries who recently said that firms are not giving investors honest information on climate change (source: Scientific American).

During the Dutch Climate Summit 'Bringing Paris Home' in October 2016 the panellists are asked how they have progressed since December 2015.

DEEP LEARNING

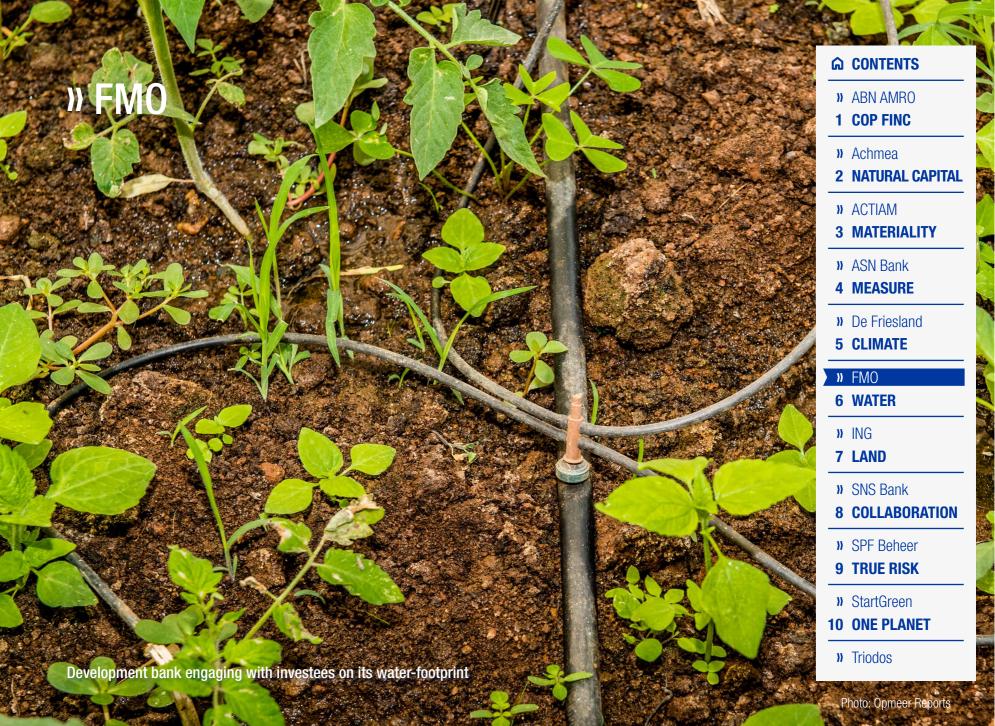
- A stable climate is a priceless ecosystem service for humans.
 We were able to evolve as a species because of this stability and have become very vulnerable to extreme weather events.
- To be able to survive as a species we have to keep the further warming of the planet within a 2 degrees scenario.
- The atmosphere is a global ecosystem (connected to the oceans and land).
- In order to keep an ecosystem resilient, all financial actors connected to that ecosystem have to work together.
- In the case of global spatial orientation of climate change, almost the whole financial world has an impact and / or dependency.
- The financial sector as a whole can be leading in the transition to a zero carbon economy.

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NATURE AS STARTING POINT LEADS TO NEW PARTNERS

FMO, the Dutch development bank was founded in 1970 as a public-private partnership, with 51% of the shares held by the Dutch State and 49% held by private sector members. Its mission is to empower entrepreneurs to build a better world, with an annual investment of EUR 1,6 bn in 2015. Inspired by the WBCSD vision for 2050, FMO strives to become the leading impact investor by 2020 by doubling its impact and halving its footprint by 2020. This shift urges FMO to consider 'what does nature need from finance'. FMO seeks new partners and high quality data to fully understand investees' impact.



Double impact & halve footprint

Mariya Soshinskaya: "It took time to develop the implementation of our 2020 ambition to double our impact- supporting jobs- and halve our footprint - avoiding GHG emissions- with our investments. Seeing ASN Bank measuring the GHG emissions of its balance sheet, taught us that it is possible to quantify GHG comprehensively. The challenge is how to gather impact data that has the same quality as our financial data. Good data is not always available in developing countries. GHG was the first topic to address. Climate Change is already affecting us today, and the impact on our clients in developing countries is even more drastic. They are more exposed yet less resilient to flooding and drought. We started measuring GHG emissions and avoidance in 2013 with data that was available. Meanwhile we developed the Impact and Footprint model combining employment and GHG, which is unique in the financial sector. Combining the two is a first step to a more comprehensive perspective on the impact of our investment portfolio. A practical approach, transparency and communication are needed to keep the process going."

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New partners for water

"Other footprint elements -water, land-use, biodiversity- are each very unique and complex so we adopted a learning approach.

Water is a next challenge as it is the biggest future business risk according the World Economic Forum. Again, clients in emerging markets are particularly vulnerable. Unlike GHG emissions, water is a local issue. FMO conducted a water foot-printing study with the Water Footprint Network of three agricultural clients.

"Every Financial Institution needs to play their own part in the transition according to their specific activities and capacities."



The study found that pollution caused by water use has the biggest impact, especially in agribusiness and that we need to look beyond the boundaries of the business's operations. We should look at the region in which the business is operating. Now we are performing a portfolio water risk analysis to start building awareness of the relevance of water with our clients. We start with risk hotspots at portfolio level and then hope to identify water efficiency opportunities through data collection at client level."

Sustainability Bonds and biodiversity

"Through our participation in the CoP we learned that measuring the impact on biodiversity can be done with different indicators but requires significant data collection. It will take some time until we can implement impact measurement of biodiversity across our portfolio. In the meantime, we manage our impact on biodiversity and ensure that it is protected with our ESG risk mitigation framework and certifications (e.g. FSC). Our Treasury department issues Sustainability bonds that finance green and inclusive projects (microfinance). The framework gives investors a transparent view on which criteria we use. Besides renewable energy and energy efficiency projects, we invest in responsible agriculture, food production, forestry and water projects. In 2015, we made good progress towards our 2020 goals, mainly by our forestry investments. Now, we need to keep the momentum going."

Beatrijs van Manen: "We became aware that ESG is about where the impact and environmental costs take place. By changing the paradigm and looking how natural capital contributes to the economy and the financial sector, financial risks become clear and a level playing field will be established. So you need to put natural capital first: look at what nature needs from finance to be resilient and vital."

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6 WATER: TOO LITTLE, TOO MUCH AND TOO POLLUTED

"I've been heartened to see that a large number of organisations are responding to the growing water challenges, many of which share our vision of a world where fresh water sustains thriving communities and nature's diversity."

Ruth Mathews, Executive Director Water Footprint Network

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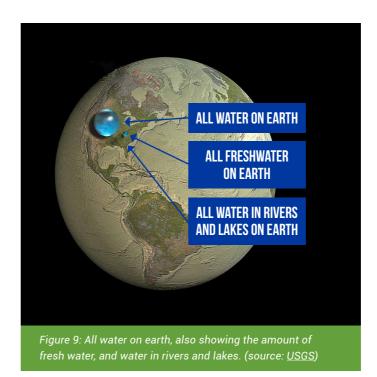
WATER

Water on a steep rise as being material

Fresh water for drinking, agriculture and many industrial processes is a very important ecosystem service. According to the World Economic Forum water is one of the <u>biggest future</u> <u>risks</u>. Only 0,1 % of the global water is available as fresh water.

One out of two countries is prone to water stress. These countries harbour the vast majority of water intensive industries: 88% of coal mining, 80% of textile production and 74% of global agriculture. Then droughts can have a material impact on investments. At the same time flood-prone zones need better protection. Seven countries, including the United States, China and India, are prone to flooding as well as water stress. In relation to flooding especially reinsurance companies like Credit Swiss and Munich Re have been working on the financial impact of extreme weather conditions due to climate change for some years. Also in the Netherlands, insurance companies are feeling the financial burden due to damage from extreme storms and hail.

The awareness of a direct link between water and financial risks is increasing. The ING Bank for example published the report 'Too Little, Too Much'. The global demand for fresh water is expected to grow by 2% annually in the coming decades. This will lead to serious constraints. Many financials expect that the regulatory regime related to fresh water will be strengthened in the coming years with more regulation and other government interventions.



Water ecosystems have a regional and local scale. To gain insight in the resilience of water ecosystems the World Resource Institute has developed a worldwide map called Aqueduct which is now being used by sustainable banks, responsible institutional investors and insurance companies. Aqueduct is a global water risk-mapping tool that helps companies, investors, governments and other water users to identify where and how water risks and opportunities are emerging worldwide. Companies like Heineken

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have developed watershed management with all ecosystem stakeholders at some of their production sites in dry areas (see ING). In Ecosystem Services; from Concept to Practice (Bouma and van den Beukering 2015) the history, issues and challenges are described in governing water ecosystems.

So more and more financial organisations want to know the dependency and impact of their investments on water. To lower downside water risks, i.e. avoid investing in 'losers', and to look for opportunities. Investing in innovation for water efficiency, in water management and waste water treatment is on the rise. Some banks have special water investment funds or they include certain water companies in green funds. Institutional investors not only engage on water as a strategy to avoid risks, they also want to use their influence for a more sustainable future. They participate via the growing number of Green Bonds with water projects and investments (see chapter 8). So how do they know their relationships with water ecosystems, in what state they are and who the other users are?

What can banks do?

FMO, the Dutch Development Bank has the strategic goal to double its impact, (i.e. numbers of jobs) and halve its environmental footprint, (i.e. double GHG avoidance). In addition, FMO acknowledges that severe droughts, floods and water pollution are important issues in the developing countries in which FMO is active. So besides implementing carbon accounting, they decided to focus on the impact of their portfolio on water.

To gain insight into their portfolio's water risks, FMO is piloting a specific water risk screening approach. They learned, similarly as multinationals depending on fresh water such as Heineken and Coca Cola, that if one wants to maintain a resilient ecosystem, one has to work at the location and scale of the ecosystem itself. So a method had to provide information at on the dimension of a specific watershed. They partnered with the Water Footprint Network combine overall maps with local data, leading to water risk hotspots. The water impact method of FMO now comprises of a combination of ESG screening, the use of a water risk assessment tool to identify whether the project lies in a water risk hotspot and is a 'red flag' project. This is followed by a more detailed engagement with clients on the actual amount of water being used within a specified watershed and data of the Water Footprint Network. The goal is to achieve the most sustainable situation by motivating the client to engage with other water users that rely on the local watershed.

How about institutional investors?

Many investors define corporate water risk using the <u>CERES</u> model as:

- Water dependency (operations and sector and product specific)
- 2. Water security (location specific, physical, regulatory)
- 3. Company response (water management, water stewardship)

The <u>Natural Capital Declaration</u> together with signatory RobecoSam developed a <u>Water Risk Evaluation Tool</u>. By using the Water Risk Evaluation Tool institutional investors can classify investments from good to moderate and the material effect on credit rating. They can also use it to calculate a shadow price of water and thus the total economic value of water for an

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investment. Together with ESG-screening, water impact data can be linked to financial outcomes, and deliver valuable investor input for engagement. The water risk evaluation tool is now part of the <u>Bloomberg platform</u> and has been downloaded more than a hundred times according to the NCD. The next step is to make the Water Risk Tool more tangible than 'just a red flag'. The <u>NCD</u> is developing new projects aimed at understanding the connection between drought and flood risks with credit risk.

Institutional investors ACTIAM and PGGM have been engaging on the topic of water management with their investees and they urged the UN-PRI for action on the handling of water risks by investees. Members of CoP FINC reported that the availability of data on corporate water risks is a big barrier for them. Most companies don't report on the amount of water used in relation to specific watersheds which their production facilities depend on, let alone on the way they respond to future water risks. They found that collaboration in platforms on data, with NGOs and scientific organisations, and from an ecosystem perspective is the way forward. Mandatory disclosure for companies on water impact data like for climate change is being developed.

DEEP LEARNING

- Water is an ecosystem service for drinking, sanitation, agriculture, industrial production, and recreation. Many water ecosystems are being severely damaged.
- Water ecosystems are regional and local. Through watershed management it is possible to know about water usage by companies like Heineken, while water saving innovations provide an opportunity.
- To define the relationship with water ecosystems FIs use ESG screening. Some companies then use detailed maps of water ecosystems, local knowledge and engage with investees on water impact data and water management. Others use a water risk evaluation tool to classify investments and the material effect of water risk on credit rating.
- Future oriented maps and validated data will make it possible for FIs to work together to keep specific water ecosystems resilient.
- Collaboration is needed on data sharing, with new partners like NGOs and scientific organisations. Disclosing information on local water dependency and impact of investments is a prerequisite to receive finance to act.

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NATURAL CAPITAL IS MATERIAL FOR SUSTAINABLE FINANCE

As a globally operating bank in over 40 countries, <u>ING</u> published its first integrated report in 2014. With a balance sheet of more than EUR 840 bn (2015), the bank's <u>Sustainability Direction</u> consists of two main pillars; financial empowerment and sustainable transitions. ING's focus on sustainability driven business resulted in EUR 23,8 bn Sustainable Transitions Financed (2015). These clients are environmental trendsetters within their own sectors. By managing social and environmental risks via the Environmental and Social Risk Framework, by proactively identifying, helping and promoting more sustainable clients, by helping clients to sustainably invest and by sharing knowledge on natural capital, ING takes natural capital into account in its core business.



At the heart of risk management

Rikjan van Zalingen: "Our ESR department advises on potential environmental and social sensitivities at both the client and transaction level. Every corporate client of ING is assessed against the ESR Policy framework to ensure compliance before we do business. Depending on the sector the client is active in, elements of the screening could consist of - for example - looking at water management, air pollution, soil erosion, land degradation, and natural stock depletion. The outcome of the Client ESR Assessment together with the outcome of the Transaction ESR Assessment will determine the overall risk profile of the business engagement and approval process thereafter. Once we decide to finance, this is followed by continuous monitoring and evaluation."

Opportunities for sustainable impact

Armand Ferreira and Jochen Harkema: "Next to ESR's risk mitigation, we also pro-actively look for outperforming clients who are more sustainable than their peers. Our <u>Sustainable Finance</u> team drives and promotes sustainable business opportunities within ING. By focusing on clients and projects with

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outstanding sustainable practices, we strive to ensure a healthy and strong portfolio and support tomorrow's economy. We developed a scorecard to identify the environmental outperforming parties compared to their peers in each sector, like natural resources, utilities, automotive etc. We do not want to risk missing out on these opportunities.

We experienced that climate goals help to clarify business cases and incorporates long-term information in the business. Small companies are more adaptive in tackling societal issues, but are more prone to financial risk. To spread the financial risk we made



thematic funds with a resilient mix of companies. In our <u>ING</u> <u>Groenbank</u> fund we invest in projects with a green certificate from the government. Also we launched our first <u>Green Bond</u> in 2015 totalling USD 800 mln and EUR 500 mln which will be used to (re)finance loans in renewable energy, green buildings, public transport, waste management, water management and energy efficiency. We aim to finance EUR 35 bn Sustainable Transitions by 2020, and <u>realised</u> 79% so far.

With ING Private Banking and Investment we invest in listed companies, assets, company and state obligations and in investment funds. Impact investments are incorporated in our sustainable client portfolios."

"Sustainable business is better business, so we want to mainstream sustainability"

Water at risk

Gerben Hieminga: "Some sectors are more sensitive to operational risks. Beverage companies for example use large quantities of water. We expect that the topic of water will become increasingly important, which is described in our report 'Too Little, Too Much'. Water stress (too little) and flood risk (too much) pose us two challenges. Improved water efficiency in agriculture and responsible water usage by corporations will be key to secure adequate water availability in the future and limit economic damage. We used data from WRI/Aqueduct, Aquastat and National Accounts to gain insight on potential sectoral and economic risk and published clarifying country infographics to share our knowledge."

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7 LAND USE AND DEGRADATION

"Saving ecosystems is not only affordable, but profitable.

Nature must not be turned into a commodity, but rather into an asset treasured by the mainstream investment market"

Tidjane Thiam, Credit Suisse Chief Executive Officer

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LAND

The impact perspective

Land use and land degradation have a (potentially) big impact on the loss of biodiversity. Recent studies show for example that industrial agriculture is a bigger threat for biodiversity than climate change. The Global Canopy Programme (GCP) sees working on deforestation, agricultural value chains and land degradation as import strategies in the transition to sustainable land use.

The UNEP-PRI signalled on its <u>annual conference</u> in 2016 that deforestation as a result of the production of soy and palm oil, pose risks for investors and that the issues surrounding it are still little understood. It organised a trip in South East Asia for investors to better understand the current situation. At that time a new interactive online <u>web platform</u> from <u>Rainforest Action</u> <u>Network</u> and <u>Profundo</u> was launched as part of a campaign targeting investors implicated in tropical deforestation in the Asia Pacific Region.

To gain insight into the exposure that deforestation poses, investors can use <u>Forest Watch</u> developed by the WRI. If an investor knows the geographic production locations of the companies it invests in, Forest Watch makes it possible to determine whether these companies are involved in deforestation. Financial organisations like ACTIAM use this instrument for engagement with their investees. Similar to measuring impact on water, one of the barriers is the lack of disclosure by companies on the location of production sites. <u>Sustainalytics'</u> report Biodiversity in the Spotlight (2015) on the

coverage and the quality of reporting and data on land use and biodiversity by companies worldwide, found that only a very limited amount of companies provide sufficient disclosure to determine a comprehensive approach to protect biodiversity and fully understand related land-use risks.

After its success with carbon, the ASN Bank assigned CREM and PRé Consultants, to develop a biodiversity footprint methodology [weblink volgt]. The basis for this is the Life Cycle Assessment (LCA) based methodology ReCiPe, combined with an impact measurement for water. The impact is translated into square miles with zero biodiversity (asphalt). Even though there are still many uncertainties and constraints, it provides insight in investments with a significant negative impact on biodiversity and an indication of the area of land impacted by a certain portfolio. ASN Bank wants to set up a long-term a goal for biodiversity.

A landscape approach when investing in nature

In the scientific world, financial instruments for ecosystem service have been discussed for some time now. Concepts such as 'Payment for Ecosystem Services (PES)', sustainable forestry, wetland banking and ecotourism have been described by academics including Lambooij (2010) and Bouma en van den Beukering (2015). The first study from the financial sector on investing in biodiversity and nature conservation is Nature Conservation: a landscape assessment of an emerging market by JPMorgan and NatureVest. In this study a growing interest in the

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market for impact investment in nature conservation is observed. Between 2009 and 2013 USD 23.4 bn was invested in global conservation, USD 21.5 bn by development finance institutions and USD 1.9 bn by private investors, with an annual growth of 26%. Two thirds of the investments were in sustainable food and fibre. Other areas of investment were water quality and nature conservation projects. But it is, according to the study, an immature market with a shortage of investment prospects with appropriate risk-return profiles and a lack of standardized impact metrics. A report by Credit Suisse and others <u>Conservation Finance</u>; from niche to mainstream calls for the development of large-scale conservation finance products, a standardized approach and an established cooperative business approach.

From an ecosystem perspective the investment market should take a landscape approach when investing in land ecosystems. A study undertaken by Enclude found that out of some 80 investment opportunities at scale, only a handful have a strong element of a landscape approach, i.e. an approach where different actors in a specific geographical area are coordinated through an integrated landscape management plan. Enclude sees a high level of innovation taking place in landscape finance, but they are at the concept stage.

Examples of interesting funds from a land ecosystem perspective are:

- The Tropical Asia Forest Fund and <u>Athelia Ecosphere fund</u>.
 This last fund makes use of UN instrument for the Reduction of Deforestation and Degradation of forests known as <u>REDD</u>
- The <u>Forest Effect Fund</u> works towards protecting against deforestation by investing in sustainable food production and thus enhancing forest conservation and increased harvests.
- Funds, like the impact fund <u>Annona</u> of <u>SPF Beheer</u>, the <u>African Agriculture Fund</u> and <u>Trade Investment Fund</u> (AATIF) Root Capital or the <u>Livelyhoods Fund for Family Farming</u> focus mainly on sustainable agriculture.
- In the <u>Coalition for Private Investment in Conservation</u> (CPIC) financial institutions, international organisations and the academic sector like Credit Suisse, The Nature Conservancy, IUCN and Cornell University to create investment opportunities and tools to help bring conservation projects to the market place.
- The new Platform Energy Efficiency Financials is directed at green infrastructure and its concept is that all banks that have mortgages in a certain part of a town or city or other spatial order, invest in an area in zero-emission houses together.
- Relevant restoration initiatives are <u>Commonland</u>, <u>Living Lands</u> in South Africa, <u>Initiative 20x20</u> in Middle America and the <u>Africa Forest Landscape Restoration Initiative</u> (AFR 100).

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The Little Sustainable Landscapes Book by the GCP, IDH and The Nature Conservancy helps investors to achieve sustainable development through integrated landscape management. It states that: "achieving long-term economic environmental and social goals increasingly depends on understanding and accounting for the impact of land management decisions on ecosystem goods and services, and developing a more coordinated approach to natural resource management on a larger scale". A key outcome following a Global Landscape Forum special investment workshop was that financial instruments and regulations need to come in at different scales, as well as providing support at different stages of landscape development and during different timeframes.

Financial cooperation inspired by a geographical location has to be deployed for projects in the build environment as well. The amount of green roofs on buildings is increasing to make cities more resilient for heavy rainfall and heat. In the <u>Green Deal on Green Roofs</u> vegetated roofs are being developed to become a bed & breakfast for domestic insects and birds. In the <u>Green Deal Infra Nature</u> the infrastructure sector such as railways, waterways and highways is experimenting to include nature in a multi-profitable way. As with the landscape approach for forests and other land ecosystems, also financial organisations investing in green infrastructure will have to collaborate on a certain scale. Whether it is a living or an ecosystem made out of bricks and cement, the place determines who has to be involved.

So a landscape approach is a new trend in the world of sustainable finance. Governments, are starting to make ecosystems more visible. The province of Antwerp made landscape images for stakeholder management. In the Netherlands the <u>Atlas Natural Capital</u> is being developed.



Ecorestoration

The UN project The Economics of Ecosystems and Biodiversity (TEEB) has <u>calculated</u> that 52% of agricultural land is degraded. An approach completely devoted to restore degraded areas is <u>Commonland</u>. It deploys different ways in which finance can play a catalysing role in implementing landscape management. According to Commonland a period of 20 years or one generation is necessary for landscape restoration and it has first-hand experience in trying to get financial institutions to invest in restoration projects due to the high-risks, low profitability, no exit strategy and lack of a track record. Investors in London said that they lack a toolbox or framework to understand or assess landscape restoration prospects.

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A policy brief by PBL on scaling up investments in ecosystems found that many financing issues such as start-up and maintenance costs, investment returns, cost recovery and risks, hamper scaling up. Different coordinating mechanisms limit further investments. Coordinating mechanisms like linking actors, scales and financing mechanisms. PBL sees a trend towards a regional approach and the number of mechanisms for collaboration between public and private stakeholders at local and global levels is increasing (PPPs and investment funds) as a result of the multi-actor, multi-level nature of restoration. The brief advises better financial orchestration at the regional level.

DEEP LEARNING

- Land ecosystems and fertile soil are the basis for a.o. agriculture, timber and paper and recreation.
- To keep land ecosystems resilient one has to, like with water, work on the scale of the ecosystem.
- From a risk perspective attention in the financial sector for deforestation is on the rise and some see degraded land as the next stranded asset.
- An impact indicator for biodiversity, based on the LCA method, is being developed.
- It is not easy to define an ambition on biodiversity for a financial institution.
- Very little data is available to determine the connection to land ecosystems, because of a lack of reporting by companies on land use etc.
- A landscape approach for finance is a new trend and a handful of funds have been developed on this scale.
- Investing in nature and ecorestoration are the next investment opportunities. These projects need more financial coordination at a regional level and investors with a long-term (20 years) horizon

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ENGAGE OTHERS IN SUSTAINABLE AMBITION



SNS Bank NV (SNS Bank NV will be renamed 'De Volksbank' as of 1 January 2017) is a retail bank offering financial products in the areas of for savings, payments and mortgages. SNS Bank NV (SNS Bank) has a total balance sheet of EUR 63 bn (2015). SNS Bank has recently decided to follow the ambition of its subsidiary ASN Bank to become climate neutral in 2030 for the total balance sheet. Laura van Heeswijk explains that when working on its long-term climate goals, SNS Bank and cooperates with customers, peers, the Dutch Banking Association and other external partners.

Adopting the climate neutral ambition of subsidiary ASN Bank

Laura van Heeswijk: "SNS Bank aims to be a sustainable bank. Climate change affects us all and we believe that everyone should contribute to adhering to the 2 degrees scenario, including ourselves. That is why we decided to follow ASN Bank's ambition and join the process and strategy to become climate neutral for all of our investments in 2030. On the one hand, we need to reduce our CO_2 losses, mainly caused by the private homes we finance. We inform our customers about energy saving options and have started a number of pilots on insulating homes and offering a reduced rate for an energy-saving consultation. We presented our ambition to reduce the CO_2 emissions of our mortgage portfolio at the climate summit in Paris in 2015. On the other hand, we have to increase our CO_2 profits by investing in green energy projects and green bonds."

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Supporting the financial sector's climate agenda

"Together with ING bank, we supported the Dutch Banking Association to publish a 10-point action plan for the responsibility of banks in relation to <u>climate change</u>. In the Climate Statement, 10 Dutch banks make a commitment to reduce their impact on climate change. We also urge the government to impose legislation on companies to report on their CO₂ emissions. The Climate Statement shows that banks act, communicate and cooperate on their ambition for CO₂ emission reduction. Collaboration is necessary for environmental sustainability and banks can take a leading role in the transition to a low-carbon economy."

Within PCAF, we are taking the lead in exploring the possibilities of improving the accuracy and quality of energy use data. This means we explore partnerships with other organisations such as Dutch grid operators to improve our calculations on the ${\rm CO}_2$ emissions of our mortgage portfolio. That will result in a better understanding of the energy use of our portfolio and provide valuable insights to develop and improve our sustainable customer propositions. Besides improving data quality, SNS Bank is also engaged in a partnership with Slimwoner.nl to stimulate and develop energy-saving solutions for our customers."

"Cooperation and partnerships are essential in making the Dutch housing stock sustainable"

Engaging others in the challenge for a low-carbon economy

"We believe it is essential to engage others in combating climate change, as it is both a global and complex issue. Therefore, the methodology that ASN Bank developed and we expanded together, is publicly accessible and open source. ASN Bank took the lead in setting up the Platform Carbon Accounting Financials (PCAF) in 2015. Together with other Dutch financial institutions, we are developing a methodology to measure the climate impact of our investment portfolios and develop long-term climate ambitions.

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8 COLLABORATION FOR ECOSYSTEMS IN NEED

"A prerequisite for ecological networks is well functioning social networks."

Anthonie Stip, <u>Dutch Butterfly Conservation</u>

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COLLABORATION

Emerging collaboration on sustainability in finance

The members of CoP FINC learned that natural capital is a concept containing all the ecosystem services our economy needs. That the ecosystems generating these services have different characteristics and that for resilience they depend on biodiversity. Moving forward they learned that three indicators should be used to measure impact. If one measures GHG emissions, dependency and impact on water as well as analysing the impact on land-use, 80% of the impact on biodiversity is covered. From their own practice and an ecosystem perspective, the members discovered that a stable climate, fresh water and fertile land are priceless ecosystem services for humans and that all actors connected to an ecosystem have to work together to keep it resilient.

Our atmosphere is the only global ecosystem; water and land ecosystems are regional or local. When measuring the impact on regional and local ecosystems, financial institutions use ESG screening, as well as collecting local knowledge to engage with investees on water impact data and water management. To keep land ecosystems resilient, a landscape approach for finance is on the rise, but only a handful of funds have started. These funds share the challenge that, once degraded land ecosystems take a long time (20 years) to recover and need blended finance mechanisms.

Frontrunners have a long history of close relationships with the companies and projects they invest in or lend to. They organize special days and seminars for relations and feature them in their different media channels. They do the same for their clients. In this way they develop their investment strategy cooperating with many different stakeholders.

More mainstream financial organisations are starting to realise that, to have a real impact, an intensive and long-term dialogue with companies is crucial. An example of such a cooperative approach with companies is the <u>Strategic Equity Portfolio</u> of <u>SPF Beheer</u> This is a portfolio with 60 to 80 companies and a scope of about 7 years. Companies are positively selected and regular meetings take place on the structure and operations. This calls for an increase in knowledge and training for the investor and the investee.

Institutionalized forms of collaboration for sustainability are <u>UNEP-FI</u>, <u>NCD</u> and the <u>UN-PRI</u>. In the last 10 years, membership of UN-PRI has led to a network of institutional investors who increasingly work together in executing their active ownership (voting and engagement). The PRI facilitates joint engagement initiatives, which investors can join as a lead investor or supporting investor. It also facilitates collaboration on shareholder resolutions; investors can act as a (co)filer of a resolution or create awareness of a shareholder resolution that is coming up. For example at the annual meetings of Shell and BP, institutional investors grouped together to press for a transition towards renewable energy. A recent <u>evaluation</u> of the first 10 years of PRI concludes that: "the PRI is widely applauded for putting responsible investment (RI) on the agenda of investors

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and policy makers. In just 10 years since its establishment it has become the leading global investors' platform for learning, engagement and the sharing of best practices on RI". An example of cooperation on specific natural capital themes is the <u>Green Infrastructure Investment Coalition</u>. In The Netherlands an agenda for responsible investing is made by the Sustainable Finance Lab and a group of Dutch pension funds titled '<u>Together stronger and faster</u>' (in Dutch).

Cooperation for and from an ecosystem perspective

An overall insight for members of CoP FINC is that to keep the planet's natural capital, collaboration has to be a 4th theme in addition to climate, water and land.



A first theme for collaboration is to develop validated data on ecosystems and their services now and in the future. Cooperation helps gain insight about whether an investor has an impact and dependency on natural capital. Financial organisations have to

share their own data in more open source ways, and collaborate for more disclosure on localized data by investees. Bank and investor experiences around water ecosystem impact showed that new partners, such as the Water Footprint Network, are necessary to deliver insights into the local state of ecosystems.

Many green NGOs, such as the IUCN, the Nature Conservancy and WWF, have a lot of local data, experience and knowledge about ecosystems and their users and have been building partnerships with banks and investors. Many smaller NGOs don't speak the language of the financial world yet. For this reason IUCN NL and Nijenrode Business University have designed The Green Finance Academy on how to speak about money for green organisations.

Also scientists in the world of ecosystem services have a lot of knowledge and data. They are working on maps and on describing the value of ecosystem services at many different locations. But this knowledge does not yet flow freely into the world of finance. At the first global ecosystem service conference described in chapter 2, only the Piraeus Bank was in the audience. Collaboration with global, regional and local policy makers could also be strengthened. At the European Environmental Bureau (2016) conference 'Action for Nature; getting Europe on track to meet its 2020 biodiversity targets' scaling-up of financing was high on the agenda. All cases and speakers had a focus on public funding however there were no representatives from private finance in the panel or audience.

The same holds for a big part for the meetings of the CBD. The Cancun Business and Biodiversity Pledge, that will be presented in at the <u>CoP13</u> of the CBD in Mexico in December 2016, will

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call for financial institutions to underwrite the importance of ecosystem services, but does not give guidance yet on the role they could or should take.

Financial organisations also have to work together on the standardization of tools and methods as is done in the Platform Carbon Accounting Financials. Last but not least, for an ecosystem perspective financial institutions have to work with new partners due to the geographical orientation of an ecosystem. Who else has investments in the ecosystem on which



your services depend? Or has invested in other users of that ecosystem service? As was concluded from the first best practices with a landscape approach to finance and with ecorestoration, better financial orchestration on a regional or local level is needed.

Green Bonds to invest in landscapes

Many institutions indicate that there are not enough bankable projects that fit their size and risk/return criteria. They want to invest in sustainable companies or projects, but when projects are small and high risk they need a lot of due diligence work, which makes them expensive. Financial organisations can innovate by creating or investing in new financial products such as a <u>Green Bond</u>. Green Bonds proceeds are directed to fund projects intended to benefit the environment and with issuers agreeing to report on the use of proceeds. Until now it is the issuer who decides to call its bond green and is thus intrinsically bound to the green strategy of the issuer. Green Bonds can play an important role in enhancing the transition to a green economy, as they can bundle a number of smaller projects into larger packages. They can be backed by public institutions, making it an instrument for blended finance.

Development Banks were the first to develop this new market. Responsible Investor Insight labelled Green Bonds the future of sustainability financing in 2014. They are a <u>fast growing instrument</u> in the investment universe; the nascent market for green bonds saw a growth spurt in 2014 with issuance tripling from 2013 and surpassing USD 38 bn. To accommodate the emergence of a market for this new instrument, special conferences, magazines and structures have been developed. Green Bonds were issued frequently in the months before the

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climate change summit in Paris: USD 150 bn by Goldman Sacks, USD 168 mln by the Green Climate Fund, USD 1.3 bn by ING, USD 500 mln by IFC, EUR 15 bn by BNP Paris Bas and so on. Also see Climate Bonds.

In The Netherlands the following green bonds have been issued <u>Green Property Bond</u> by ABN AMRO and <u>Unilever</u> issued a bond on energy savings. Both were validated by the <u>Climate</u> Bonds Initiative.

Currently most Green Bonds have been directed towards renewable energy, energy efficiency, water treatment and water recycling. So Green Bonds from an ecosystem perspective on climate change and land are being developed rapidly. Green Bonds including biodiversity, land use or nature are scarce. In 2014 Credit Suisse launched The Nature Conservation Notes consisting of investments in sustainable agroforestry and ecosystem conservation. It was awarded with the Sustainable Forestry Deal of the year 2015 by the online magazine Environmental Finance.

As became apparent from an ecosystem perspective on land, investment opportunities in landscapes are being developed or are in concept phase. According to the GCP the <u>Unlocking Forest Finance project</u> is an example of a landscape bond. Landscape investment platforms have been set-up to coordinate funding for sustainable landscape by packaging investment opportunities by for example The Landscape Fund. All ecorestoration initiatives such as Commonland and many others that are based on a landscape approach will need new ways of financial collaboration. The World Economic Forum finds blended finance the way to redesign development finance for the SDGs and has

launched two new <u>Blended Finance platforms</u> to provide capital suppliers with access to a pipeline of individual blended finance projects. We hope that they will take an ecosystem perspective into account. Crowdfunding is a way of financing more small scale ecorestoration projects like the coral restoration project of <u>StartGreen</u> But as crowdfunding is a fast growing innovation, it might become a way to participate in larger projects as well.

So collaboration in finance on the many dimensions of natural capital is key. Data to know the relationship between investments and ecosystem services have to be developed in an open source environment and collectively with scientific community and NGOs. To invest in ecorestoration, collaboration is needed with other financials and from an ecosystem perspective, being global, a watershed, or a landscape. It will lead to positive impact, innovative instruments and new partners. Financial innovations like Green Bonds can be an instrument to keep ecosystem resilient or to restore them. Also a close connection with national, regional and local governments and regulators is a prerequisite.

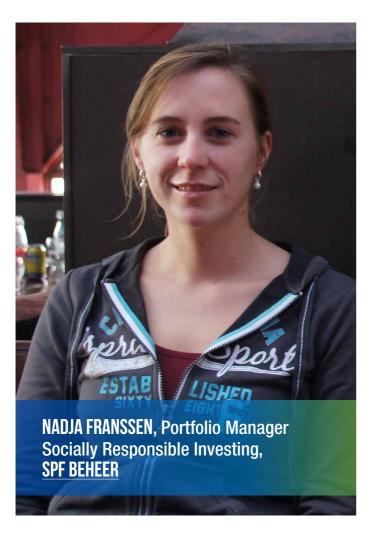
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NATURAL CAPITAL IN STRATEGIC PORTFOLIO AND IMPACT INVESTING



A medium-sized asset manager for the Railway Pension Fund (SPF) and the Pension Fund for Public Transportation (SPOV) with assets worth approximately EUR 18 bn. In its role as an asset manager, for <u>SPF Beheer</u> a number of factors are significant. Firstly, measurability and visibility of consequences are important to activate stakeholders. Secondly, SPF Beheer is following its clients. With its Strategic Equity Portfolio and its impact fund Annona, Nadja Franssen discovered how the company was taking care of its biodiversity impact.

SAP screening

Nadja Franssen: "It's not our role, as a pension provider, to dictate to our pensionfunds and their clients what they should do. Rather it is the other way around, participants are required to participate in a particular pension fund, so it is our job to invest in a socially responsible way. SPF Beheer has a Strategic Equity Portfolio ('SAP' in Dutch), consisting of 60 companies, for which a stable growth on the long-term is expected. The objective of SAP is to achieve a positive return over the long-term, with an average of about 7 years. Socially responsible investing (SRI) is included as an integral part of the investment decision. The focus is on human rights, child labour, the environment and, for one of the clients, executive compensations. During the first meetings of CoP FiNC, I discovered that SPF Beheer already does quite a bit in terms of biodiversity, but that we don't explicitly categorise it that way. In our SAP approach we first check information of

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Sustainalytics and then, based on our internal models, we write our own ESG-report. We use publicly available information such as the Carbon Disclosure Project information and the annual report of the company. After the selection, we continuously monitor the companies. The information is used for dialogue with the company."

"Collaboration is needed to progress on biodiversity financing."

Increased risk

"The assumption that underlies SAP, is that unsustainable practices are an increased risk and often imply poorer long-term returns. The methodology is innovative and the results so far have been so positive that SAP repeatedly made the news in the investment world. SAP covers slightly under 20% of the invested assets of SPF Beheer. Climate has attention for the purposes of combating pollution and reducing CO2 emissions. Biodiversity is not explicitly included, but it is strongly interlinked with climate change and pollution. As an investor we are continuously weighing risk-return elements of potential investments, but, since we have almost 18 bln Euro to distribute across investments. we also look at the opportunities to allocate a substantial amount of money into a fund. Unfortunately, many interesting and innovative ideas and developments I heard during the meetings on biodiversity are difficult to integrate into our portfolio because they are too risky, lack size or lack track records."

Biodiversity and impact investing

"When the CFO of our initiated fund Annona gave a presentation in one of the CoP meetings, I noticed that implicitly we were doing more in the field of biodiversity than we thought. For example Annona is developing eco-tourism investments in Africa. Still as a topic for investment choices, biodiversity is quite complex, I don't expect we'll start focusing on biodiversity explicitly on a short term, as we do on Climate. Climate is currently a hot topic. Apart from the fact that we always took the carbon emissions of a company into account when selecting investments, we have recently also measured the footprint of our SAP portfolio. It turns out that our efforts bore fruit and our portfolio emissions are significantly lower than the benchmark. In addition, water is increasingly important as a topic. In the area of biodiversity we would like to see more innovation through impact investing. The obstacle is that most projects are small scale and that the monitoring of lots of small projects is too time-consuming for us. If a fund would be set-up that integrates and bundles several projects, risks are spread and more investors would then have the possibility to take these pro-biodiversity investments into their portfolios."

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9 TRUE RISK

"What would nature do?"

Katherine Collins, Honeybee Capital

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Natural capital value at risk

The Stockholm Resilience Institute developed the Planetary Boundaries concept as a framework to define a safe operating space for humanity. It shows the urgency of the matter with biodiversity being one of the most crossed boundaries.

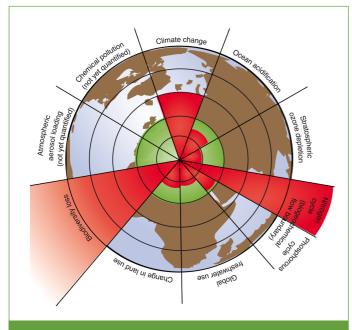


Figure 11: Planetary boundaries. Source: <u>Stockholm</u> <u>Resilience Centre</u>, 2009

The planetary boundaries show that the provision of an ecosystem service can collapse over time. When this will happen depends on the ecosystem underpinning the service. For some ecosystems this moment is better studied than for others. Most work on how much monetary value related to natural capital is at risk, has been done in the field of climate change. The value of investing in coal is on a downward path and profits of fossil fuel companies are going down so rapidly that media like Carbon Tracker talk about a meltdown. Research by the intelligence Unit of The Economist reports in The cost of inaction that the value at risk to manageable assets from climate change is calculated as USD 4.2 trn in present value terms. The tail risks are more extreme: 6°C of warming could lead to a present value loss worth USD 13.8 trn, using private-sector discount rates. Impacts on future assets will come not merely through direct, physical harm, but also from weaker growth and lower asset returns. The interconnected nature of the problem will reduce returns, even on investments unharmed by physical damage. Although direct damage will be more localised, indirect impacts will affect the entire global economy. Accordingly, asset managers will face significant challenges diversifying out of assets affected by climate change. As the Economist writes "Institutional investors need to assess their climate-related risks and take steps to mitigate them, few have begun to do this."

In The Netherlands the Central Bank conducted a <u>study</u> on the impact of climate change on the financial sector. The study concludes that: "Only a fraction of the energy is produced in a sustainable way in the Netherlands. CO₂ emissions have recently risen again, after several years of decline. The Dutch economy is

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specialized in CO₂ -intensive processes. This means that the Dutch economy may be affected by relatively strong climate policies, including through competitiveness."

Other financial implications of risks related to natural capital are reputational risks when investees are causing deforestation. Credit and operational risks are expected to materialize fast with regard to too much or too little water. Also the term 'stranded asset' is now used for investments related to potential degraded land. Regulatory risks are expected in relation to climate change and water especially when governments develop a pricing-system for CO₂ and for water use and land related ecosystem services. It can even become a legal risk with companies potentially being held liable for natural capital degradation.

A future oriented approach

Ecological risks increasingly lead to sudden and extreme situations in the marketplace. But most of them are not taken into consideration in current risk models because the financial sector uses backward looking risk models. In the spirit of TruCost which combines the costs of ecosystem services with financial data of companies and TruE Price which calculates the prices consumers should pay for a product if natural and social capital was included, we propose a discussion on 'true risk'; the uptake of data on ecological risks in financial risk models.

The Dutch <u>Helpdesk Natural Capital</u> advises two steps for a future looking approach to determine true risks. Step one is a risk analysis with horizon scanning and looks for drivers behind the trends. This should be followed by a sectorial risk analysis and the determination of the impact on investees. The result of the

first step is an overview with hotspots per natural capital theme, climate, water and land, for investments by risk areas in country and sectors. The second step is a risk analysis for individual investments and a deep-dive in local trends and drivers followed by a risk analysis at the local level and identifying mitigating actions. In a meeting of the helpdesk and members of CoP FINC one of the main insights was that companies and other investees need to report on water dependency and their impact on land and biodiversity, and that this data should be disclosed per specified production location. The conclusion was that financial organisations should cooperate more on putting pressure on companies on reporting and disclosure.

Science based scenarios for ecosystem services

The question remains however what the right time horizon is. In finding the time horizon for the provision of ecosystem services, ecosystem thinking should be the guiding principle. How long does it take for an ecosystem to collapse and / or how long to restore it? For our global ecosystem the atmosphere, science has developed the 2 degrees scenario. More than 2 degrees in temperature rise will make the ecosystem unstable and vulnerable to all kinds of tipping-points. With enough consensus given by science and commitment by governments Carbon Tracker now frames the risks related to investments in fossil fuel as a carbon bubble with stranded assets. Frontrunners like ASN Bank and FMO use the 2 degrees scenario to quantify their climate ambitions, i.e. a climate neutral portfolio in 2030. For water ecosystems, work is in progress to make Aqueduct future-proof and include projections and scenarios on the state of its water ecosystems in one, 5 and 10 years' time.

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Investing in nature and the restoration of degraded land has a time horizon of 20 years. Commonland has learned that its projects need investors with a long-term focus and that ecosystem restoration projects need 'transition money' via a diverse funding model with a variety of partners such as family offices and equity funds. Public money can act as a long-term guarantee for private investments in ecorestoration and thus help to develop 'blended' finance strategies. Also nature conservation needs new financial models to spread the risks. Credit Suisse lists six effective financing mechanisms to support conservation, combining for example corporate green bonds or by leveraging a development agency loan portfolio or a targeted financial institution portfolio. Mainstreaming the Green Bonds market can help to resolve what Mark Carney of the Central Bank of England, calls the tragedy of the horizon, he observes: "when governments step up like they did in Paris, it brings forward the horizon."

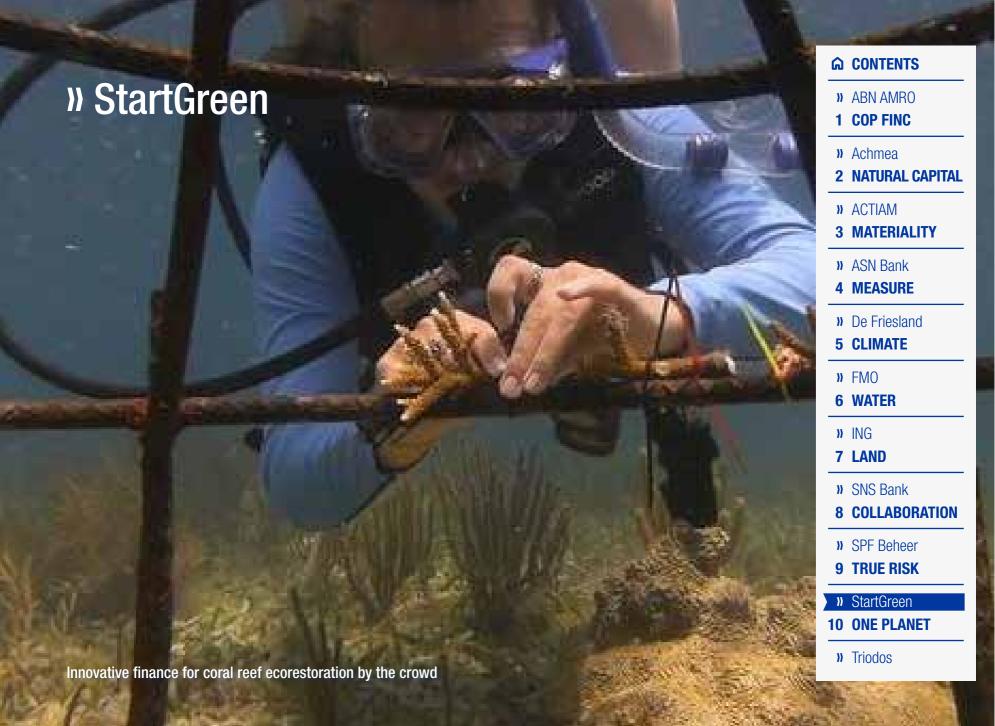
In The Netherlands the Sustainable Finance Lab (SFL) and the VBDO with different institutions from the Dutch financial sector expressed that they want to go further understand the risks and opportunities of these exposures, and to develop strategies that respond adequately. An understanding is needed to see how different scenario's will impact the portfolio. Performing an environmental stress test is a first step. The goal is to integrate these assessments in the general (credit) risk framework and thus translate these assessments into a risk appetite at the portfolio level. They want to include exposure to water stress, land degradation, deforestation etc. and organize a series of master classes and workshops.

Considering true risk, we conclude that ecosystem services have tipping points and some are at risk. Restoring ecosystems can take as long as 20 years, but financial risk management is backward looking. It needs to adjust, evolve and integrate true risk. This calls for science based scenarios for ecosystems and their services. Collaboration is needed on data to define risk and to build trustworthy scenarios.

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FINANCING NATURAL CAPITAL



StartGreen Capital offers instruments for entrepreneurs with innovative and sustainable businesses or projects to take it to the next level of development. StartGreen managed four funds (two venture capital funds/ two regional development funds, with EUR 125 mln assets under management). In 2012 StartGreen Capital also launched the first sustainable crowdfunding platform in the Netherlands, called OnePlanetCrowd, with 25,000 international participants (the crowd) so far. In 2016 this crowdfunding platform generated EUR 15 mln (July 2016). With the current growth rate the platform doubles its asset collection each year. OnePlanetCrowd is also active in Germany, Belgium and Austria and will start activities in the UK in 2017. StartGreen aims to offer the sustainable entrepreneur or project developer a custom made finance solution, offered from their funds, by crowdfunding, or a combination of both. Coenraad represents the Netherlands as Board member of the European Crowdfunding Network. He experienced in the CoP that their combination of market knowledge, network, coaching and innovative investment practice offers opportunities for natural capital as well.

"We can be a hands-on partner for regular financial institutions and enhance their natural capital transition."

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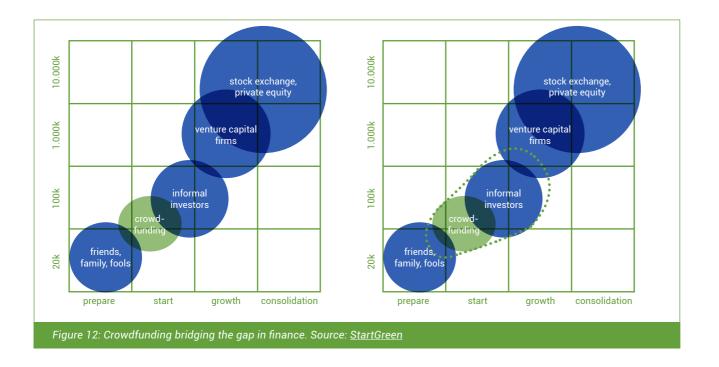
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Crowdfunding for transition

Coenraad de Vries: "The financial market is rapidly chancing, the total available investment money is growing quickly. Despite of this start-ups and sustainable projects can still hardly find 'starting money'. Most of the governmental (and EU) policy is supporting regular financial institutions (banks, Private Equity funds). These investors lack the expertise to finance these start-ups and projects, especially in the sustainable sector.

On the other hand personal savings are at a record high (in % of gross national income never this high in Benelux before). As interest rates are incredibly low there are limited opportunities to create returns for these savings. These two macro trends give

crowdfunding the opportunity to bridge the finance gap for SME's and sustainable projects. It is developing very rapidly worldwide, doubling each year (Massolution). Besides start & growth capital we experience more benefits with crowdfunding. For the public it is an opportunity to generate personal impact through finance. Funders feel connected with 'their' project or start-up and generate free publicity and advice. For banks and governments, the fundings of the crowd show the market-value and potential business case of such a project and its innovative character. On top of that, through its investment, the crowd decreases financial risk. We think that crowdfunding and regular finance instruments will work together in new models (see picture) more and more."



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More nature than thought

"In the past years, we predominantly aimed at financing sustainable energy. This funding is of course also related to the preservation of natural capital, but we did not finance biodiversity directly through our funds. Because of our participation in the CoP, we started to think about the meaning of the concept of Natural Capital. Until recently, the definition of it seemed very abstract and policy-oriented to us. However, when we scanned our crowdfunding portfolio, it appeared that we financed more natural capital related projects than we thought. Think of organic flower bulbs, protection of natural parks, initiatives to create a healthy sea, and the preservation of bees. We expect to finance more biodiversity through crowdfunding because of the sustainable relevance and the public awareness. The network of CoP FiNC really helped to have a better understanding and network in this area. What we see is that much of the nature related finance is in the form of taxes and subsidies. I believe we should come up with better business cases for natural capital. We could play a role by raising awareness and by direct involvement."

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10 FINANCE FOR ONE PLANET

"We have to move from the tragedy of the commons to the promise of the commons"

Willem Ferwerda, Commonland, No 1 of the Dutch sustainable 100 (2016)

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FOR ONE PLANET

Ambitions and responsibilities

This publication started with the statement that the financial sector can be a significant enabler in a transition towards a green economy, i.e. an economy that keeps the ecosystems on our planet resilient. The question for individual financial institutions however is how to define its ambition and responsibility in line with this transition. For climate change frontrunners use science based targets related to the 2 degrees scenario leading to the ambition of becoming climate neutral in 2030. Can this also be done for water and ecosystems related to land? Ecofys is now working on science based targets on land use and water. For financial institutions that want to formulate an ambition for biodiversity the question is whether they should go for No Net Loss investing or do they have to go further and become pro-biodiversity?



Can the concept of Planetary Boundaries and <u>One Planet</u>. <u>Thinking</u> developed by WNF, Eneco and Ecofys, help to define the level of ambition needed? One Planet Thinking is based on model of Planetary Boundaries (<u>chapter 9</u>) representing a new way for companies to look at their business and align it with what is needed for a healthy and resilient planet for next generations. One Planet Thinking (OPT) is still in its early stages of development and companies that get involved now will have the opportunity to co-develop this methodology.

Other financial institutions are experimenting with developing an impact indicator for biodiversity and a growing group is using the SDGs. In a joint statement, nine institutional investors, including four from The Netherlands, state that they strive to facilitate a steep increase in what they call <u>Sustainable Development</u> <u>Investments</u>. As became clear in <u>chapter 2</u>, more than half of the SDGs depend on natural capital so we hope an ecosystem approach will be part of such investments. In <u>Banking for a Better World</u> (Nanno Kleiterp, FMO 2016) the role of different financial institutions, i.e. development banks, commercial banks and pension funds, in financing sustainable development, can be found.

Time for transition to phase 3

To make a green economy the new normal, the transition in finance has to move from transformation phase 2, take-off, to phase 3, called the critical mass phase characterised by inclusive and structural change (chapter one). Where competition between frontrunners is part of phase 2, stakeholders collaborate (chapter 8) to tackle obstacles in the phase of critical mass. One overall message surfaced all the time during CoP FINC: that

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collaboration is needed on data sharing, with new partners like NGOs and the scientific community, and that disclosure on local impact data for land and water is prerequisite for finance to act. When investing in ecosystem services, financial coordination is determined by the geographical location of the underling ecosystem. Financial institutions have to push together for the disclosure of data on production locations to gather the necessary water and land indicators. Collaboration is also needed to change the way the sector regards financial risks and the risk models that are used at present. New 'true risk' models are future oriented and should take the time scale of nature into account.

In phase 3 governments institutionalize the transformation and expand the drivers of change. A turning point in carbon accounting is, according to the UN-PRI, the French Energy Transition Law adopted in August 2015. It includes ambitious targets around reducing greenhouse gas emissions and overall energy consumption, by mandatory disclosure of GHG emissions by larger companies. UN-PRI advises its signatories to collaborate to drive up industry standards. In The Netherlands the transition to phase 3 is visible in the actions of the Dutch Central Bank. Besides research on the impact of climate change on the financial sector the visit of the UNEP Inquiry in 2015 is relevant. The Inquiry is a process run by the UNEP aimed at designing a sustainable financial system. At a meeting, coorganised by the Dutch Sustainable Finance Lab, UNEP Inquiry's chair Simon Zadek pointed out that the rules of the system have to change. A few months later, the CEO of the Dutch Central Bank stated that financial actors have a responsibility in creating a sustainable future and that ecological risks threaten the resilience of the financial sector. He added that it was time to move from ad-hoc initiatives to a more systematic change and

that for this purpose the DNB would form a Platform Sustainable Finance. The foundation of this Platform provides a great opportunity to accelerate the transition to a green financial system. Working groups, chaired by a CEO from the sector on different topics, are being created. Also the sector is ready to work more closely with the central government.

The third phase of transition is also characterized by the rapid growth of new infrastructure. In the last two years we have seen the steep growth of sustainable finance consultancies such as Sustainalytics, and of new sustainable services such as Morningstar, with again Sustainalytics, who developed a sustainability rating for funds. It is a new way for investors to evaluate how well the companies in a fund's portfolio are managing the ESG-investing factors The fact that data and methods on natural capital are valuable was illustrated by the EUR 14 mln that S&P Dow Jones Indices paid to acquire Trucost.

One Planet Thinking for the financial sector

We think, based on the lessons and insights in this publication,

that the time has come to develop One Planet Thinking (OPT) for the financial sector and we would like to invite all financial institutions to join the emerging OPT community. This will lead to a paradigm shift, i.e. a profound change in a fundamental model, believes and methods.



Do you see a duck or a hare? Once you see both you can't go back to seeing only one of them.

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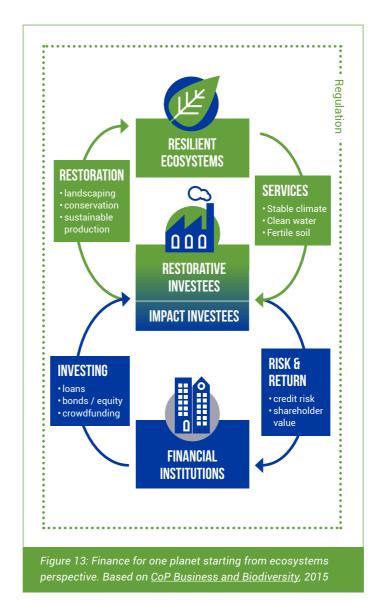
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We started from a financial sector perspective and moved to ecosystems and related impact indicators. One Planet Thinking for the financial sector means to start from the ecosystem perspective, and its need to sustain on delivering ecosystem services to the economy and finance. Figure 13 shows this turn around.

This urgency for a radically different way of operating is summed up in the words: "It's time to declare war on climate change" (Bill McKibben, founder of 350.org) and "the survival of humanity" (Aaron Mair, president Sierra Club). For climate change the 2 degrees scenario is starting to inspire high ambitious financials to set science based targets. It may even be developed into a benchmark for the financial sector, so that the sector can benchmark itself against the needs of the largest ecosystem of the planet instead of each other.

Financial institutions with an ambition to become No Net Loss with regard to natural capital or even ecorestorative like Interface, will have to invest in ecorestoration. This has to be done with a landscape approach, financial coordination at a regional level and investors with a long-term (20 years) horizon. Financial innovations like Green Bonds and crowdfunding can be an instrument for ecorestoration. More people are calling for financial innovations to keep our ecosystems resilient, like the head of UNEP, Erik Solheim, who said: "Fintech should be ecofriendly, for new technologies are a way to promote sustainable finance" (Financial Times, Future of Fintech, 2016).



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One Planet Thinking for the data quest suggests that we need an open source clearing house, connected to the new <u>GRI standard</u> and natural capital protocol. Data to make the risks associated with ecosystem services known and based on trustworthy scenarios and maps. For data collection more cooperation with science and NGOs is urgently needed. Also One Planet Thinking needs global governance structures. It is global structures like The <u>Global Commission on Climate Change</u> reaching out to the financial sector: "Investing in sustainable infrastructure is essential to solve all the world's most pressing problems," said its chair Felipe Calderón. "It's key to reigniting global growth. It's key to reducing poverty. And it's key to meeting the <u>Paris Agreement</u>. It all depends on whether we get financing right, only then will capital fully shift in the low-carbon direction."

Another global actor, the UN Inquiry observes in its latest report <u>From Momentum to Transformation</u> "The financial system remains disconnected from the long-term needs of the real economy".

We would like to replace the term economy with the needs of ecosystems providing the economy with its services. To take an ecosystem perspective for the whole financial sector, including system players such as regulators and (international, local and regional) governments.

Inspired by our Dutch experience with CoP FINC, the European Business@Biodiversity Platform recently has initiated the development of a new community of practice Finance@ Biodiversity. A midterm review of the EU's Biodiversity Strategy underlines the need for an increased effort to halt biodiversity loss by 2020. This need, along with our Dutch experience with

CoP FINC and the expressed interest from financial institutions in Europe, will be the starting point to build further on the emerging ecosystem perspective for finance.

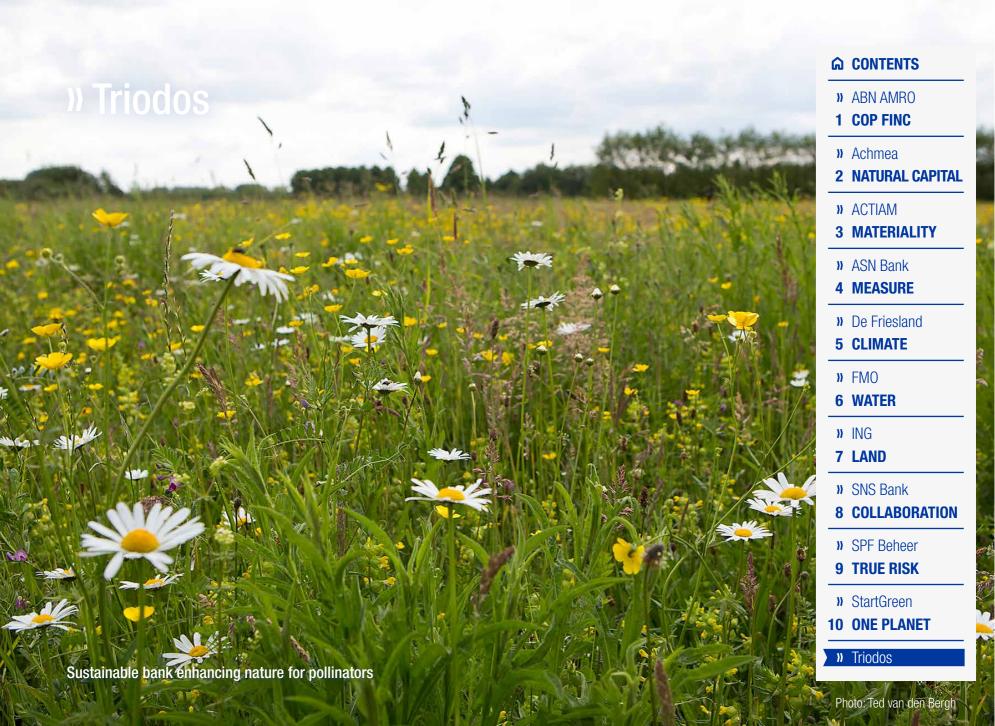
Julia Roberts as Mother Nature ends this beautiful short <u>video</u> with the question "I will keep evolving, how about you?"

We hope that the financial sector will find further inspiration and practice to evolve to a system that supports and sustains the planet's natural capital.

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POLLINATING FINANCE

Triodos Bank is one of the world's leading sustainable banks. Its mission is to make money work for positive social, environmental and cultural change. Within the area of nature and environment, the bank finances projects committed to the preservation of ecological cycles and enabling sustainable alternatives. Funding is focussed on renewable energy, organic food and agriculture, sustainable and social real estate, landscaping and nature projects. Triodos Investment Management, a full subsidiary of Triodos Bank, invests in the same themes through impact investment theme funds in public and private equity as well as public and private debt. Triodos Bank is a founding member of the Global Alliance for Banking on Values Triodos Investment Management is a founding member of the Global Impact Investment Network.



Biodiversity and investment

Els Ankum-Griffioen: "One of our biggest impact investing funds is Triodos Groenfonds (Green Fund). The fund is active in the themes renewable energy, organic farming, nature and sustainable building. The projects are mainly located in the Netherlands, as the fund invests in projects that are certified as 'green' by the Dutch government. As a theme, organic agriculture is also an important part of our Triodos Organic Growth Fund (private equity). This fund provides mission-aligned capital to leading later-stage organic and sustainable consumer business across Europe and Triodos Sustainable Trade Fund (commodities), which aims to improve the economic position of farmers in developing countries and to encourage sustainable agriculture as an alternative to conventional, chemical-intensive agriculture."

Natural capital strategies

"Natural capital is actually part of all financing and investment decisions at Triodos Bank and Triodos Investment Management and part of our business principles. We respect the environment by doing all we can to create and encourage positive environmental impacts.

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From an investment point of view, in my experience private equity, private debt and listed equity are the best asset classes to enable acceptance of natural capital as an investment theme by professional investors. Conventional vehicles and structures, are very effective for investment (public-private) projects with a positive impact on the environment, such as organic farmers or wind and solar parks. Investing in publicly listed companies is also an option. Finding the companies with the right focus and criteria (positive selection) is reinforced by encouraging these companies to do more, through active engagement. We are transparent about the outcome of our engagement activities, and we are convinced that selecting a particular focus makes a difference versus an unfiltered, unscreened alternative in terms of financial and social/environmental return. By now it has become very clear that these goals can actually be successfully combined."



Collaboration for bees

Ted van den Bergh: "Stichting Triodos (Triodos Foundation) was founded in 1971 and is a marketplace where gift-money finds it's way to sustainable, innovative projects and impactful social initiatives. We distinguish three working areas: Nature and Environment, People and Society and International Cooperation. Within these areas we focus on the themes of organic farming and healthy food, fertile/living soils, animal welfare, renewable energy, arts and culture, education, integrative medicine, poverty alleviation, emancipation and solidarity with people in developing countries, to name a few.

"More cooperation will take place, with other banks, business, NGO's, science and governments"

Biodiversity is vital and we see bees as indicators of biodiversity. With our donations we raise social awareness around food and about the dangers of chemicals in the environment.

Neonicotinoides, for example, applied on seeds find their way into leaves, flowers and pollen. Some 90% of the applied neonicotinoids leaks into the soil and groundwater, and it takes years before it loses its toxicity. For insects neonics can be 7000 times more toxic than DDT. Therefore we support a bee and butterfly sanctuary on an estate near Dronten together with Green Organics, distributor of organically grown vegetables. We supported Natuur & Milieu, KPN and NCB to launch the "Bijensafari"-app (Android/Apple) to help people recognize bees and stimulate them to create a bee-friendly environment."

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EPILOGUE



To accelerate the green transition in finance, facilitation of the Community of Practice Financial Institutions and Natural Capital connected evolving practices to build knowledge. In doing so it paved a road for ecosystems based investment strategies and coalitions. We would like to thank all participants for their openness and trust, for it is the only way to make a CoP like this a success. We would also like to thank their organisations for the room they provided to learn from one another and to accelerate the learning process. Our thanks also goes to the participants for making it possible to publish this document. A special thank you for the members that commented on an earlier version of the text: Maxime Molenaar (ACTIAM), Martin Lok (Ministry Economic Affairs) also for his pro-active support and thoughtful contribution to the community continuously linking its activities to (international) policy arena's, Frank Wagemans (VBDO), Maarten Vleeschhouwer (DNB), Jeroen Loots and Irene de Jong (ASN Bank) and for Mariya Soshinskaya (FMO) improving the summaries of each meeting.

During the CoP meeting a variety of guests came to inspire the group with their vision, experience and knowledge. Others helped the group with reflections or other support. We would like to thank all speakers, hosts and participants that participated once or twice, mentioned on the next page. A group of people working in the context of CoP FINC met two times to reflect on the green transition in finance. Our thanks goes out to the members of this sounding board.

The Community of Practice was made possible by the Netherlands Enterprise Agency (RVO.nl), DuurzaamDoor and the Ministry of Economic Affairs. We would like to thank them for the interest and support of CoP FINC. Ireen de Nijs (RVO.nl) for all her help during the first two years of CoP FINC, Liselotte Dijksma (RVO.nl) for the advice and communication support and Inge Mijnheer (AMBOR creatie) for helping to finalize this publication with great care. We would like to thank Joyce Velu for her initial contributions to the stories from practice. Also, during the process interns Nierika Hamaekers, Nela Gomez and Madeleine den Hartog were a big help.

We hope that the insights that emerged from CoP FINC via the participants and this publication will continue to inspire and accelerate the transition towards 'Finance for One Planet'.

Caroline van Leenders (Netherlands Enterprise Agency)
Anne-Marie Bor (AMBOR creatie)





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ABBREVIATIONS

ANK

Atlas Natural Capital **CBD** Convention on Biological Diversity CE Circular Economy Community of Practice Financial Institutions and **CoP FINC** Natural Capital CoP B&B Community of Practice Business and Biodiversity DG Directorate-General **DNB Dutch Central Bank** EP&L **Environmental Profit and Loss** ES **Ecosystem Services ESG** Environmental, Social and Governance FI Financial Institution **GCP** Global Canopy Programme **GHG** Greenhouse gas **Global Impact Investing Network GIIN Global Reporting Initiative** GRI **IFC International Finance Corporation IPCC** Intergovernmental Panel on Climate Change International Union for Conservation of Nature **IUCN** LCA Life Cycle Assessment NCC **Natural Capital Coalition** NCD **Natural Capital Declaration NCP Natural Capital Protocol** NGO Non Governmental Organisation OPT One Planet Thinking Netherlands Environmental Assessment Agency **PBL**

PCAF Platform Carbon Accounting Financials PES Payment for Ecosystem Services PRI Principles for Responsible Investment REDD Reducing Emissions from Deforestation and forest Degradation Sustainable Development Goal SDG **SFL** Sustainable Finance Lab **TEEB** The Economics of Ecosystems and Biodiversity United Nations Environment Programme **UNEP** United Nations Environment Programme Finance **UNEP FI** Initiative United Nations Principles for Responsible Investment **UN PRI VBDO** Dutch Association of Investors for Sustainable Development Wealth Accounting and the Valuation of Ecosystem **WAVES** Services World Business Council for Sustainable Development **WBCSD WWF** World Wildlife Fund WRI World Resources Institute

For more information on Natural Capital related terminology, please see the Natural Capital Protocol glossary (p.122).

For more information on terminology of the financial sector, please see the Natural Capital Guide of VBDO and CREM.

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CoP Financial Institutions and Natural Capital

