NATURAL CAPITAL

Together with Platform BEE, more than fifty Dutch companies have initiated natural capital projects. In and around the company buildings, through the supply chains and by investing in natural landscapes. In doing so, they ensure their businesses are future-proof.

What is natural capital?

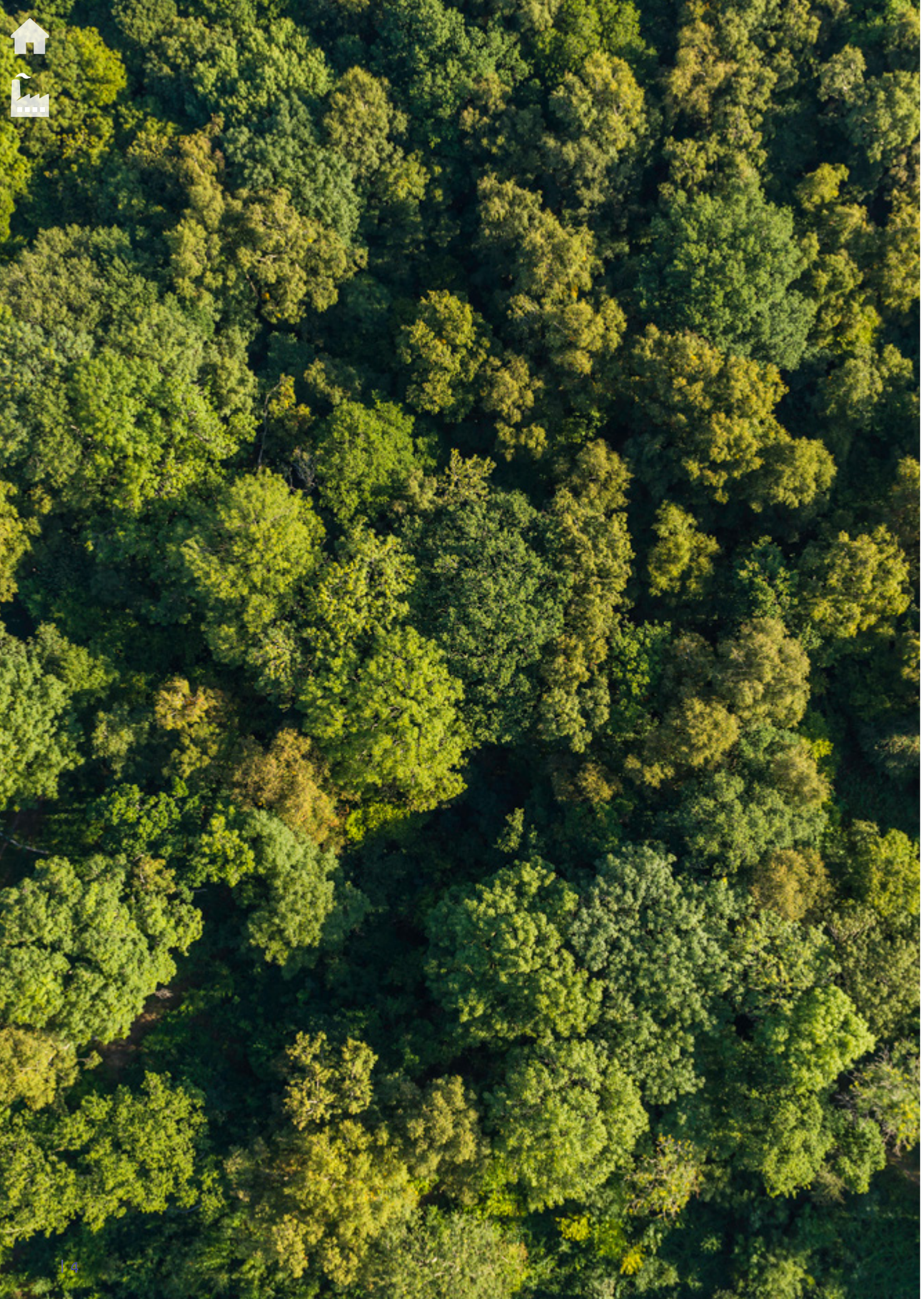
Natural capital is the stock of natural resources, such as plants, animals, water, soil and minerals. Together they provide goods and services that form the basis of our economy and our well-being.

Our planet's ability to deliver these goods and services is large, but not unlimited. Supplies of minerals and fossil fuels can run out, plant and animal species can become extinct. The ecosystems in which plants and animals live can disappear or be degraded.

It is important to protect our natural capital, particularly the living nature that makes our planet so unique. Use of natural capital is only sustainable if nature in all its diversity (biodiversity) is not further damaged, but has a chance to recover. Only then can its capacity to deliver goods and services be maintained and can we live off the *interest* of the capital.

Our global economy does not yet work this way. Only goods which are traded directly, such as caught fish, are seen to have economic value. The costs of a weakened marine ecosystem, for example due to overfishing, pollution and climate change, are not taken into account. We are therefore depleting the capital, causing the interest to decline, certainly in the long run.

Content



Foreword

Twenty years ago, when I was living in the Philippines, I was chairman of a foundation that worked to protect the Philippine eagle, a critically endangered species. One of the world's largest eagles, it is a fantastically beautiful animal. Such an experience moves the heart even of a down-to-earth businessman.

Each of us has such a memorable experience. We know we have to take care of nature, but we still sometimes see it as 'separate' from us. Yet natural capital forms the foundation of our economy. We cultivate crops that grow in healthy soil. We use water in all production processes – in our factories or through the raw materials we purchase. Our clothes, houses, cars, roads: nothing is made without natural capital.

The good thing about natural capital is that it has the capacity to regenerate. We can cut down trees and new ones grow back. We catch fish and the sea replenishes the stocks. But there are limits. Scientists give us clear warnings: we are exceeding our 'planetary boundaries'. This carries great risks.

As entrepreneurs we tend to dislike limitations. What do you mean, boundaries? The sky's the limit! The good thing is: in a circular economy we give nature the space it needs to regenerate. That way, we can make full use of our innovative strength and sense of enterprise. Create value and retain natural capital. The boundaries of our planet only confine us if we continue working in a linear way.

Ten years ago, with seventy leaders from the private sector, we sent a letter about the value of nature to the informateur (the person overseeing the formation of a new cabinet). A task force was set up, which provided recommendations to the Dutch government. This led to the formation of the Platform for Biodiversity, Ecosystems and Economy. Over the last five years, with the support of the Ministry of Economic Affairs, the Confederation of Netherlands Industry and Employers (VNO-NCW) and IUCN NL, more than fifty Dutch companies have initiated natural capital projects.

So how does a company invest in natural capital? By getting started. This brochure shows how entrepeneurs rolled up their sleeves and got to work. A farmer, investing in healthy soils. A designer, working with alternative raw materials. A logistics manager, designing a smarter process which saves both money and natural resources.

This is only the beginning. More is needed and can be achieved if we work together.
In circular economy in which natural capital is preserved. I wish you plenty of inspiration!

Rein Willems

Chairman of the Dutch Platform for Biodiversity, Ecosystems and Economy (Platform BEE)

Five ways to invest in natural capital

in and around the company

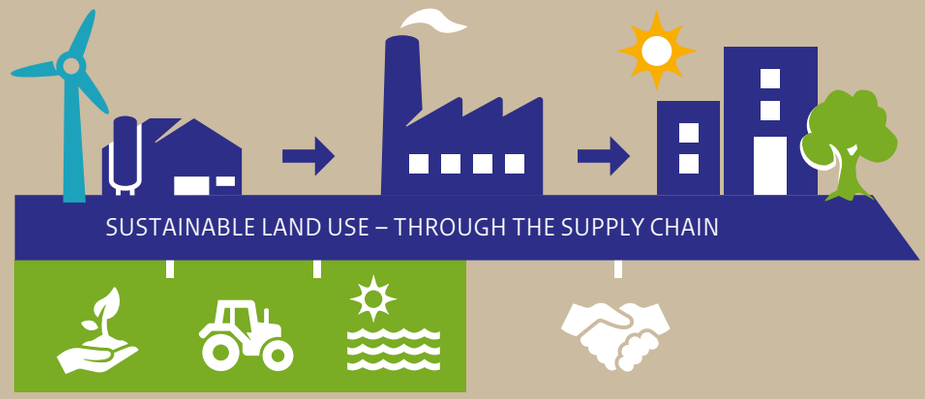
natural capital

through the supply chain

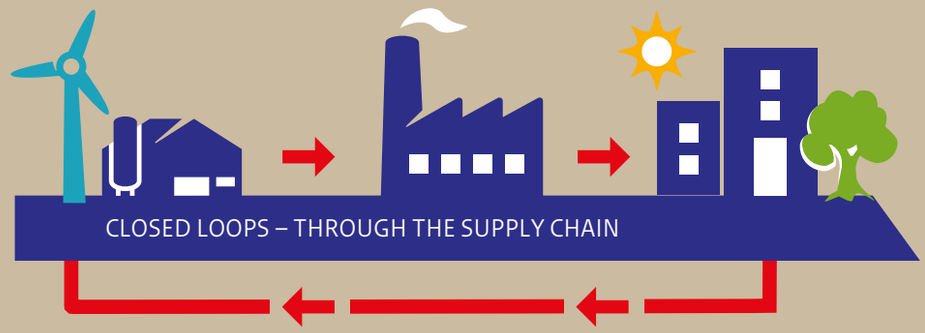
conservation and restoration elsewhere

Page 14 – 23 Sustainable building, sustainable land, water and energy use. Healthy soils, working together in the broader landscape.

Page 54– 59 Investing in nature, without a direct link to the supply chain. For the company profile, or as compensation for impacts elsewhere.

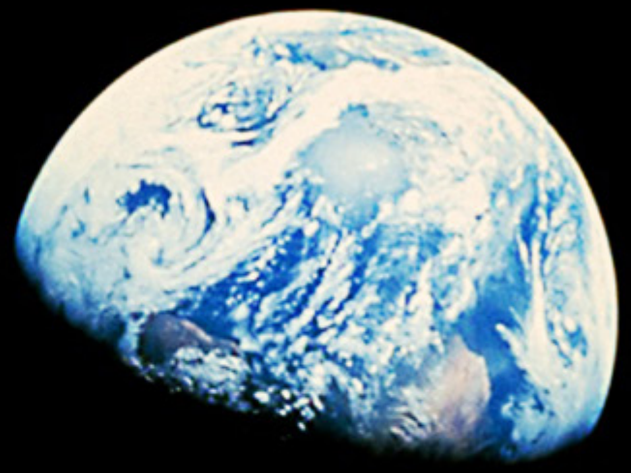


Page 24 – 35 Conscious procurement of raw materials. With suppliers and primary producers encourage sustainable land, water and energy use.



Page 36 – 43 Circular design, production and waste management – thereby closing loops. Waste becomes food.

Page 44 – 53 Which materials combine the right characteristics with the lowest land, water and energy use?



“Everyone can make a contribution by making better choices in how we govern, produce and consume. The future of the planet is in our hands.”

André Kuipers
Astronaut and ambassador WWF Netherlands

Apollo 8 view of Earth rising above lunar horizon (W. Anders, NASA)

Blue planet

In 1968, Apollo 8 went to the Moon.
An incredibly exciting adventure, with all attention focused on the Moon. Until astronaut William Anders turned his camera around and aimed it at the Earth. For the first time we could see our entire planet from space. That famous image is called Earthrise.

Astronauts return to Earth with the image of our blue planet emblazoned on their memories. They find it hard to express how beautiful, but also how vulnerable our planet looks from space. This was later called the Overview Effect. Dutch astronauts have experienced this too. The late Wubbo Ockels called for more respect for Spaceship Earth. And on his return from space, André Kuipers became ambassador for WNF, the Dutch branch of the World Wide Fund for Nature.

If we go outside on a sunny day, the blue sky gives us the feeling that there is no limit to the Earth and its atmosphere.
But our planet does have boundaries.

Vulnerable planet

Currently, we are using up more natural capital each year than the planet can regenerate. The Global Footprint Network concluded that in 2016 we had already reached 'Global Overshoot Day' on 8 August. Another year with net loss of nature. Each year we move deeper 'into the red' in terms of natural capital.

Recent research confirms that we are exceeding the limits of our system. In 2015 an article on Planetary Boundaries was published in Science, in which scientists describe critical processes for Planet Earth. Every process has a boundary, beyond which the system shifts out of balance. If we remain within these boundaries we are in the Safe Operating Space.

Climate change is perhaps the most well-known, and justifiably so. But researchers at the Stockholm Resilience Center emphasise that this is only one of the critical processes.

The image shows that for four of the nine processes, we have already overshot the boundaries of the (green) Safe Operating Space. Along with climate change these are biodiversity loss, land use change and the phosphorous and nitrogen cycles. For chemical pollution and atmospheric aerosol loading, scientists have not yet quantified the boundaries. The diagram shows just the current state of affairs, but in almost all cases the trends are strongly negative. Problems with freshwater and with ocean acidification are on the rise. Sooner or later we are all going to experience the consequences of this.

Other sources confirm the strongly negative picture. The latest Living Planet Index of WWF shows a 58% average decline in populations of thousands of animal species between 1970 and 2012. The strongest decline is seen in freshwater areas. Recent research on the Great Barrier Reef shows that large parts of this world-famous coral area have suffered huge deterioration in a short time. In view of the steadily warming oceans, it is doubtful whether the reef can recover in the coming years. And although the speed at which natural woods and forests are disappearing has slowed since the 1990s, another 16.5 million hectares of forest were lost in the period 2010–2015 (FAO, 2015). That is almost four times the total area of the Netherlands.

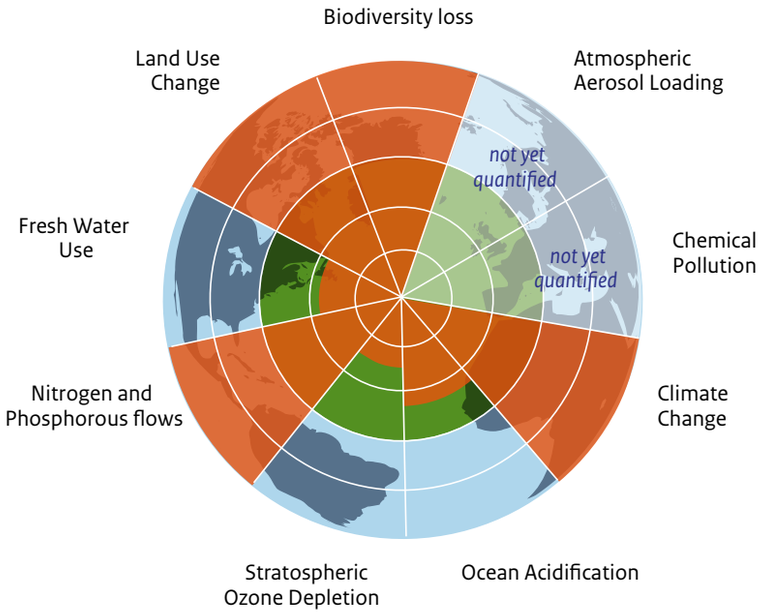
A gradual recovery of the ozone layer is the only issue showing a positive trend. A glimmer of hope - if all countries work together, we really can reverse negative trends.

One Planet Thinking

As Rein Willems already mentioned in the foreword: entrepreneurs generally do not like limitations. But these limitations, these boundaries, are non-negotiable. There is no point in thinking outside these bounderies. There is simply no room to operate there.
IUCN NL (a partner in the BEE platform) and WWF call this 'One Planet Thinking'. Within the boundaries of our planet there is endless space for innovation and creativity.

Since 1968, our global population has more than doubled (from 3.5 billion to 7.5 billion) and it continues to grow. We can only provide all these people with food, water and a safe living environment if we make more efficient use of natural resources.

Over the last five years, more than fifty companies initiated projects with platform BEE. On the following pages, you can see how, each in their own way, they invested in natural capital.



Working with natural capital

Every company is dependent on natural capital. And every company has impact on natural capital – in and around the company itself and through the supply chain. From water to energy used and the land on which the building stands, to all supply chains of raw materials and products purchased. The output side also has an impact. Transport, packaging, waste – all of these things can use, protect or damage natural capital.

This brochure shows you how more than 50 companies – mostly SMEs – have started natural capital projects with Platform BEE.

The projects in this brochure are organised as follows:
Natural capital – in and around the company itself
Natural capital – through the supply chain
- Sustainable land use
- Closed loops
- Alternative raw materials

Natural capital –restoration and preservation elsewhere

These projects focus on taking action. Measuring, planning, evaluating and reporting are essential to ensure you stay on track. But as all entrepreneurs know, real change requires action.

natural capital

in and around the company itself

The most direct way to invest in natural capital, is by looking at your own company buildings and the ground you own or have concessions to. For farmers, this is their daily work, but it also applies to factories, harbours, office buildings etc.

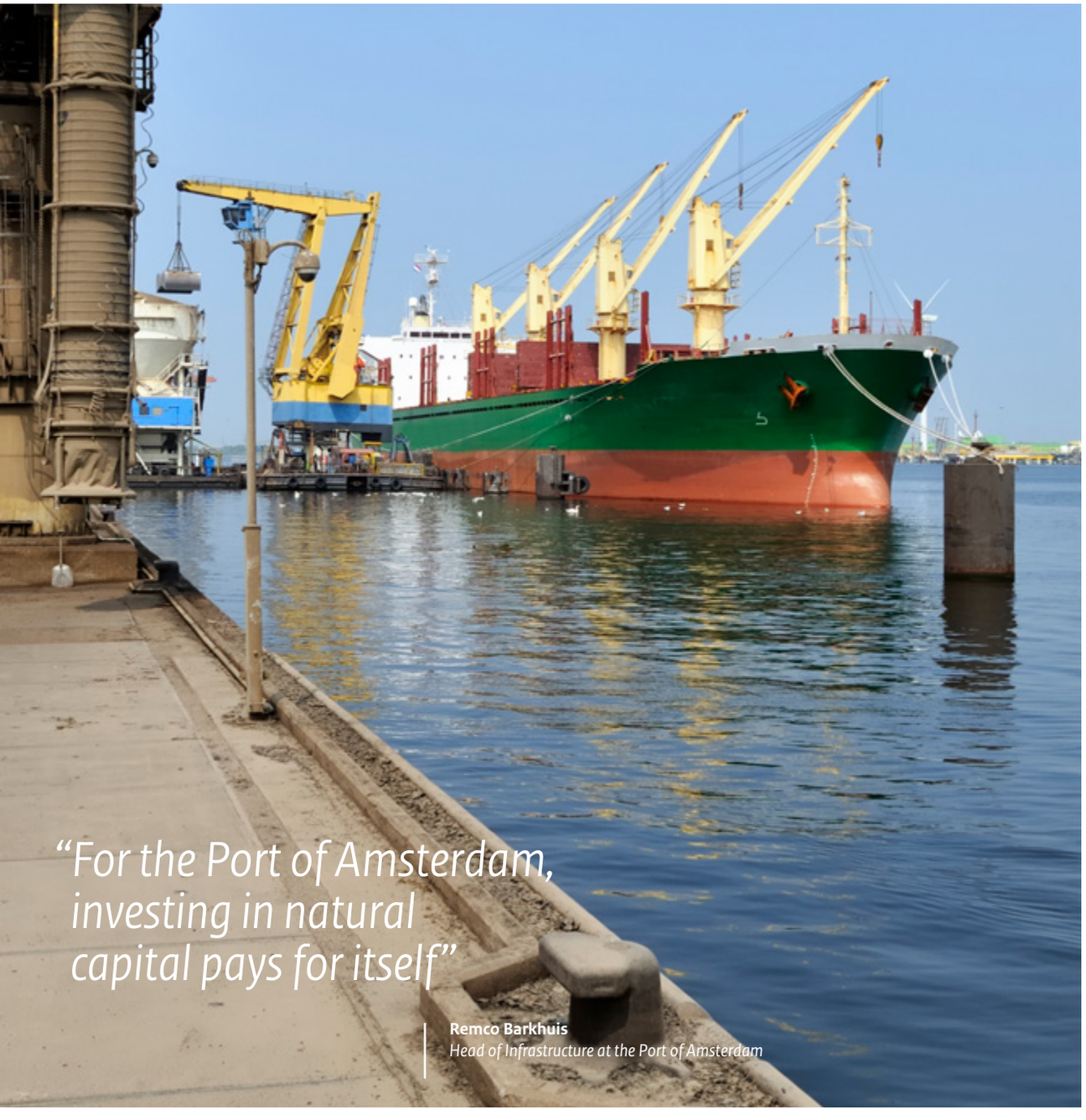
In the report Human Spaces, professor Cooper concludes that a natural working environment is a good investment in the health, well-being and performance of employees. The Port of Amsterdam recognises this and is actively working to make the port area greener.

Florist Oogenlust knows that not everything green is equally natural. When the company took over an undeveloped area next to a nature reserve, they dug up the exotic plants and planted native oak and beech trees.

Mining companies have large concessions. Their excavation carries risks, but also offers opportunities for nature restoration, after the materials are extracted.

Every entrepreneur can start working on natural capital on and around their own company site. It starts with looking at the company's floor plan and a map of the region. Then one can think in concentric circles: the building itself, the land used and the broader landscape. Looking for ways to reuse silt taken from the harbour, Groningen Seaports found a local solution by using the silt to enrich farmland soils in the area.

Natural capital is everywhere. Even in the Amsterdam business district 'de Zuidas', a peregrine falcon lays its eggs high up on the ABN AMRO building each year.



Green harbour

More green spaces create an attractive port area. The Port of Amsterdam has made natural capital part of its business strategy, based on a clear economic rationale: ‘We want companies to establish their business premises in the port area, and be able to find staff easily. A pleasant, green environment helps with this.’

Throughout the Port of Amsterdam, one can find green spaces. With the support of Platform BEE and IUCN NL, the port has developed its own nature policy, with the aim of becoming one of the most sustainable ports in Europe.

The Port of Amsterdam is creating ecological corridors along the banks of ditches that are used for drainage in the area. This is just one of many nature projects taking place in the port area.

Not a luxury

Remco Barkhuis is Head of Infrastructure at the privatised company, formerly a municipal service of the City of Amsterdam. Is it easy for him to get everyone within the company on board with the idea of greening the port area? After all, land is scarce and expensive, with one square metre of port land going for as much as 200 euros.

‘That’s right’, says Barkhuis. ‘That’s why we take great care to ensure that our biodiversity policy isn’t just a luxury which new management could easily cancel.’

Remco Barkhuis, pictured at one of the newly established green spaces in the Port of Amsterdam.

Wadden Sea silt improves farmland

Saline silt from the Wadden Sea contributes to greater soil fertility and better crop yields and makes the land less susceptible to wind erosion. These are the findings from a pilot project undertaken among farmers in the Veenkoloniën region, a formerly swampy region in northern Netherlands named after the peat colonies that existed there.

The project was triggered by a question that Groningen Seaports asked the Natural Capital Help Desk: do farmers accept silt on their land? The positive results of the pilot project, involving ten Veenkoloniën farmers, have provided sufficient grounds for a follow-up project, which will look into the long-term effects.

The tidal current deposits silt in the port, making dredging necessary. The clean silt that is dredged up during this process is normally released in the Wadden Sea and the Ems estuary. However, this is not an ideal solution: silt makes the waters murky, which sets off a negative chain reaction among aquatic life.

Beetroot

Clay particles in the dredged silt contribute to soil fertility. Because the silt is saline, researchers looked for crops with a natural tolerance for salt, such as Beta vulgaris (beet). Research has shown that the fertility of the participating farmers' land has increased. The silt increases the soil's capacity to retain and release minerals. The beet and grass yields seem to be higher when silt from the Wadden Sea is used.

Groningen Seaports has developed a plan for a follow-up project. Monique van den Dungen, Government & Environment Advisor at Groningen Seaports: 'We want to discover where to find the best silt for agricultural use. It may well be that this varies from one season to the next, as silt deposition is a natural process. We will also be doing research into the effects of using the silt, the maximum yield of silt that can be obtained, and the effect of mixing silt and compost.'

Once the silt from the Wadden Sea has been dredged from the port, researchers take samples to determine the salt and clay content. Following this, the clean, saline silt is spread on poor, sandy soil in the Veenkoloniën region. The arable farmers are very pleased with the results.

“Nature conservation and running a profitable business can go hand in hand”

Marcel van Dijk
CEO Oogenlust

Good neighbour to nature

Oogenlust moved all its business activities to a derelict site right next to a nature reserve, with the aim of restoring biodiversity in the area.

With a team of forty employees, Oogenlust can rightly be called a major florist. The company in the province of North Brabant provides flower arrangements for events in many countries. Due to the company’s steady growth, they soon needed more business space. Following negotiations with the municipality of Eersel, the company moved all its activities to a wasteland area on the edge of the De Kempen nature reserve.

Visitors

Oogenlust returned the site to its original state wherever possible. Native trees such as oaks and beeches were planted, while exotic species were removed. The construction of footpaths and regular land art exhibitions bring tens of thousands of visitors (and potential customers) to the estate every year. With the support of Platform BEE, Oogenlust also made its business operations more sustainable.

Focusing on sustainability is something you do because it’s part of your vision, according to CEO Marcel van Dijk. ‘Economic returns aren’t the primary reason.’ Of course, things like waste separation, composting and insulation also bring financial gains. But in the short run, that doesn’t weigh up against the labour and investments required. ‘Involve your staff in the process’, is Van Dijk’s advice for other companies. ‘They have to be willing to go the extra mile.’

The old company building was taken down and then rebuilt in the new location.

Other cases

“The wild bees, for one, clearly love it.”

Djûke van der Maat
Nieuw Slagmaat

De Bierkreek

Ladybugs to the rescue

De Bierkreek, the only certified organic garden-rose nursery in the Netherlands, already knew their approach was successful – but they didn’t have the facts and figures to demonstrate why. Research filled that gap. The findings are intended to convince other growers to also adjust their nurseries, in order to attract parasitoid wasps and ladybugs as part of natural pest management.

Ecomunitypark

Business park of the future

Former farmland in Oosterwolde, in the Dutch province of Friesland, is becoming the site of an ecological working landscape. Innovation, entrepreneurship and sharing knowledge and facilities come together in this landscape. It will be home to a communal restaurant and conference spaces. ECOstyle’s head office and warehouse was the first to be completed, soon to be joined by other businesses and educational institutes. Ecomunitypark aims to become the first business park with a positive impact on natural capital.

Nieuw Slagmaat

More greenery in orchards

For some time now people have been experimenting with green borders surrounding agricultural crops. Fruit grower Djûke van der Maat wondered whether it would be possible to do the same thing in orchards. And would it be possible in a way that is economically viable? It turned out little was known about this way of greening orchards. With a few colleagues who ‘are also willing to stick out their necks’, she set to work. ‘The wild bees, for one, clearly love it.’

Boer Bos

Organic farming and coaching

The farm as a source of inspiration for growth and development through learning programmes: after a career in journalism and communications, Paul Bos took over his parents’ farm. Now he combines the worlds of farmer and coach/advisor. Boer Bos (‘Farmer Bos’) has his own sheep herd, sells lamb and wool, and offers nature education for schoolchildren.

ENCI

Restoration after mining

In 2018, after 92 years, ENCI will permanently cease its limestone mining operations near Mount Saint Peter in Maastricht for the production of cement. Since several years the mining operations are entirely dedicated to the transformation of the 135-hectare limestone quarry. Part of it is earmarked for recreation, the rest will become a nature reserve. ‘It will become a unique part of Dutch nature.’

Van den Diepstraten

Quiet electric boats

De Biesbosch National Park is becoming increasingly popular among tourists, with some negative consequences for the environment. Boat rental companies Van den Diepstraten Botenverhuur, Rondvaartbedrijf Zilvermeeuw and Biesbosch Adventures each developed a new company strategy aimed at a cleaner Biesbosch and improved natural environment. Electric rental and tour boats are helping to bring this about. The companies are hoping their sustainable approach will appeal to a wider public, strengthening the commercial perspective.

natural capital through the supply chain

If you look at the origin of the raw materials for everything you buy, you'll see connections running all over the globe. Even the coffee you serve will likely take you to Brazil and Vietnam. And you buy much more, of course: paper, computers and all raw materials and equipment you need in order to make your product. All these purchased materials have an impact on natural capital elsewhere. Land and water use, greenhouse gas emissions from transport and manufacturing, mining, waste processing.

Among the companies that collaborated with Platform BEE, one question kept coming up: where is our footprint the biggest? Where in my supply chain can I make the biggest difference?

Researchers commissioned by Platform BEE conducted analyses using sophisticated models such as Globio and ReCiPe. They considered a company's total impact in the current situation, and the potential biodiversity gains in an alternative scenario.
Desso (a Tarkett company) was the pioneer, followed by Better Future Factory, Coolrec, Foreco, Moyee Coffee, Natuurbegraven Nederland, Natural Plastics, Schut Papier and VolkerWessels.

There are countless ways to reduce impact through the supply chain. By collaborating with manufacturers in the field to increase the sustainability of production on-site. By closing the loops and recycling materials. Or by using an alternative raw material with a smaller footprint.

The following pages contain examples of companies that have started working on natural capital through the supply chain. If your company wants to do the same, but you are not sure where in the supply chain you can make the biggest difference, you can find more information at www.naturalcaptains.nl .

natural capital

through the supply chain – sustainable land use

One way to invest in natural capital through the supply chain is by encouraging the primary supplier (farmers, fishermen) to produce more sustainably. This way, they can help prevent deforestation and overfishing. Encourage more efficient use of water and soil improvement. Let natural pest control mechanisms replace harmful pesticides.

The first companies to encourage sustainable land use through the chain were large multinationals. They became aware of their dependency on natural capital. In the 1990s, Unilever concluded that overfishing was a growing business risk. That's why in 1997, together with WWF they created MSC, the label for sustainably caught fish. In 2004 they were one of the founders of RSPO, the quality mark for sustainable palm oil.
In the Netherlands, IDH, the Sustainable Trade Initiative was founded in 2010. The organisation forms public-private partnerships to make supply chains and production landscapes more sustainable.

SME entrepreneurs can also have a big impact on sustainable land use via the supply chain. To do so, collaboration with suppliers is key. Moyee sells coffee with respect for both social and natural capital. They aim to give farmers a fair price, and ensure that coffee plantations do not lead to deforestation. Suiker Unie, which has a shorter chain, uses the same principle: collaborating with suppliers to achieve more sustainable land use, with the knowledge that healthy soil is an investment in the future.

Besides agriculture, there are other sectors with a direct impact on land use, such as road builders. The chain of developer Heijmans is short, as they work with Rijkswaterstaat on road expansion of the widening of the A12. Together they actively sought cooperation with nature organizations. The goal: a net positive on nature.

Healthy soil benefits beet

Suiker Unie wants all the sugar-beet farmers that are part of its cooperative to actively protect soil fertility, and use pesticides that are less harmful to the environment. The natural environment, the farmers and the company all stand to benefit from this. Increasingly, customers ask Suiker Unie about the origin of the products they are purchasing.

The cultivation of sugar beets represents an important agricultural sector for the Netherlands. More than 9,000 farmers supply sugar beets to Suiker Unie (part of the Royal Cosun cooperative) every year. 'We are constantly looking to improve crop production. In our view, sustainability is an inextricable part of this', says Jurriaan Visser, Agricultural Affairs Project Manager at Suiker Unie.

Farmland life

Suiker Unie wants to move towards methods of sugar-beet cultivation that have a positive impact on biodiversity. Incidentally, the company avoids using this term, as it is too unclear for farmers. Instead, Suiker Unie consistently talks about 'farmland life'.

In consultation with the beet farmers (and with the support of Platform BEE) Suiker Unie's advisors have identified ten measures which benefit both farmers and the natural environment. This include the use of less harmful pesticides and useful insects, as well as the reduction of ground pressure from agricultural machinery (heavy machines press down on the soil, which is harmful to soil life and creates drainage problems).

At site visits, the sugar-beet farmers are told what they can do to promote healthier soil.

To promote the implementation of the Farmland Life Plan, Suiker Unie has developed an interactive website, which takes farmers through the different seasons, explaining the potential measures they can implement and what the benefits are, for them and for the natural environment (in an informal way, in Dutch).

Green manure is another item on the list. Visser: 'You can improve soil fertility by sowing green manure crops prior to planting, and then sowing the beets directly into these plant remains in the springtime.' During site visits, the farmers together with the advisors from Suiker Unie decide which measures are most suitable in their situation.

Bonus

The Farmland Life Plan makes up part of the crop registration and advice programme that Suiker Unie farmers work with. Some 20% of them participate on a voluntary basis. Visser: 'We are incentivising farmers in all sorts of ways. For example, we give them a €250 bonus when they sign up. But we want all of them to be on board by 2018.'

Business case for climate-positive coffee

Moyee contributes to a coffee production chain that also benefits the local population. What's more, this young company is also committed to increasing ecological sustainability.

'FairChain' is how Moyee has dubbed its own method, aimed at sharing as much as possible of the added value that coffee provides with the local economy. Instead of exporting green unroasted beans – as is the usual practice in the coffee trade – Moyee roasts the beans locally. Last year, the company opened a professional roasting plant in Ethiopia. 'We're finding ourselves faced with all sorts of logistical and legal challenges', says Impact Officer Mark Kauw, 'but it's clear even at this early stage just how much of a difference it's making over there.' To date, the roasting plant has created 22 new jobs.

Deforestation

Before the end of this year, Moyee is rolling out training programmes for the coffee farmers. The objectives are to increase quality and yields, strengthen ecological values and prevent deforestation. The next step is to establish a model farm. 'We want to purchase 1,200 acres [500 ha] of degraded land on which to start a coffee plantation. We are currently developing the business case in order to attract investors. The project should result in the cultivation of climate-positive coffee.'

The Dutch drink more coffee per person than any other country, but the coffee plant grows best in the tropics.

"We're proud of the impact we already have, but we're also still in the development phase"

Mark Kauw
Impact Officer at Moyee

Some of the captured reptiles were photographed before they were released into the new nature area. This makes it possible to investigate the impact of the measures related to nature.

More highway, more nature

The A12 intersects the Veluwe, a Natura 2000 site. Dutch contractor Heijmans made building with nature a reality in a road expansion project.

Hundreds of sand lizards and dozens of slow worms, viviparous lizards and smooth snakes. Since the spring of 2015, these reptile species have a new, viable habitat. Wildlife passages ensure that bats and badgers are able to safely traverse the area. Additional facilities were put in place for pine martens: two new traffic gantries over the highway have been equipped with walking gutters.

The A12 is the oldest highway in the Netherlands, and an important link between the east and west of the country. An 11-kilometre section in the Veluwe was widened from 2x2 to 2x3 lanes. The road restricts movement for many animals, and the verges are habitats for all kinds of reptiles. As a result of the widening, 22 acres [9 ha] of reptile habitat were lost. However, Heijmans’ nature-inclusive approach supplied 100 acres [40 ha] of new habitat. The verges now connect previously isolated heathland areas.

Long term planning

Nature was a key consideration in the tender process. Rijkswaterstaat, responsible for the main infrastructure facilities in the Netherlands, challenged the candidates to limit environmental degradation to a minimum. Together with regional stakeholders, it drafted a wish list. The manner in which interested companies tackled this wish list was considered in the contracting of the road expansion.
Heijmans really went the extra mile to do more than just minimise damage, says Jan Willem Burgmans, Landscape & Ecology Team Leader. ‘We wanted to improve the natural area along the highway and expand the habitat of the threatened species.’ From the very start Heijmans worked with specialist bodies and nature organisations. Due to the scope of the measures, cooperation from other land owners was needed. For this reason a covenant was drawn up.

Heijmans will remain in charge of the management of road and green space until 2032. Burgmans: ‘Until then, we will monitor the impact on the area’s flora and fauna, to gain insight into the effectiveness of measures taken. Where necessary, we can make adjustments immediately.’

Other cases

Æ – Food Forestry Development

Food forests: regenerative agriculture

According to Xavier San Giorgi, food forests are a viable ecological addition to traditional and city agriculture. San Giorgi has designed, planted and now manages a number of food forests: in the Randstad, in the province of Utrecht, in Amsterdam, and at Wageningen University.
He currently works as Urban Greener for the Floriade 2022 and is developing a 15-hectare city food forest.

ASN Bank

Contributing to natural capital by providing financing

The ASN Bank is the first bank to have the ambition of becoming fully climate-neutral with all their investments. The bank wondered if it would be possible to set a similar goal for biodiversity. This was the start of a search process, in which sharing knowledge with others in the financial sector and specialists is front and center.

Ben&Jerry's / Unilever

Happy farmers, happy soil

With the Caring Dairy programme, ice-cream manufacturer Ben & Jerry's (of Unilever) supports happy farmers, happy cows and a happy earth. While the company's roots are in Vermont, many Ben & Jerry's cows can be found in Dutch pastures. Caring Dairy works with dairy cooperative CONO and its 225 dairy farmers.

Cocoanect

Time for green cocoa farming

Over the past decades, the increase in cocoa plantations in West Africa has led to large-scale deforestation. The young trading company Cocoanect is trying to help reverse this trend. It works directly with small-scale farmers, developing reforestation projects on the plantations and introducing fuel-efficient small cooking stoves for villages to reduces wood consumption.

Flower trader Weerman

Greener flowers

A compelling story for florists to inform consumers about the environmental impact of cut flowers. Weerman cooperates with florist Oogenlust and others to achieve this. Weerman is one of the largest flower traders in the country, based on the FloraHolland flower auction in Aalsmeer.
"Consumers are not yet asking for sustainably grown flowers, which means florists do not ask traders. That has to change."

Flowserve

Fish-friendly pumps

Fish often do not survive their journey through pumping stations. They are struck by the blades or crushed. Flowserve Hengelo has developed a new type of impeller that makes it possible for fish to pass through virtually unhindered. Two pumping stations in the province of Friesland were the first to use the new impellers, which can also be incorporated into hundreds of pumps elsewhere in the country.

"Where in the cocoa chain can the biggest positive effect on natural capital be achieved?"

Tony's Chocolonely

FrieslandCampina

Biodiversity in dairy farming

How great is the impact of dairy farming on the natural environment? And can investing in natural capital be profitable for dairy farmers? In order to find out, FrieslandCampina developed a new measurement model, which it is currently testing. The WNF (the Dutch branch of the World Wide Fund for Nature) and Rabobank are partners in this project.

McCain

Biodiverse potato cultivation

Potato farming that is both sustainable and profitable – that is what the Dutch branch of French-fries manufacturer McCain wants to achieve for the farmers supplying its potatoes. Initially, it wasn't easy to convince the farmers, but gradually interest grew. The approach is currently being piloted in France, and has attracted attention at the corporate level.

Nordic Maize breeding

Field peas for soil fertility

Repeatedly growing maize in the same place depletes the soil. It's better to cultivate multiple crops simultaneously or in rotation. One of the best crops for intercropping is the field pea, but it is barely grown in the Netherlands. Nordic Maize breeding is developing new varieties which can cope with the Dutch winters.

Tony's Chocolonely

Looking for ways to reduce its ecological footprint

Tony's Chocolonely is a company with a mission: 100% slave-free chocolate. In a few years, eating a Tony's bar should also benefit the environment. Where in the cocoa chain can the biggest positive effect on natural capital be achieved? Tony's Chocolonely has commissioned ongoing research to find the answer to this question.

Van Oers

Fewer pesticides in vegetable cultivation in Africa

Vegetable supplier Van Oers United wants to make natural capital a priority in its business operations – first in Ethiopia, with its subsidiaries in Morocco and Senegal to follow suit later on. Van Oers' Ethiopian partner is now alternating vegetables with strips of coriander, buckwheat and sorghum. 'These buffer crops contain natural enemies of plant diseases, and as a result the company needs fewer pesticides', Sustainability Manager Maria Oliveira explains.

Verstegen Spices &Sauces

App for sustainable spices

What is the best way to encourage spice farmers to adopt more sustainable land use methods? The Natural Capital Help Desk looked into this question for the Rotterdam-based spice manufacturer Verstegen. This resulted in the idea of an app or game intended for farmers. Verstegen is currently exploring how producers of white pepper in Indonesia feel about this initiative.

natural capital

through the supply chain – closed loops

Increasingly, entrepeneurs consider more efficient production processes and reuse of waste, which saves raw materials.
Rendisk is one of the companies that has started working on this.
The company developed a food processor which restaurants can use to transform organic waste into soil conditioner. Ikea is currently testing the appliance.

Closing the loops in our food system is an important one. Especially in this sector, there is a lot to be gained. Roughly one-third of all food produced worldwide goes to waste. This is a huge waste of the natural capital invested in its production. Less food waste saves land, water and energy, which in turn is good for nature. There are many opportunities for entrepreneurs in this regard.

Another example is that of Industriewater Eerbeek. The company has been purifying water coming from paper mills for years. What is new is that now purified water and biogas is fed back into one of the factories, resulting in a huge win-win. The factory needs less water, less energy, fewer chemicals, ánd they save money.

Efficient use of materials also brings profits in the chemical and other production sectors. Many designers are finding inspiration in the circular economy and the Cradle to Cradle™ concept that's based on it.
The design phase in particular brings major opportunities. When an entrepreneur considers from the start how materials can be reused after a product has served its purpose, it is much easier to close the loops.

Food waste becomes soil conditioner

Using a new type of kitchen equipment, businesses and restaurants can convert their own organic food waste into soil conditioner. The Ikea Concept Center in Delft is testing the technology, which can contribute to reducing food waste worldwide.

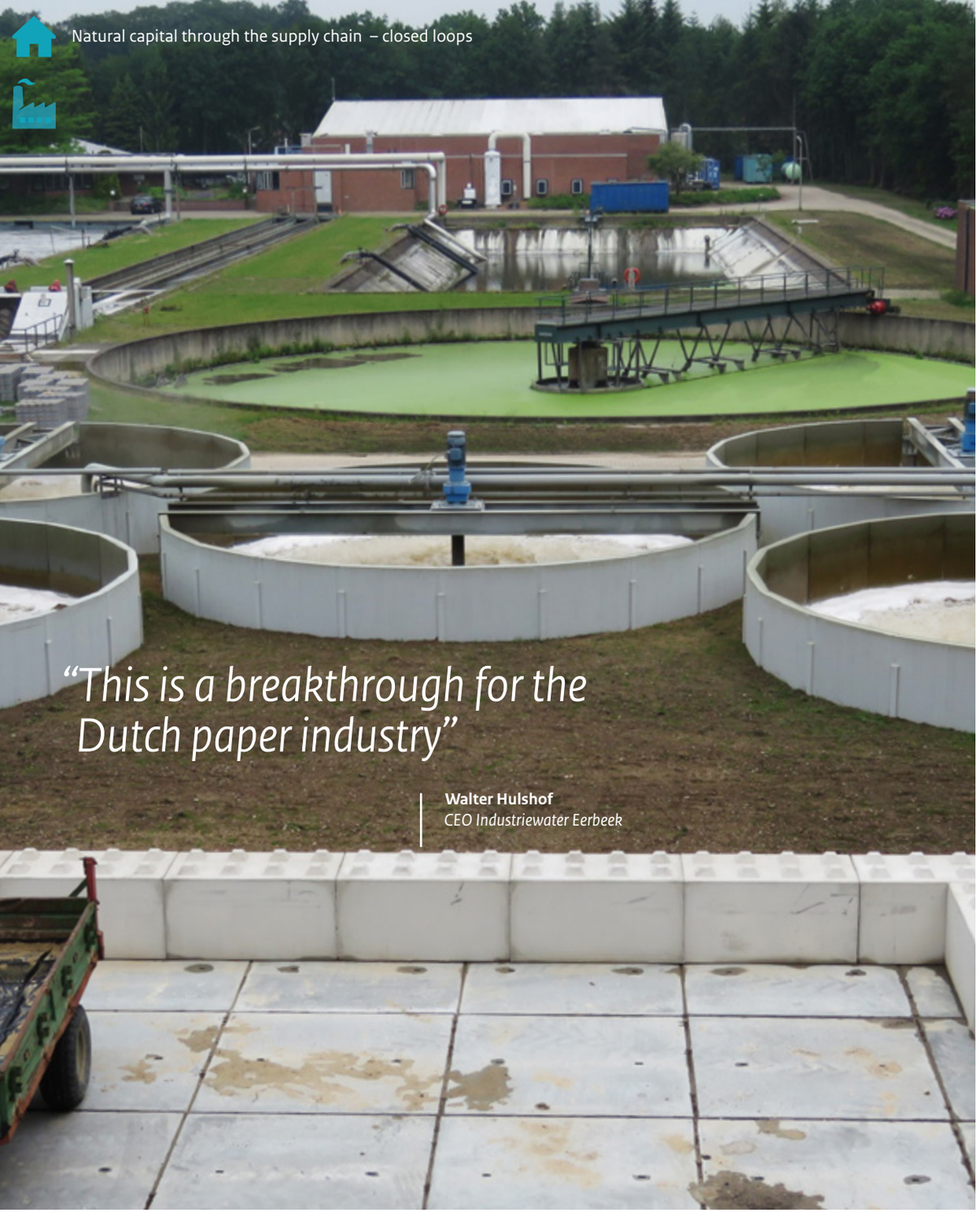
Huge quantities of food waste are dumped in landfills every year or incinerated as residual waste. With the support of the Platform BEE, Rendisk in Ruurlo has developed the Circular, a fully automated composting system which converts food waste into soil conditioner.

Ikea has been involved in the project from the start, and since October 2015 the prototype has been in operation at their branch in Delft, to the great satisfaction of all those involved. Every week 1000 kilograms of waste from the restaurant are processed into about 80 kilograms of soil conditioner. The decisive argument in the business case is the reduction in waste processing costs that can be achieved. But for Ikea, it is first and foremost about the principle, says Jan Jansen, Director of Operations at Rendisk.

If the pilot project in Delft is deemed successful, Ikea wants to promote the technology at other branches worldwide. In addition, a plan is in the works to offer the processed soil conditioner to customers in the form of compost. In addition to marketing the product to Ikea and restaurants, Rendisk also sees plenty of sales opportunities among customers it is already supplying with kitchen equipment, such as universities and large-scale hotels.

"Ikea wants to demonstrate to its customers that it is doing everything in its power to prevent waste"

Jan Jansen
Director of Operations at Rendisk



After years of experimentation, Industriewater Eerbeek has developed an affordable water softening technology which also produces sustainable pure lime (for which there is demand in the local agricultural sector). ‘With the traditional technologies you have to spend a fortune every year on chemicals such as lye,’ says CEO Hulshof. ‘We wanted to move away from that. Our new procedure makes this possible.’

Breakthrough in the paper industry

Industriewater Eerbeek feeds back water and biogas to a nearby paper factory. In doing so, the company is taking a major step towards circular production. DS Smith Paper De Hoop expects it will require 40% less groundwater. And having to pump less groundwater helps prevent drought in neighbouring natural areas.

As of the start of 2016, there are two three-kilometre pipelines running between the water purification company in Eerbeek and the DS Smith Paper De Hoop paper factory for the transportation of purified water and biogas. In addition, with the support of Platform BEE, Industriewater Eerbeek has invested in new technology for softening, filtering and disinfecting the treated wastewater. This has enabled the paper factory to substantially cut back on groundwater use. The new technology has also led to a reduction in carbon emissions (equivalent to the energy consumption of a thousand households) and strongly influenced the amount of process chemicals required.

Long-held wish

The reuse of purified water and biogas is a long-held wish come true. For fifty years Industriewater Eerbeek has been purifying the wastewater from three paper factories in Eerbeek, in the Dutch province of Gelderland, and discharging it into the river IJssel. The amount of wastewater generated by the three paper factories is comparable to the waste burden produced by a city the size of Utrecht. Industriewater Eerbeek thinks that, in the longer term, the new procedure will enable them to feed back almost 50% of this wastewater in a purified state. In addition to saving groundwater, DS Smith Paper De Hoop is also hoping to achieve savings in energy (it will also be supplied with warm water) and chemicals.

According to Walter Hulshof, CEO of Industriewater Eerbeek, the new water softening technology has wide applications in the paper industry and other industries in which lime forms an obstacle to the recycling of wastewater or process water. He hopes that one of the major players in the field of water purification will put it on the market. ‘We’re not going to sell water systems, that’s not our purpose. But developing this new technology fits perfectly with our ambition of being a pioneer in sustainable industrial water purification.’

Other cases

"With the building sector and consumers, we want to reduce the mountain of plastic waste."

Uptown

Auping

Fully circular by 2020

Bed manufacturer Auping wants all of its business processes, products and services to be fully sustainable by 2020 – including the full recycling of old mattresses. In order to achieve this, the company first needs to have a better idea of its ecological impact. Auping is currently planning this research. Not just exploratory: the company has committed to adjusting its business operations should the research give reason to.

Bureau Waardenburg

Mussel filter purifies wastewater

Mussels purify water. By filtering nutrients and poorly biodegradable organic compounds, they contribute to improved natural water quality. This creates opportunities. Following extensive testing with cultivated mussels in city ponds and sewage plants, environmental consultant Bureau Waardenburg is currently looking into large-scale applications. Water authorities, municipalities and businesses have already shown great interest in the mussel filters.

Coolrec

Old electronics also contain natural capital

Coolrec, a subsidiary of Van Gansewinkel, is an enthusiastic ambassador for the circular economy. However, the revenue model for high-grade recycling of electronic devices is still in its infancy. The value of used goods does not pay itself back yet. Working with the Netherlands Organisation for Applied Scientific Research (TNO), Coolrec is designing a study into the natural capital value of old electronics to map this and raise awareness.

Green Filmmaking

Sustainable filmmaking

The Dutch movie industry has had to pull out all the stops to stay financially afloat. This tends to get in the way of sustainable innovation in the sector – when in fact there are plenty of opportunities which can also yield financial savings. Green Filmmaking, a project supported by the Netherlands Film Fund, is showing producers and directors the ropes.

Natural Plastics

Anchoring trees using food waste

Bert van Vuuren formerly was a road construction contractor. He came up with an underground system in which the roots of saplings are anchored using biobased and degradable materials from the food industry. Natural Plastics also supplies biodegradable drainage pipes and watering sheets. Waste from the food industry is used as raw material.

Nova Lignum

Cladding panels from wood waste

Facade cladding, made from fibre-rich waste flows, that will last a hundred years and has no drawbacks. That's every contractor's dream. Nova Lignum from Dinteloord is working on upgrading waste materials. The new factory is expected to be in full operation by mid 2017.

StadsWormerij

Put worms to work on fruit and vegetable waste

In trays at the Amersfoort-based start-up StadsWormerij, thousands of tiger worms are turning fruit and vegetable waste from local households, restaurants and organic supermarkets into supercompost. With this initiative, this start-up is closing the food chain loop in a very modern way. The company also employs people with an occupational impairment.

SuGu

Towards the manufacturing industry of the future

The Rotterdam-based start-up SuGu Club is developing new biobased business concepts. They use energy, heat, and plastics from organic waste from the Rotterdam fruit port. The bioplastic can be used as raw material for a 3D printer. In project OBER, with a cluster of companies, they want to create other valuable products from untapped waste streams, for a circular economy.

Uptown

Tackling plastic flows

Uptown is a consortium of companies (recycling, construction and creative industries), government agencies and knowledge institutes. With the construction industry and consumers, they want to reduce the mountain of plastic ending up in ecosystems. They analyse plastic flows, and recycle plastic into functionale building components. An example is Better Future Factory, that developed a 3D-printer ink made of waste material from glove compartments of old cars, lining of refrigerators, etc.

natural capital through the supply chain – alternative raw materials

More and more entrepreneurs are asking themselves the question: can I make my product from other raw materials as well? Materials with a smaller footprint, which require less land, water and/or pollutants? The creativity that has been unleashed in recent years is inspirational.

Bamboo is one such material. It is an alternative to hardwood. MOSO is a company that uses it to make flooring. Bamboo also offers other application possibilities. It is increasingly used in clothing and as a substitute for plastic.
In countries with a tropical or sub-tropical climate, bamboo is one of the fastest growing plants. It needs relatively little land, and requires relatively small amounts of water and chemical pesticides.

Omega-3 pills are usually made from fish oil. Testa is proving that algae are a good alternative to fish oil. This allows more fish to remain in oceans and fish ponds. Millions of people depend on this marine natural capital.

Schut Papier has decided to use a waste product from another sector for its paper production: tomato plants from the horticultural sector. This means the company needs less wood from monoculture tree plantations (for which tropical forests may have been cut down).

It is not always clear at first, especially when the supply chain is complex, but choosing alternative raw materials can have a major impact on natural capital.

Building with bamboo

Bamboo provides a bona fide, sustainable equivalent to hardwood, in the construction industry and elsewhere. Moso is one of the key players in the bamboo market.

The company, based in Zwaag in the province of North Holland, has been active for two decades in the still-young bamboo industry. It is one of the largest worldwide importers and developers of bamboo construction materials. ‘Bamboo has a wide range of environmental advantages,’ says Pablo van der Lugt, Head of Sustainability and Innovation at Moso. ‘It grows very fast and can play a role in reforestation. The destruction of tropical rainforests often results in very poor-quality soil. Planting bamboo is one of the few options left in that scenario. Bamboo absorbs a lot of carbon dioxide, while the product itself has qualities similar to those of hardwood, without the associated negative environmental effects. It can be harvested annually, just like any agricultural crop.’

Primary forests

Van der Lugt is researching the lifecycle of bamboo. ‘This has led us to be even more critical about what we’re sourcing, and from where’, he says. ‘For example, we check to ensure that no primary forests have been destroyed to plant the bamboo, and that it does not lead to land displacement.’

Van der Lugt has found that the expertise that has been acquired within the Natural Captains network is very useful when it comes to addressing such questions. With others in the sector, he is thinking about ways of marketing sustainable construction materials more successfully.

In the meantime, Moso continues to work on making bamboo more sustainable. Van der Lugt hopes it will soon be possible to replace the synthetic adhesive currently used to glue bamboo strips with a greener alternative. ‘We are running tests in the lab and in the factory in China. If it works, it will be a real breakthrough, and enable us to provide a 100% bio-based, fast-growing alternative to tropical hardwood.’

Increased awareness of the sustainable role of bamboo in forestry could make it easier to earn carbon credits. This makes it more interesting for investors and would give a significant boost to the market. Internet giant Alibaba was the first to buy credits on the voluntary carbon market for the planting of giant bamboo in China.

Tomato plant paper

Schut Papier produced the first book in the world to be printed on paper that contains tomato plant fibre. The recycling of horticultural waste could be of benefit to both the greenhouse horticulture sector and the paper industry.

Residual waste from the horticulture sector, such as tomato plant fibre from the greenhouses in the Westland region in the province of South Holland, is available in large quantities, often for free. Schut Papier in Heelsum is working hard to develop applications for this in the paper industry. The company already manufactures boxes that contain the remains of tomato and bell-pepper plants. It also produces paper seed bags that contain bell pepper fibre.

Research by Wageningen University revealed that adding plant fibre does indeed result in a reduction in carbon emissions. One in three trees felled worldwide is processed into pulp, the semi-finished product used to make paper. This happens at the expense of global biodiversity.

Right now the plant fibre is mainly being used as a component of recycled paper. ‘We’ve figured out how to use the material as filler’, says project developer Marcel van de Peppel. ‘We’re already using as much as 30%. But we also want to find out where the boundary is – how much further we can push that number up.’

“If we are able to create demand for this product, we’ll have a fantastic business case on our hands”

Marcel van de Peppel
Project Developer at Schut Papier

Algae save fish

At least one-quarter of all the fish caught worldwide is used for fish food or fish oil. A needless waste, as farmed algae offer an environmentally friendly alternative. Young company Testa produces plant-based omega-3 products.

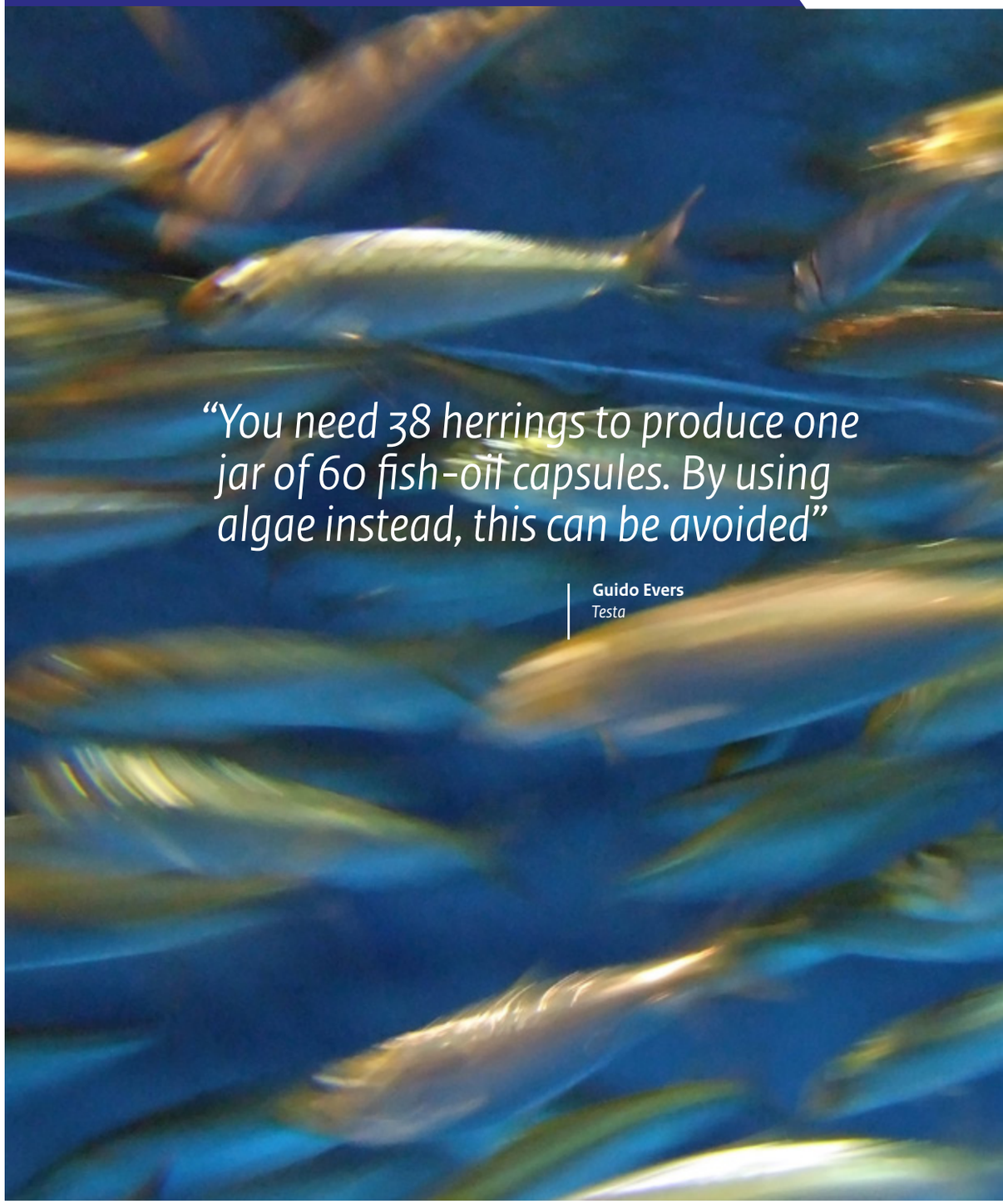
'A lot of people take fish oil capsules because of the beneficial effects of omega-3 fatty acids', says Guido Evers, who initiated the project at Testa. 'But they have no idea just how detrimental those products are to fish stocks.' Replacing fish oil with algae oil is an excellent way to combat the overfishing of our oceans – and it makes a lot of sense. 'It's not the fish that produce omega-3 fatty acids, but microalgae in the ocean. Fish eat those algae and store the fatty acids, which we go on to take in the form of fish-oil supplements. So why not cut out the middleman and go straight to consuming the algae?'

With the support of several other companies, Testa offers fish-free omega-3 fatty acids via an online shop. Currently algae oil comes mainly from North America and Asia, pioneers in the field of large-scale algae production. The Netherlands and the rest of Europe are producing on a smaller scale.

Creating awareness

Testa is not the only company offering algae-based omega-3 products. 'But those other companies sell fish-oil products as well', says Evers. 'We want to move away from fish oil altogether. This makes us unique.' And the quality of the algae capsules is superior to those made from fish oil, says Evers. 'Unlike fish, our algae oil is not contaminated by heavy metals, plastic and dioxins.'

In addition to winning over consumers, Testa wants to get more companies onboard with the initiative – such as pharmacy chains which are currently selling fish-oil capsules. And it wants to establish partnerships with influential NGOs, such as Greenpeace and the World Wide Fund for Nature. 'We are looking for broad support to create awareness about these fish-free capsules and further drive down the cost price,' says Evers. 'I'm convinced that there is a market for this environmentally friendly product.'



Testa is also part of the For our love of life website. The people who developed this site want to use it to bring this plant-based alternative to fish oil to the attention of the general public.

Other cases

"How can you determine which raw material has the lowest overall impact on natural capital?"

Vivera

C4C Holding

Mushroom farmers looking for alternative to peat

The mushroom sector cannot survive without peat, but there are mounting concerns about depleting irreplaceable peatlands. That's why C4C Holding, which supplies substrates to mushroom farmers in the Netherlands and elsewhere, is looking for alternatives. The use of residual material from mushroom cultivation is promising, but for now carries too great a risk of attracting unwanted fungi and bacteria. The search continues.

Estafette Odin

Revival of forgotten vegetable varieties

Organic farming is on the rise, but the number of plant varieties available to farmers is limited. In three experimental gardens, Estafette Odin has been developing a wider range of non-hybrid vegetable varieties and grains. Successful varieties will soon be available in stores. The ultimate goal is to achieve greater variety on the land, on shop shelves and on our plates.

Klasmann Deilmann

Wood fibre replaces peat

Peatlands form a unique ecosystem and are a major carbon sink. However, peat is still exploited, among other things for potting soil. Klasmann Deilmann, the largest producer of substrates for commercial horticulture worldwide, is developing alternatives. The company built a new wood-fibre installation in Schiedam, and is currently blending up to 25% wood fibre into its end product. Coconut and natural compost are also suitable substitutes for peat.

Desso

Norwegian wool better for the environment

Carpet manufacturer Desso (a Tarkett company) wants to significantly reduce its impact on natural capital. Research revealed that switching to Norwegian instead of English wool has the biggest effect, as the sheep in Norway graze a more natural area. This was a surprise given that wool makes up only 2% of raw materials purchased. The researchers conclude that relatively simple measures can result in substantial impact reduction.

Foreco

Timber production with less impact

The timber company Foreco is an innovative player in the sector. It produces timber with as low an impact on natural capital as possible. The showpiece in its collection is NobelWood, a biobased product made from fast-growing softwood and sugar cane stalks, which can serve as an alternative to tropical hardwood.

Modified Materials

Less lead in recreational fishing

Lead has long been a fixture in recreational fishing. Much lead is lost in the process. It remains in the water, where it corrodes into toxic and highly-polluting compounds. Modified Materials is developing alternatives such as cast iron, minerals and composites. The company is looking to partner with stakeholders in the fishing sector, to scale up production of these alternatives and bring down the cost price.

Selekt and Sleegers

Plant-based additives in meat products

Algae, seaweed, duckweed and possibly even grass can replace animal protein, fats and fibre in hybrid meat products. Selekt Meat and Sleegers Quality Meat Products are marketing hamburgers, sandwich meats and other meat products that contain plant-based additives. The biggest demand for hybrid meat products currently comes from young, food-conscious consumers in Germany. 'They're a few years ahead of us over there.'

Van Houtum

Toilet paper made from elephant grass

Less and less waste paper is available, and its quality is on the decline. This threatens toilet paper manufacturer Van Houtum's supply of raw materials. Experiments led to elephant grass as an alternative. It's technically possible, but the business case has yet to be fully developed. They're still working out the optimum way of transporting the fast-growing plant, which is voluminous but weighs almost nothing.

Vegetarische Slager

Locally grown meat substitutes

More and more people are eating plant-based meat substitutes. But opposition to the large-scale importation of soybean, the key ingredient in many meat alternatives, is building. De Vegetarische Slager is developing alternatives that can be grown on Dutch soil. It's a tricky process: 'A steak made of lupin tends to fall apart.' The company has already developed a vegetable-based steak, and is currently experimenting with Dutch soybean. The search continues.

TUI

A fish-friendly menu for tourists

Can you really contribute to local fish stocks by eating fish on your vacation? Apparently, according to research undertaken by the Natural Capital Help Desk, based on a question by TUI Benelux. Restaurants on Curacao can make their menus more fish-friendly by serving non-native species, such as lionfish, which after having escaped from an aquarium are now a true plague for native species in the waters surrounding the islands.

Van Wijhe Verf

Seaweed enzymes for boat hulls

Nature-loving water-sports enthusiasts find themselves faced with the problem of the toxic antifouling that is so effective in preventing algae growth on boat hulls. Are there substances that can prevent algae growth on boats, but perhaps also on cladding panels on buildings? Nature may provide the solution. Van Wijhe Verf, with paint manufacturer W. Heeren & Zoon, is looking into enzymes produced by seaweed to prevent algae growth.

Vivera

Choosing the right crops

Vivera is a large-scale producer of sustainable meat substitutes. But how can you calculate the contribution of the raw materials to natural capital? One crop does better on water usage, while another scores higher on promoting biodiversity. That's why Vivera is developing a tool which can help choosing the right, most promising crops at an early stage – with biodiversity being one of the main criteria.

natural capital

conservation and restoration elsewhere

Most companies first look at their own, direct connection to natural capital. This includes their dependency as well as their impact – in and around the company itself and through the chain.

Some companies choose to invest in natural capital elsewhere, without a direct link to the company's value chain. Because they want to compensate their own impact elsewhere. Or to increase the involvement of employees and business relations. Because it fits in with the company's profile.

One way companies can do this is by investing part of their profits in the conservation of natural areas. Perhaps in the same province, so employees and business relations can visit the reserve and enjoy it first-hand. A site such as the Marker Wadden, a new natural area the Dutch Society for Nature Conservation is developing with partners. Other companies choose to invest in protecting tropical forests in Borneo or the Great Barrier Reef in Australia. Sometimes there is an indirect link with the company's own product, such as diving masks or travel.

On the next page you can read about five companies contributing to forest conservation in the Peruvian Amazon. Tropical forests are preserved along with unique animals and plants. The forest also captures CO_2. This enables companies to contribute to the solution to the climate problem. This in turn contributes to the conservation of other natural capital, such as coral reefs that are highly sensitive to rising ocean temperatures. This way, the companies kill two birds with one stone (figuratively speaking, of course).

The local population can grow cocoa in buffer zones which surround the forest. This is meant to prevent people from needing to resort to felling the trees as a source of income.

Companies invest in Peruvian forest

Five Dutch companies are joining forces to invest in the protection of the rainforest in the Peruvian Amazon. The project helps to preserve the forest, supports the local population and brings about a reduction in carbon emissions.

Deforestation in the tropics causes massive loss of biodiversity and accounts for 15–20% of global warming. The UN Climate Change Convention aims to reverse this trend through the REDD+ programme: Reduced Emissions from Deforestation and forest Degradation. In the Paris Agreement it was explicitly stipulated for the first time that governments and businesses need to work together to tackle the climate issue, and deforestation as a part of this problem.

Cocoa cultivation

Energy suppliers Eneco and Essent, carpet manufacturer Desso, development bank FMO and cocoa trading company Cocoanect are putting this idea into practice together with Platform BEE. They have established the REDD+ Business Initiative and are investing half a million euros in the Tambopata project in Peru.

In this way they are contributing to the protection of the rainforest and promoting high-quality cocoa cultivation in buffer zones which surround the forest, so that the local population can have a guaranteed source of income without needing to resort to felling trees.
CO_2 certificates are used in order to make the conservation of the forest and the associated investments measurable. Companies can use these certificates to voluntarily offset their emissions.

‘We hope, of course, that other companies will join the REDD+ Business Initiative’, says Rudi Daelmans from Desso (Tarkett company). Cooperation is crucial, as the problem is too great to be tackled by any single company.

For more information, visit:
www.platformbee.nl/redd/

Other cases

Marker Wadden

Large-scale, innovative nature development

The Marker Wadden project is a joint effort between the Dutch Society for Nature Conservation (Natuur-monumenten) and various partners. Together, they are working on nature development in the lake Markermeer. The construction of an archipelago will create a robust natural area which will not only be of vital importance for Dutch animal and plant life, but also provides new opportunities for tourism and recreation. For the hydraulic engineering sector, working with silt on this scale is a real challenge. The Marker Wadden project is a unique and innovative collaboration between the public and private sectors which is giving a significant boost to the area known as the 'blue heart' of the Netherlands.

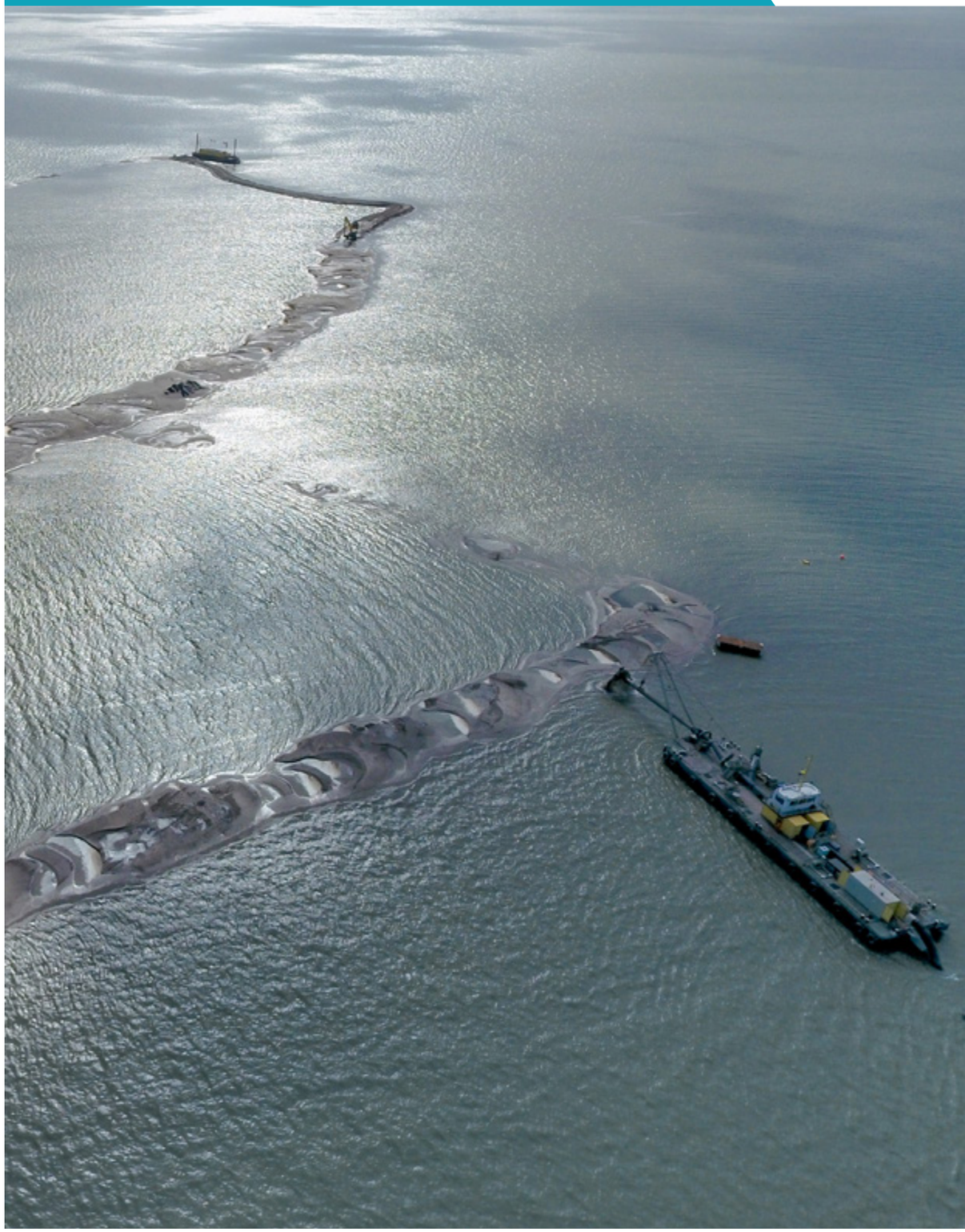
Green Rhine Corridor

Bringing back nature to the Rhine

Slowly but surely, the Rhine is becoming a naturally diverse river again. Insurmountable obstacles for migratory fish, such as salmon and sturgeon, are disappearing. Wetlands have been created (or restored) in the upper reaches of the river to retain rainwater for longer periods of time. But the Green Rhine Corridor is much more than just a large-scale nature project. 'With each thing we do, we look at the economic interests and possible business cases. All the work we do in developing the natural environment needs to contribute to multiple ecosystem services.'

"This way we create a robust area that has unique natural value, and at the same time provides new opportunities for tourism and recreation"

Marker Wadden



The construction of the Marker Wadden is in full swing. Natuurmonumenten and partners are developing this new archipelago of islands between the cities of Enkhuizen and Lelystad.

The financial sector

International

The financial sector is the engine that drives our global economy. Since the financial crisis, the sector has actively examined potentially underestimated risks. A growing number of experts warns of the consequences of operating beyond the limits of our planet. Jim Yong Kim, President of the Word Bank, said in October 2016: *'We have a planet that is at serious risk, but our response has not been equal to the task.'*

In addition to commercial and investment banks, insurance companies are also considering the risks. They are casting a keen eye on predictions of more extreme weather, floods caused by deforestation and erosion, growing water issues and soil degradation.

Two mutually reinforcing movements can be seen in the sector's increasing focus on sustainability. On the one hand, financial institutions are withdrawing investments that systematically harm natural capital. On the other hand, they are influencing the sustainability performance of companies through their financial relationship.

In line with this, there is a growing interest in so-called impact investments, which generate natural and social returns in addition to financial gains. A recurring concern of the financial sector is that there are not enough 'bankable' projects at this stage. To address this, IUCN NL teamed up with Nyenrode, ABN AMRO and the Ministry of Economic Affairs to start an initiative supporting natural capital projects to make them more appealing to investors. This has produced promising projects that will now be launched with private capital.

Internationally, an important collaborative venture is the Natural Capital Finance Alliance. The NCFA was previously called the Natural Capital Declaration, after the declaration of 2012. The contents of this declaration include the following: *'this declaration calls upon the private and public sectors to work together to create the conditions necessary to maintain and enhance natural capital as a critical economic, ecological and social asset.'* The declaration has since been signed by 30 financial institutions, including Dutch organisations ASN, FMO, MN, Rabobank and Robeco.

In October 2016 the Natural Capital Financial Alliance announced that it is working together with the Dutch Association for Investors for Sustainable Development (VBDO) on a supplement to the Natural Capital Protocol (see page 63) for the financial sector. This supplement is expected in September 2017.

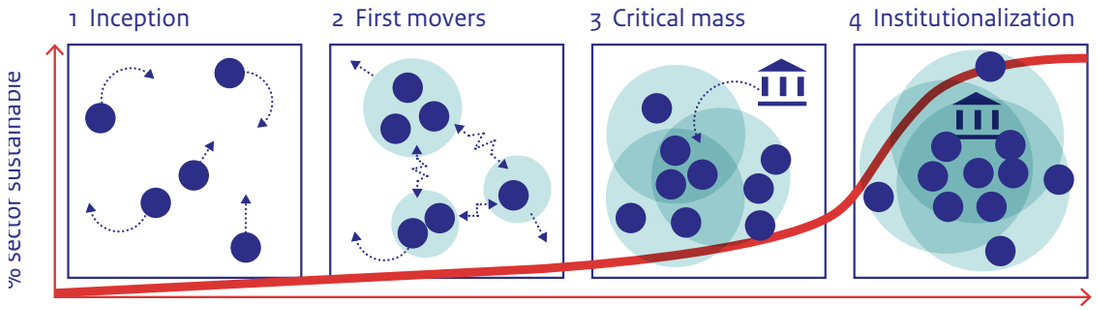
In the Netherlands

The sector is also evolving in the Netherlands. According to the recent publication 'Finance for One Planet', the sector is now in the second phase of the transition curve (see the four phaes in the image below). In this 'first movers' phase, the first collaborative efforts become visible, like the Community of Pactice mentioned below. This moves the sector towards the next, third phase in the transition. In this case, the transition towards a sustainable financial and economic system as a driver of sustainable development.

In the publication, the Netherlands-based 'Community of Practice Financial Institutions and Natural Capital' (CoP FINC) shares its experiences. In 2014, ASN Bank took this initiative together with development bank FMO. They wanted to better understand the relationship between their investments and sectors that have major impact on natural capital.

Over a period of two years, employees from 15 Dutch financial institutions (banks, pension funds, insurance companies) met on a regular basis to exchange their knowledge and experiences.

They ultimately decided on four themes: climate & energy, water, land use and collaboration. All within the basic principle of working within our planet's boundaries. Hence the title of the publication, 'Finance for One Planet'.

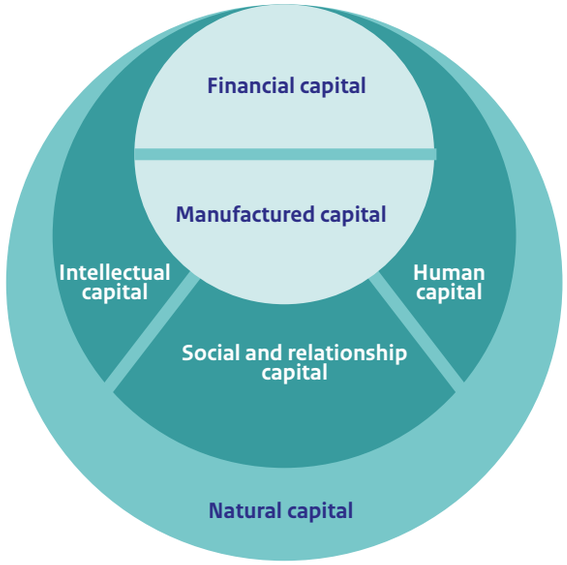


Four phases of the transition to sustainability, according to NewForesight.

Natural capital in international context

The Netherlands isn't the only place where natural capital is gaining traction. In November 2015, the World Forum on Natural Capital took place in Edinburgh for the second time. In October 2016 there was a Natural Capital Summit in Madrid. More and more companies are realising that natural capital is undeniably linked to financial capital.

This can also be seen in the annual reports of large companies, which increasingly refer to the 'six forms of capital' of the IIRC (International Integrated Reporting Council). As shown in the below image, natural capital is the foundation of all other types of capital.



Because natural capital is a relatively new concept, in recent years there has been a growing interest to work together to develop tools and standards.

This started ten years ago with TEEB: The Economics of Ecosystems and Biodiversity, led by economist Pavan Sukhdev. TEEB drew attention to the value of ecosystems and biodiversity. Amongst others by referring to studies putting a price on nature, such as a study that estimated the global value of pollination to be 153 billion euro. The World Bank and FAO concluded that more sustainable fishing could save 50 billion dollars per year.

The value of nature can and should not only be expressed in financial terms. Still, TEEB wanted to make visible those costs that are currently not taken into account in our global economy, with all the risks that this entails.

The Natural Capital Coalition

In 2014 the Natural Capital Coalition evolved from the TEEB for Business Coalition.
By now, more than 200 organisations have joined: leaders from the business world, financial institutions, nature and knowledge organisations.

The Natural Capital Protocol

In 2016, the coalition launched the Natural Capital Protocol: a practical roadmap to map the impact and dependencies of companies on natural capital. The goal: better decision-making. Informed choices between alternative ways of doing business, taking natural capital into account. Aimed at reduced risk, increased efficiency, improved reputations and better access to funding. The protocol now has sector-specific annexes for clothing and for the food industry. A supplement for the financial sector is expected in September 2017 (see page 60).

You can find more information on the coalition and protocol on the NCC website: www.naturalcapitalcoalition.org

The Global Goals

International government policy on natural capital was first introduced in the 1993 Biodiversity Convention. This was presented at the Rio Earth Summit in 1992. In brief, the convention is aimed at the conservation, sustainable use and equitable sharing of worldwide biodiversity (the variety of plant and animal species).

The third Earth Summit in Rio focused on linking ecological, economic and social goals. The decision was made to develop Global Goals (also known as the Sustainable Development Goals) for the 2015–2030 period.

After years of hard work by governments, companies and civil society, in 2015 more than 150 countries rallied behind seventeen goals. Preserving natural capital is an essential part of the Global Goals. Nearly all deal directly or indirectly with natural capital.

You can find more information on the Global Goals in the app available for download here: https://sdgsinaction.com

Lessons & recommendations

You've read various real-life stories from the field. Examples of more than 50 companies who are working on natural capital. Valuable lessons can be drawn from them. We have listed some of these lessons below.

For the entrepreneur

To incorporate natural capital in your business in a meaningful way, a systematic approach is important. These simple steps, based on the Natural Capital Protocol, may be useful.

1 *Positioning*
Start by identifying the impact and dependency on natural capital for your company as well as through the supply chain. What are the biggest risks and opportunities? For a first estimate you can use tools such as the Quick Scan Natural Capital developed by Platform BEE.

2 *The sustainable alternative*
The next step is to think about how things can be done differently, with a lower negative impact and fewer risks. Also consider how new products and services can help others to reduce their impact as well.

3 *Measurement is key*
It is important to formulate your goals in a way that is measurable. Then measure whether this is being achieved. Keep monitoring and adjusting as needed.

4 *Learning together*
Sustainable use of natural capital is a complex and relatively new practice. It is therefore important to share knowledge and experiences with leading companies in your sector, as well as with knowledge and nature conservation organisations.

5 *Reporting*
A report can be small or large. Within the company itself, in the region, for clients and partners or as an integral part of the annual report. In it you report on your mission to continue operating within the limits of our planet, using indicators provided by knowledge and nature conservation organisations.

More detailed information about a structured approach and relevant tools can be found at:
www.naturalcapitalcoalition.org
www.naturalcaptains.nl

For employers' and sector organisations

1 Encourage companies to see the sustainable use of natural capital as a prerequisite for business continuity and as a basis for innovative business models.

2 Establish green business networks to bring together chain-oriented or cross-sectoral entrepreneurs.

For the government that wants to encourage and support the entrepreneur

1 Set a good example by making sustainable use of natural capital the backbone of your own sustainability policy.

2 Issue standards (preferably internationally recognised ones) in order to determine impact and dependency on natural capital, along with the associated opportunities and risks.

3 Like companies, measure and report on your own impact using indicators provided by knowledge and nature conservation organisations.

4 Encourage innovation by eliminating regulatory barriers.

5 Promote new forms of public-private financing that bridge the 'Valley of Death' (the gap between pilot project and profitability).

6 Encourage knowledge sharing and collaboration, pre-competitive and otherwise, among companies.

7 Invest in raising the awareness of consumers and manufacturers so that the concept of natural capital is better understood. This can be done by highlighting good examples and establishing links with climate and resource policy, circular economy and sustainable procurement. This way trends can reinforce each other.

8 Involve entrepreneurs in regional policy.

Lessons & recommendations

For financial institutions

1 Make easily accessible, ‘patient’ financing available for new technologies and market launches of new sustainable products. Work together with the government in this regard to bridge the ‘Valley of Death’.

2 Integrate the sustainable use of natural capital in all investment decisions. Make use of the Natural Capital Protocol, and indicators developed by knowledge and nature conservation organisations.

3 When making investment decisions, prioritise activities and products that take into account impact on natural capital, even if it will take a bit longer to see the return on investment. Put the removal of regulatory barriers to such an approach on the agenda in meetings with government and supervisory bodies.

For knowledge and nature conservation organisations

1 Safeguard the academic basis of practical methods, indicators and target values, through which the impact of regulations and business operations can be measured and improved. Work on indicators for natural capital that go beyond CO_2 and water, such as land use.

2 Make this knowledge accessible for companies and financial institutions, for example within a Community of Practice. Translate the complexity of the issue into relevant and costumized information. Pay particular attention to matters such as supply security of raw materials.

It’s all about collaboration. Collaboration between all parties, harnessing each other’s expertise.

In the past five years, the Platform on Biodiversity, Ecosystems & Economics (Platform BEE) committed itself to the preservation and restoration of biodiversity and ecosystems, as a prerequisite for a strong economy and a healthy environment. The Platform was an initiative of employers' organization VNO-NCW and nature organisation IUCN NL. Representatives of the private sector, nature conservation organisations, development organisations and knowledge institutions participated in the Platform. More information can be found on www.natuurlijkkapitaal.com

Leading companies worked with Platform BEE under the name Natural Captains. Apart from the companies in this brochure, these are: Dekker Group, Ecovillage Boekel, Holland Biodiversity, Natuurbegraven Nederland, Pooling Partners, Priva, SAB Catering, Royal Schiphol Group and VolkerWessels. If you want to learn more or are considering joining, go to www.naturalcaptains.nl

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