

Business and Biodiversity Insights from the Community of Practice

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Business and Biodiversity

Insights from the Community of Practice

Text

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This publication is available at

www.duurzaamdoor.nl/bedrijven-en-biodiversiteit www.amborcreatie.nl/en/CoP_BB

Participants in CoP Business and Biodiversity



brabant Water

TATA STEEL

HET

ANKER

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HEINEKEN





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Heijmans: Creating added value

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through nature-inclusive building

COMMUNITY OF PRACTICE Business and Biodiversity

» Het Anker yacht marina We have a shared responsibility

URGENCY drives ambition and innovation



PREFACE

The days are gone in which nature and economic activity were considered to be diametrically opposed, and we are becoming increasingly aware that the two areas actually strengthen one another. Nature not only delivers the resources and services that drive the economy, but it is also one of the most important factors in selecting a location to establish a firm. In addition, every self-respecting business now operates a sustainability agenda with a particular focus on nature. Accounting for nature and biodiversity helps to cut costs and it creates local support. Businesses are starting to reap more public rewards for their nature conservation efforts, and the demand for solutions to sustainability issues is leading to the development of new products and the establishment of start-ups on the market.

Any company wishing to 'make its business 'greener' faces a host of questions to be addressed. "What exactly is my relationship with nature? How can I measure this relationship, and will this give me results that are quantifiable and manageable? Can I learn from my competitors? Or perhaps from players who are active in other sectors?" This digital publication, Business and Biodiversity: Insights from the Community of Practice, aims to answer some of these questions.

Written in clear language, it is a publication from practice for practice, which discusses biodiversity and the natural environment in relation to business activities from the perspective of the entrepreneur. This makes it an invaluable resource for any company wishing to conduct business in a sustainable way or planning to focus its ambitions on green business. The knowledge and the narratives shared in this publication stem from the Community of Practice Business & Biodiversity. Its meetings, held between 2011 and 2013, brought together players from a variety of sectors, all of whom were keen to learn from one another and all of whom realised that green business calls for new coalitions and cooperative associations that transcend the boundaries of individual sectors. The new forms of cooperation that followed became an important source of inspiration for further innovation, by opening up prospects for new markets, generating new knowledge about the role of biodiversity in the production chain and enriching already existing business strategies. This cooperation has also spawned a series of spin-offs, including a Green Deal focused on the promotion of green roofs and a Community of Practice in the financial sector. It is my clear wish that others will enjoy similar experiences and achieve similar results; in this way, they will be able to improve their own ventures and at the same time support the natural environment.

Sharon Dijksma Minister for Agriculture

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SUMMARY

Businesses can learn from each other's practical experiences in a *Community of Practice* (*CoP*). Government facilitates and establishes a CoP and places it firmly within its context, including knowledge institutions, NGOs and policymakers. The results are new forms of cooperation that in turn *accelerate* effective *transition* through combined knowledge and action.

2 The *urgency* for focusing attention on biodiversity is considerable. Following climate issues, biodiversity is the *next* theme in the *CSR ambitions* of industry. Pioneering businesses focus on biodiversity to secure the availability of resources, to fulfil their social responsibility, to retain their market value or reputation, to achieve innovation or to address specific problems, for instance challenges resulting from the increasingly powerful dominance of exotic species.

As Bruce Wilcox and Michael Soulé put it, *biodiversity* denotes "the variety of all life forms". It refers to 1) genetic diversity, 2) diversity of species and 3) different types of ecosystems. Diversity is essential for the *resilience* of ecosystems; as such, it is the basis of our economy. Relationship between ecosystem and business. For its activities, every business depends or impacts on an ecosystem*****



4 **Ecosystems** help us deliver many services, such as the production of food, the regulation of water management and the purification of drinking water. Thinking in terms of ecosystem services demonstrates the **value** of biodiversity. If ecosystems are taken as a starting point, **innovative opportunities** can be created and **new cooperative partnerships** will evolve.

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The *relationship* between business activities 5 and biodiversity can be divided into three categories: A. relationships demonstrating impacts on ecosystems on *location*, such as construction work, mining, manufacturing and the use of chemicals, B. relationships that depend on ecosystems via the production *chain*, for example in food and agro businesses, drinking water production and the manufacturing of bio based products, and C. relationships in which *pro-biodiversity* strengthens ecosystems, for instance in marine farming, the management of country

estates and the use of green roofs.

Category A. This category refers to businesses ĥ that have an impact on ecosystems via their location and that are not directly dependent on ecosystems for their continued existence. It is possible for these businesses to compensate for their impact. Examples include the prospects for innovation offered by nature-inclusive building.

Category B. In this category, the supply of raw materials is threatened if ecosystems become exhausted or polluted. This risk applies to businesses that are *dependent* on healthy ecosystems via their production chains. Promoting sustainable production and certification offer possibilities for reducing ecosystem risks.

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biodiversity and deliver ecosystems services. Here, private investments generate social benefits. These benefits must be made visible and a new business model must be developed in cooperation with all stakeholders.

biodiversity business activities which strengthen

Category C. This category concerns pro-

Involving your *colleagues* is best done by starting 9 on a modest scale and at a single location. It is important to speak the language used in other departments and to create a match in terms of values. Appeal to the sense of urgency through *emotion*. Formulate an *impact ambition* and *embed* attention for biodiversity in existing management systems.

Biodiversity-based business transcends individual

practice. Include stakeholders in the context to make the best possible use of available opportunities and to remove obstacles. Encourage biodiverse purchasing by *government*, formulate questions for *science*, work together with NGOs and involve financial parties in new business models.

The business and biodiversity *transition* is still in its infancy. Still, the CoP has generated significant insight into the various types of relationships between businesses and ecosystems and it

has demonstrated what parties can do in this context to accelerate the transition process. Participating businesses proved to be able to boost their practices, resulting in innovative opportunities, new coalitions, a new Green Deal and a new CoP.

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CREATING ADDED VALUE THROUGH NATURE-INCLUSIVE BUILDING



One of the largest contractors in the Netherlands

"How can Heijmans create measurable value for the benefit of biodiversity?" This was the first question that Frank Hoekemeijer put to himself, almost immediately followed by "And how can Heijmans be rewarded for its efforts?" Together with his business colleagues, he developed the concept of nature-inclusive building, and in close concert with his Managing Director, he succeeded in placing nature-inclusive building on his clients' agendas on many occasions, for instance during tendering procedures.

Different scale levels

"Heijmans had already been operating an active CO2 reduction policy for a number of years, so for me, the next challenge lay in addressing the decline of biodiversity. This was something that I deeply felt should be placed on our agenda for translation into action. It was a true eye opener for me that we, as a Dutch construction company, could have a positive impact on preventing biodiversity loss on a global scale, mainly via our CO₂ emissions. That being said, the greatest opportunities for strengthening biodiversity for Heijmans are first and foremost related to the Netherlands and the local regions where we carry out our projects. On this particular scale level, it is the fragmentation of nature areas caused by roads and other infrastructure projects that is a major contributing factor in the decline of biodiversity. Against that background and on behalf of the CoP, I asked the Natural Capital Helpdesk to identify the most important issues to be addressed and to inform me about relevant policy frameworks currently in place in the Netherlands.

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Shared responsibility

The need for permits is fed, amongst other things, by the desire to protect biodiversity against contractors with large bulldozers. Here, however, biodiversity is often interpreted in terms of protected plants and animals that are considered a nuisance

"Putting my learning process into words gave me a clear insight into my own altered thoughts about biodiversity: from impact to value creation"

in the construction process and in the process of issuing permits. This development has led to a reactive response from the construction sector. Still, what we should continue to keep in mind is that the greatest impact on biodiversity is in fact determined during earlier stages: it lies in the initial decision where precisely a road will be built. If central government decides to build a motorway right through a nature area, there is relatively little that we at Heijmans can do about it. This means that any negative impact on biodiversity as a result of the construction process is a shared responsibility, something to be dealt with in a process in which all parties concerned must play their own role.

From impact to added value

For me, the question is how we can have a positive impact, and how we can combine nature objectives with functional objectives in carrying out our construction activities. In this

respect, too, there is a clear role for other parties, including the Dutch ministries of Infrastructure and the Environment. Economic Affairs, Transport, Public Works and Water Management, and the Dutch National Forest Service (Staatsbosbeheer), to name but a few stakeholders. One example of successful cooperation is the Room for the River project, in which not only water safety objectives have been achieved, but also nature objectives. Another illustration is the Nature Summit organised in 2013 by the Dutch Minister for Agriculture Sharon Dijksma: Heijmans organised the Green Table on Nature-inclusive Building. We concluded that natureinclusive building calls for a more proactive attitude from us as builders as well as an open and creative attitude from government. We greatly welcome even more intensive and widespread cooperation so that we may investigate how we can leave behind a better and more diverse natural heritage for future generations. In this way, we can make a true difference in turning around the decline in biodiversity in the Netherlands by the time we reach the year 2020.

Innovative solutions

It is my firm belief that nature-inclusive building can be achieved, by redistributing existing budgets, if cooperation with government and nature organisations is tackled in new and innovative ways. I am convinced that immense gains can be made in terms of biodiversity and functional combinations through smarter forms of organisation. Let us look at the opportunities and possibilities in our tendering and licensing processes, for instance. If government approaches current tendering procedures in an integrated manner so that nature objectives are highlighted at an early stage, we as market parties can deliver creative and innovative solutions.

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ISO 14001 helps

All of Heijmans' relevant business components have been ISO 14001-certified since 2012. In 2013, biodiversity was included within the scope of this system as a separate area of attention. This means that biodiversity is now a structural point of focus, and we continue to strive for improvements in this field, in all our activities. This is how we develop the proactive attitude that is needed for moving forward in this area."

1 COMMUNITY OF PRACTICE BUSINESS AND BIODIVERSITY

"There's so much more to discover"

Redmond O'Hanlon

1 COP B&B

Transition to a green economy

What is needed today is a transition from an economy that exhausts resources to an economy that retains and strengthens biodiversity and natural resources. We need to make use of our natural resources in ways that are sustainable – and we need to share the profits fairly.

The Green Deal CoP B&B

A growing number of people active in the industry sector are starting to view biodiversity as the next key theme on the



CSR agenda. <u>Research</u>, however, has revealed that in terms of converting ambitions into activity a clear struggle is taking place on many production floors and in business processes. Based on the idea that change can be promoted via learning, and more specifically by learning together, the Community of Practice Business and Biodiversity (CoP B&B) was launched. Because accelerating a transition to a green economy is part of an overall government ambition, the <u>CoP B&B</u> was supported by Dutch government in the form of a Green Deal. Green Deals are a key instrument for boosting green initiatives.

What was the aim of the CoP?

The CoP aimed to move away from situations demonstrating negative impacts on biodiversity to a situation of No Net Loss, or better still, to a situation in which positive contributions made by businesses would actually strengthen ecosystems. A CoP is a community of people, in this case representatives from industry, who wish to learn from each other's professional practice in order to accelerate innovation. A CoP is usually prepared and facilitated by process managers. In the case of the CoP B&B, these process managers were employed by government and supported by experts. An essential precondition for participating in a CoP is that CoP members are actually working on biodiversity in the form of a practical project.

What form did the CoP process take?

A shared sense of urgency and shared ambitions are essential to any transition. This is why we went in search of people who were experimenting with biodiversity in their own corporate practices. More specifically, we were looking for people who were employed in a variety of sectors, from huge multinationals to sole traders. After all, diversity leads to learning. Introductory talks were held with all participants about the questions facing them in their practical projects. These discussions served as

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a baseline measurement and as input for a long list of topics for discussion. These were then prioritised by the participants themselves during the CoP kick-off meeting, resulting in a strategic agenda for subsequent meetings. Over a period of two years, the CoP met on ten occasions, each time at the location of one of its participants. The process of learning from one another's professional experience and practice was enhanced by a number of external speakers who had been invited to share their ambitions and inspiration.

How did we include other stakeholders?

To ensure reflection and an effective cooperation with the external context, a sounding board group was established and insights and knowledge were shared with a larger group; this was done via a <u>LinkedIn group</u>. In addition to the ten meetings of the CoP itself, two other meetings were organised: one with NGOs early on in the process followed by a later meeting with policymakers. We also conducted a participatory system study.

Support for businesses

The Platform for Biodiversity, Ecosystems & Economy launched a helpdesk offering two days of free advice. Points of interest included, amongst many others, the search for new earning models; this was tackled in a study programme set up by Het Groene Brein in collaboration with the Netherlands Organisation for Scientific research NWO. This programme incorporated examples from the professional practices of the participating businesses. On behalf of the Ministry of Economic Affairs, the Netherlands Enterprise Agency (RVO.nl) was made responsible for implementing the biodiversity and business subsidy programme.

How to read this publication: Business and Biodiversity

This publication is intended as an inspiration for people who work in industry and who wish to start working on the topic of biodiversity. It offers a wide range of tips to boost current business practices. Based on the lessons learned during the CoP sessions, this publication offers a clear illustration of the Community's journey in the realm of business and biodiversity. Its opening chapters offer new knowledge and insights on biodiversity and ecosystems, followed by chapters that deal with business practice. The publication concludes with a number of chapters offering tips for actors in the world of business.

This publication offers two types of information:

- a. Substantive chapters on subjects selected by CoP participants.
- b. Personal narratives detailing the process completed by CoP participants.

We have opted for a structure in which an illustrative and relevant business case precedes the generic knowledge presented in each chapter.

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WE HAVE A SHARED RESPONSIBILITY



ENTREPRENEUR JASPER BLOM, <u>Het anker yacht marina</u>

A recreational business on the shores of the Loosdrechtse Plassen.

As an entrepreneur in the leisure sector, Jasper makes the best possible use of the green backdrop offered by the lakes of the Loosdrechtse Plassen for the benefit of his business. Still, he has found himself faced with a dilemma: what can be done about the negative effects caused by the presence in the lakes of an exotic water planned named Cabomba, and who is responsible for solving the ensuing problems? On behalf of Hiswa, the Dutch sector organisation for water sports, and together with the Wijdemeren Recreation and Tourism Platform and the water sports association Watersportverbond, Jasper persuaded the Province to allow these groups in their role as entrepreneurs to formulate a vision for the area. This innovative process was undertaken in close consultation with the Municipality of Wijdemeren, the Amsterdam water company Waternet, the Water Board, the Rural Areas Department of the Province, the Society for the Preservation of Nature in the Netherlands (Natuurmonumenten), the Dutch National Forestry Service (Staatsbosbeheer), the Dutch Confederation of Agriculture and Horticulture (LTO) and the Province of North Holland.

From problematic to practical

""I believe it is vital that we maintain biodiversity as best as we can, not just on a local scale but throughout the world. On the other hand, the current situation is problematic and certain questions remain. Should you maintain every single species you find in a certain area, for example, or is it simply a matter of evolution that certain species disappear while others replace them? Operating as a yacht marina, we are merely a small part

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of an immense water system, and we can only make a tiny contribution towards improving water quality. We strive to keep the water we make use of as clean as possible, for example by opting for biodegradable antifreeze in our business activities.

From species to green backdrop

Our yacht marina is literally surrounded by nature, and as a recreational entrepreneur I have plenty of opportunity to make maximum use of the advantages this offers. Nonetheless, I believe that for recreational users – my clients – biodiversity is something that offers little added value. Of course, people see that a green backdrop is a bonus. They very much appreciate the local reed beds and realise that it is important to tend to that green backdrop as effectively as possible, for example with hedgerows and woodland. In this way, more bird species can be attracted. But who will pay for all of this if it costs twenty percent more than standard landscaping? Our customers are very reluctant to spend so much more on green surroundings, so in this sense biodiversity is not a strong business case for us.

"My participation in the CoP means that nature organisations and authorities see me as an important stakeholder and discussion partner."

Harmful presence of exotic plant Cabomba

In the Loosdrechtse Plassen, we are faced with the presence of an exotic plant, the Cabomba, which demonstrates excessive growth. Together with partners and contacts from our CoP, I visited the Municipality of Wijdemeren to discuss whether the water plant could be put to good use as biomass material for fermentation. Instead of costing money to remove the Cabomba from the water, this approach would actually offer us a financial gain. In addition, it would improve the navigability of the lakes, and room would be created for other species. In other words, this approach is expected to have a positive effect on biodiversity

Different values

Biodiversity means different things to different people. Let me give you an example. One of our goals is to re-open an ancient navigation channel that was in use for as long as 400 years. This single channel has a different value for each of its users. For recreational users, its main value relates to the experience of sailing it, but it also has a certain value in terms of biodiversity. Finally, with its bridges and locks, we can see its cultural and historical value. In other words, the channel is important as a living environment for recreational users, for the local residents and for the ecological system. However, it has turned out that as a result of that important ecological value, it is not automatically possible to use the channel for recreational purposes. Indeed, we were told that it cannot be opened up because the propellers of our boats will destroy the waterbed. despite the fact that this same waterbed has been cut and dredged for many years in order to manage and maintain the channel. The question that arises next is who is nature intended for, and what do we want to do with it?

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Serious discussion partner

Because of my involvement in biodiversity, I am convinced that the Dutch nature organisations and the authorities see me as a stakeholder and a serious discussion partner. They recognise and acknowledge my interests and commitment. I have made a positive effort to engage and do business with Natuurmonumenten. It is their role, supported by its members, to open up more and more nature areas to the general public. At the same time, another primary objective is nature conservation, so it is important for us to join forces in search of a sound balance between nature, culture and the economy."

» Antropia

2 URGENTIE FEEDS AMBITION AND INNOVATION

"The ultimate bank on which we all depend, the bank of natural capital, is in the red"

Prins Charles of England

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2 URGENCY

The Earth's limits have been reached

Almost ten years ago, <u>the Millennium Ecosystem Assessment</u> (MEA) was prepared by the World Resource Institute and published on behalf of the UN. It was the first global scientific study into the condition of our planet's ecosystems. The picture it revealed was far from rosy. The resilience of ecosystems is under pressure at all levels: global, regional and local.

Three key developments addressed by the MEA were the following:

- 1. The growing demand for food, clean water, wood and other essentials has meant that over the past 50 years, people have influenced and altered ecosystems more rapidly and more fundamentally than ever before in human history, resulting in a substantial loss of biodiversity on the planet.
- Although modern developments have led to greater wellbeing and higher economic growth, they have also led to the degradation of numerous ecosystems, an increased risk of changes that are irreversible and a rise in poverty among certain population groups.
- To counter the effects of recent developments, significant changes are needed in the policies of governments and institutions and in terms of business and consumer practices.

The loss of biodiversity has already far exceeded our planet's resilience and capacity for recovery. The Resilience Institute in Stockholm has illustrated the situation with their description of <u>planetary boundaries</u> (figure presented below). Another indicator is the <u>Earth Overshoot Day</u> maintained by the Global

Planetary boundaries (Rockstrom 2009, Stockholm Resilience Centre)



Footprint Network. This network yearly calculates on what day more natural resources are used than the planet can recover. This is the moment when our resource consumption for the year exceeds our planet's capacity to renew these resources in that year. In 1996, Earth Overshoot Day was in November; by 2006 it was on 9 October, and this year it fell as early as 13 August.

What causes pressure on biodiversity?

The Earth's biodiversity is declining due to changes in land use and the overexploitation of ecosystems. Climate change, large-scale monocultures in agriculture, the pollution by industry of soil, water and air, and mobility and accommodation are

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TERRESTRIAL

important factors contributing to this degradation. At the same time, the health of ecosystems is threatened by the introduction of non-indigenous, exotic species that can travel the globe due to the extensive globalisation of trade and worldwide transportation. This is clearly revealed by the summary compiled by the Worldwide Fund for Nature in its Living Planet Report 2012 (see figure).

PROVISIONING

SERVICES

The most important international agreement on the conservation of biodiversity and the recovery of ecosystems is the United Nations' <u>Convention on Biological Diversity</u>. In Europe, the <u>strategy</u> of the European Union is to achieve a No Net Loss situation by 2020. In the Netherlands, the Taskforce

on Biodiversity and Natural Resources was established in 2009. One of its achievements was the Platform for Biodiversity, Ecosystems and Economy that supports governments in implementing biodiversity in business practice. The ambitions of the Dutch government for the conservation of natural resources are expressed in the National Vision on Nature 2014. Government plans for national and international conservation and sustainable use of biodiversity are outlined in the Implementation Agenda for Natural Capital.

So why should businesses be interested in biodiversity?

CoP activities and a study of literature have revealed a variety of reasons for a business to work on biodiversity. These reasons depend on the type of business activity involved, the position of a company in the production chain, its mission and the passion and commitment of individuals operating within that company.

Some of the reasons put forward relate to the following areas:

- Compliance with regulations and social requirements;
- Reputation and image management;
- Access to raw materials and/or a stable ecosystem;
- Business visions and practices;
- Threats presented by exotic species;
- Opportunities for innovation.

STORIES FROM PRACTICE

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EVERY SPOT IS UNIQUE



COUNTRY ESTATE COACH GIJS Van Heemstra, Until Recently Affiliated to the <u>verwolde</u> <u>Country estate</u>

Winner of the 2013 prize for most innovative country estate, awarded by the Province of Gelderland

One of Gijs van Heemstra's aims was to increase biodiversity on the Verwolde estate, to compensate for what he saw as external threats to biodiversity. He discovered a number of promising opportunities that could also support economic viability but which had at the time not yet been recognised by owners of other country estates. Gijs is a member of the Governing Board of the Gelderland Private Landowners Association (Gelders Particulier Grondbezit) and currently active as rural estate manager at the Sint Hubertus Hunting Lodge at the Hoge Veluwe National Park.

Indicator species for the health of a country estate

"Because the annual costs of maintaining a country estate are often not in line with its revenues, estate managers like me are constantly on the lookout for new economic motors. Still, I have to admit that just like sustainability in the past, biodiversity was a relatively meaningless buzzword for me. What we do at the Verwolde Estate in terms of guarding biodiversity involves maintaining a number of important plant and animal species on our land. We work with certain indicator species that, as the name suggests, indicate the condition of the estate's woodlands. If we see the marsh gentian or the white admiral butterfly, for example, these indicate that all is well with biodiversity in the woodlands. Operating in this way, we have seen that there is considerable biodiversity on country estates.

A more attractive and richer natural environment makes country estates appealing and inviting

With relatively minor interventions, it is possible to re-establish

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biodiversity at its original level, and sometimes it is even possible to enhance it further still. By improving the quality of the natural environment, we also add to the pleasure and enjoyment experienced by our visitors, be they recreational walkers, horse riders or cyclists. In this way, biodiversity loses its status of anonymity, and we learn which measures can optimise co-existence between species and their natural environment. As a result, a country estate's biodiversity becomes a promising niche, compared to other nature areas, in which we can attract additional recreational visitors.

Impact of agriculture and water management

We see that agriculture and the use of fertilisers that are spread by the wind have had major negative effects on biodiversity. As a result, a number of the estate's cornfields that used to be treated with artificial fertilisers have been cleared to make room for cornfields treated with much less harmful fertilisers. As a result, biodiversity has improved considerably, thus making the landscape even more attractive. A better balance has been reached, also in other areas. Allow me to illustrate the point. We know that farmers want the water on their fields to be drained off as quickly as possible, to prevent foot and mouth disease in their cattle and to counter the risk of crop rot. We, on the other hand, seek to retain water as much as possible, to improve biodiversity. It is possible to retain water in woodland and at the same time to drain it from arable land more quickly, namely with an effective system of dams, sluices and gates in place. Interventions of this kind are important for water storage as well as for water board activities concerning water management and anti-drought measures. A win-win situation all-round.

Local produce

At the Verwolde Estate, our ancient kitchen garden was reestablished with vegetables that we sell as local produce. The very combination of our attractive natural environment and these local products encourages our visitors to return more often. As an additional advantage, this improved experience also encourages them to spend more money during their visits,

"CoP participants exerting a negative biodiversity impact inspired me to develop biodiversity credits"

for instance by buying a piece of home-baked apple pie or a pancake. In this way, biodiversity can act as a highly accessible and effective economic motor for country estates.

Biodiversity credits

A future development may be that businesses will wish to compensate for their negative impact by developing biodiversity credits. If the scale of a single country estate should prove to be too small for such endeavours, we could offer hundreds of thousands of hectares of nature by teaming up for compensation and collectively grouping together country estates and land management organisations such as the National Forestry Service and Natuurmonumenten.

Every estate is different

A country estate is a multifunctional unit that combines functions related to agriculture, accommodation, cultural history and nature, water, fresh air and recreation. Every country estate houses a unique combination of landscape, cultural and historical elements. Estates also represent a unique

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combination of owners and water boards, municipalities and provinces. The actors involved are highly diverse, as is the natural environment. What truly matters is an ability to identify unique selling points – and in fact unique buying points – in each individual case. It is particularly this uniqueness that offers us a chance to develop an individual earning model for each individual country estate. To design a successful estate formula, we should not only carefully examine the characteristics of the estate's specific area, but also what we wish to achieve with it. Once we are clear on those issues, we can engage with the right parties and achieve common goals. And of course, part of the formula is the optimisation of biodiversity. It may not be the chief motor of an estate's earning model, but it is certainly an important element in a mix of operational opportunities."

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3 BIODIVERSITY, NEW DEFINITIONS

"Look deep into nature, and then you will understand everything better"

Albert Einstein

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3 BIODIVERSITY

All life forms

'Biodiversity' is an all-inclusive term. Some apply it when they refer to tropical rainforests while others use it when they talk about the introduction of non-indigenous species in the Netherlands. The term can also be applied in other areas, such as the extinction of specific species, the dwindling of the bee population, the re-introduction of ancient cattle breeds or cooperation with Filipino fishermen to repair the ocean bed. The Community of Practice started out by identifying the meaning of biodiversity in its participants' professional practices and by developing a common language.

How can biodiversity be defined?

The <u>Convention on Biological Diversity</u> defines biodiversity as 'life in all its manifestations'. In terms of life forms, three levels can be distinguished. The first relates to the world's genetic material. To illustrate the point: a storage location is currently under construction at the North Pole to store samples from all the seeds that are currently available in the world. In this way, we can ensure continued access to all forms of genetic diversity with the aim of safeguarding crop diversity. The second level relates to species and includes, for example, the IUCN's <u>Red</u> <u>List</u> of threatened species which records extinction rates. Level three relates to ecosystems.

The above-mentioned levels are clearly interlinked. The diversity of species within an ecosystem, for example, is used as a marker to indicate the resilience of that system. IUCN and the WBCSD have developed a <u>guide</u> that informs companies how they can make the best possible use of an ecosystem concept and the Red List.

What is an ecosystem?

An ecosystem is a demarcated unit consisting of living organisms and non-living material. An essential element of such a system is coherence: the interaction between all organisms and interaction with non-living objects such as rocks and water. In general, ecosystems that harbour many different species are more resilient than systems with fewer species. Species diversity reduces the risk of system collapse, because certain species can compensate for the loss of others. Some of these species, also known as indicator species, serve as a measure of the environmental conditions that exist in the system of which they form part. They express their ecosystem's resilience – and hence its health.



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Differences between ecosystems

Every ecosystem - woodland, desert, sea or jungle - has different characteristics and may show any number of different species. However, what all ecosystems have in common is that their species need one another to survive. Some ecosystems can be viewed on a global scale, such as the world's climate system; some are more regional, such as the North Sea, and some are local, for example arable fields. Here, too, levels are linked in different ways. Ecosystems are dynamic, and they are subject to change over the course of time: time and history play an important role in their development and human activity can change their status. Such changes can have positive as well as negative consequences, and sometimes it is difficult to tell which is which. Let us consider the example of an offshore wind farm: it influences the existing ecosystem, but it also highly likely that the original ecosystem was already disrupted earlier. namely by fishery and merchant shipping.

What is the state of an ecosystem?

To determine the status of ecosystems in the Netherlands, one can consult the Environmental Data Compendium (Compendium voor de Leefomgeving). This document offers information about biodiversity issues that are relevant for all regions in the Netherlands. At present, the government is working on a <u>Atlas of Natural Capital</u> in the Netherlands. The first version is expected to become available at the end of 2015. To investigate the status of ecosystems outside the Netherlands, it would be wise to ask business partners in the production chain for information about the status of their local system. Support for international cooperation in strengthening ecosystems abroad is offered by international NGOs such as <u>IUCN</u>.

What are ecosystem services?

If we refer to ecosystems as a natural production system for the benefit of humans, then we refer to ecosystem services. Such services include water purification via the infiltration of the water in sand dunes (for natural purification), relaxation in natural surroundings on a country estate, the production of food and timber or pollination by bees, to name but a few of many and varied examples. In other words, ecosystems have a specific value that we need to manage prudently. We are dependent on ecosystem services, and in turn influence these systems. PBL's nature survey presents an overview of the stacked ecosystem services available in the Netherlands.

Our natural capital

The natural production of ecosystems is a key pillar for our economy. More and more businesses are realising that ecosystem services form our natural capital. The <u>Natural</u> <u>Capital Declaration</u> defines natural capital as the world's natural assets that ensure a renewable flow of goods and services for our economy and that offer advantages to businesses and communities. To determine the natural capital that businesses use, a special protocol is currently being developed by the World Business Council on Sustainable Development together with IUCN and businesses. This cooperation is known as the Natural Capital Coalition.

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Connecting with other concepts?

Nature has become a near-limitless source of inspiration for the development of new concepts. A specialist field that reveals what we can learn from nature is Biomimicry. This new branch of science investigates nature's models and then uses their designs and processes to address human problems. At product level, this can be illustrated by the development of special water-repellent swimwear whose high-tech fabrics mimic the characteristics of a shark's skin. On a social level, biomimicry is illustrated by efforts to work towards a more circular economy. So far, research results have led to many promising new initiatives. Within the innovation framework Cradle to Cradle. for instance, one of the three leading design principles is 'celebrating diversity'. The Natural Step strives for a sustainable society in which man lives in harmony with nature, and the Blue Economy uses the laws of physics, biology and chemistry to develop smart innovations for society. That considering the opportunities offered by nature is a highly successful approach is unambiguously shown by inventor Gunter Pauli, who formulated more than one hundred concrete examples of sustainable business cases.

STORIES FROM PRACTICE

Verwolde, Kruidenier, Hortimare, ASN Bank

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brabant Water

Altijd. Overal.

Ook hier werken wij aan het lekkerste drinkwater.

Vergroting en vernaturg van het heidegebied. Ons terrein is beperkt tot ankelijk van 23 september tot 31 oktober door het kopen van bor

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DETERMINING VALUE WITH NEW STAKEHOLDERS



SENIOR POLICY ADVISOR SANDRA Verheijden, <u>Brabant Water</u>

Drinking water production assisted by the natural environment in the Dutch province of Brabant

"What is the significance of biodiversity in the choices you make as a company in your production process?" askes Sandra Verheijden Can biodiversity play a role in protecting groundwater, the raw material used to produce drinking water in Brabant? In collaboration with land users around the vulnerable drinking water abstraction areas, the ecosystem approach is proving highly valuable. It offers guidelines for working together with farmers, councils and businesses to reduce the effects of the use of pesticides on water quality."

Reducing our own footprint

Brabant Water produces annually around 180 million m³ of drinking water for the residents of Brabant. We only use groundwater as the source for our drinking water. The water abstraction areas where we pump groundwater up from the ground are often owned by us. In many cases, water abstraction is carried out in remote rural areas. In total we manage around 1500 hectares of nature. In these areas we are directly contributing to biodiversity. However our activities around abstraction, treatment and distribution of drinking water to our customers means that we also have a less positive impact on biodiversity. We are attempting to reduce our environmental impact by reusing waste products from drinking water treatment such as calcium residues and by improving our energy efficiency. In January 2014, Brabant Water became the first certified climate neutral drinking water company in the Netherlands.

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Cooperation with farmers

The quality of our water sources benefits from broad biodiversity. Around our water abstraction areas biodiversity can be influenced by other land users, for example farming activities. In the project Clean Water for Brabant, we are working together with partners to improve groundwater guality by reducing pesticide leeching. We are also participating in a pilot scheme with a number of pioneers from the agricultural sector, aimed at healthy soil for crop protection with less emissions and less groundwater pollution. It remains a continuous search to make sustainable production profitable. An interesting study in this field was established via the CoP. Together with Kruidenier Foodservices, we are considering a market for clean water products. Such a market would certainly offer opportunities. Also, in a pilot scheme focused on water quantity, we are investigating how the drought sensitivity of agriculture can be reduced, and how the moisture supply can be improved to prevent the need for huge transfers of water.

"The CoP has shown me where the opportunities are for improving the (eco)system"

The search for a revenue model

It would be ideal if we could combine and share the knowledge from the various projects with more growers. The main issue for all projects and pilot schemes is how to ensure that the resulting improvements to sustainability are continuously applied. And if extra effort is needed, who pays for it? Or is it just part of the agricultural business practice? The revenue model for this approach needs to be further investigated.

Awareness of the entire ecosystem

We need to look even further. If a plant is healthy, it is less troubled by pests and other problems. That in turn means less intervention with pesticides. The entire ecosystem must be in good condition. Using an integral approach, multiple problems can be solved simultaneously, and together the whole system improves. The result is an ever-growing understanding that the entire ecosystem must be considered as a whole; the soil, the crops and the water. In that sense, biodiversity is an opportunity to further expand the contact with our environment. My aim for the future is to increase the awareness of biodiversity and the opportunities it offers us. It is not yet truly part of our system, and is currently too heavily dependent on the drive of individual employees."

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4 VALUE OF ECOSYSTEMS

"The services nature offers us are the true gold standard. Investing in preservation and protection of nature has proved a winning concept for us."

Ray Anderson (Business lessons from a Radical Industrialist, 2013)

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4 VALUE

What types of ecosystem services can be distinguished? The natural production systems for people or <u>ecosystem</u> services can be divided into four types:

1. Production services such as food and timber

Production services are the goods and products that businesses extract from ecosystems. In production services, value is often expressed in the price of raw materials. Businesses from the food and feed sector use these services because they require beef, water or hop, for example, and power companies use biomass to produce energy. Production services are at risk if the ecosystem that supplies these services becomes exhausted.

2. Regulating services such as water management, pollination and climate control

Regulating services are processes such as water purification, pollination and climate regulation. Regulating services serve many end users, making it difficult to give them a specific value. Drinking water companies use the cleaning capacity of sandy soil to purify water for drinking water production. Pollution, for example from crop protection agents, represents a risk.

3. Cultural services such as aesthetics, recreation and inspiration

Cultural services are the intangible services delivered by ecosystems. Examples include services allowing users to experience nature, relaxation, education and inspiration. In this context, values are concerned that give meaning: these can be of spiritual, cultural or historical importance or they may represent our heritage. Cultural services can be translated into individual and personal values. For instance, businesses

Four types of ecosystem services (PBL, 2010)



from the recreational sector and country estates use these ecosystem services for tourism. An excessively protective attitude towards nature represents a risk for the valorisation of cultural services.

4. Support services such as soil creation and photosynthesis

Support services form the basis for living organisms. To illustrate the point, let us consider for example the water cycle, photosynthesis, the nursery function of a coral reef or the phosphate cycle. They enable the production of food and biomass. Because they benefit many different users, supporting ecosystem services, are difficult to trace. Monocultures and the globalisation of trade represent a risk to support services. The soil becomes exhausted and phosphates eventually leach into the sea.

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Who profits from the value generated?

The four ecosystem services categories are interrelated and overlap. An ecosystem often delivers more than one single service. Woodland, for example, delivers wood, purifies water, binds CO2 and regulates the climate. The same woodland offers relaxation for walkers and delivers a protective environment for rare species. The value of ecosystem services is generally determined by different kinds of users. Value can only have meaning when it is clear which stakeholders use the ecosystem. Its value is different for each user and must be determined in consultation with the relevant stakeholders. By answering the question for whom the ecosystem offers value, we can identify potential collaboration partners or clients with whom we can work to strengthen the ecosystem.

Monetarisation of ecosystem services

The advantage of monetarising ecosystem services is that their value is made explicit. Monetary value can contribute to awareness among businesses and offers the possibility to weigh innovations. The value of a service can then be discussed with other users of the ecosystems concerned. At present, a variety of different approaches are being developed for monetarising ecosystem services. The UN has launched a special project entitled The Economics of Ecosystems and Biodiversity (TEEB). Within the framework of this project, the UN has succeeded in translating the value of the ecosystems of a single hectare of tropical rainforest, to mention but one field of application. The TEEB city instrument gives insight into the value of the use of plants and water in urban environments.

What is an Environmental Profit & Loss calculation?

The Trucost company has prepared an <u>EP&L account</u> for PUMA, making PUMA the very first company to place the natural capital it uses on its balance sheet. PUMA uses

ecosystem services to the tune of \in 145 million. Of that total, \in 24 million were spent on CO2 emissions and water consumption. The remainder stems from land use and waste. The most costly contribution proved to come from the use of leather for shoes. PUMA is currently searching for a suitable bio-based alternative.

A pioneering initiative in the Netherlands is offered by <u>True</u> <u>Price</u>. In collaboration with Dutch businesses, this organisation is developing a method for calculating the true price of products. In True Price's future activities, the value of ecosystem services will also be included.

Risks of monetarisation?

The monetarisation of ecosystem services also represents certain risks. For the very first time in its history, the new Dutch Nature Act specifies that nature also has an 'intrinsic' value, a value that cannot be expressed in monetary terms. Natural values are not always exchangeable: how much do we consider the last tuna to be worth? For poor people or for those who are dependent on ecosystem services, pricing may have major negative consequences because it may make these services very costly. Another question would be whether they are in fact authorised to sell the calculated value.

STORIES FROM PRACTICE

Brabant Water, Hortimare, Living on Roofs, Verwolde, Heijmans

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BIODIVERSITY IN OFFSHORE WIND AND BIOMASS



SENIUR SUSTAINABILITY UFFICER SILVAN DE BOER, ENECO Energy supplier for whom sustainability is a priority Bij aanvang vroeg Eneco zich af hoe ze biodiversiteit konden onderbrengen in bijvoorbeeld wind-op-zee projecten. Nu is er onderzoek naar biodiversiteit in relatie tot windparken, zijn er bijen op het dak van het hoofdkantoor en gaat Eneco voor verschillende bedrijfsonderdelen de impact bepalen met partner WNF. Silvan werd ondersteund door trainee Ina Schjelderup.

What is the impact of a windfarm?

"I must admit that biodiversity was not high on our agenda, and that there was some uncertainty about its precise definition. Whenever we would start to talk about biodiversity, people would respond by saying 'there they go again, back to the bees and the flowers'. But biodiversity is extremely relevant, for instance when you ask yourself what influence offshore wind has on biodiversity levels in the area. Research has revealed that certain fish, for example flatfish, avoid wind farms while other varieties such as cod deliberately seek them out. The same applies to birds. Cormorants are attracted by wind farms, but the Northern Gannet prefers a complete reroute. With seals, preference depends on the character of the individual creature. So what then is a windfarm's net impact? And on what? Not on the original system, because that has long disappeared: today's seas are heavily used by increasing numbers of fishing boats and cargo ships. What we have effectively created is a new habitat.

Range of business activities

Biodiversity is relevant to a range of business activities, and it is relevant in different ways. We have built extensive experience

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with the sustainability criteria developed for biomass, and now we wish to develop measurable and uniform criteria for our other projects, so that we at Eneco can stand out from our competitors. By carrying out a quick scan, for example, we can now identify the impact on biodiversity in our chains, also for infrastructure projects. Wherever we identify a negative impact, we immediately investigate how we may compensate for the effect via the REDD++ projects in which we participate.

"Participating in the CoP helped me to strengthen my own convictions"

Introduction into strategy

The first building blocks are already in place. I have published an internal paper and drawn up a biodiversity plan that has been well received by our management. As a consequence, alongside CO2, biodiversity could become an important pillar in our sustainability profile. People from all parts of the company are asking me to explain our vision on biodiversity. This vision must be clearly embedded in Eneco's strategy and thus become a distinguishing element for the outside world. Internally, it is up to us to reach agreement on becoming biodiversity neutral. By working together and establishing new coalitions, I am convinced that these targets can be achieved.

Broad awareness

A growing number of people within our company are aware that the subject is of major importance to us, but we still have a long way to go. Initially, I kept the subject a bit too much to myself, so my next goal is to achieve broad internal awareness. What we need are internal ambassadors, and our links with Leadersfor-Nature are proving useful in this respect. In the long term, new incentives will have to encourage others to actively work towards biodiversity.

Language and tone

Language and tone are vital factors for future success. Our present aim is to focus heavily on internal marketing, on perception and sentiment. For me, it was particularly valuable to see that we can work on this topic with representatives from different generations. Almost by definition and following the nature of this group, younger generations tend to feel more closely connected to biodiversity-related themes than older generations. Biodiversity is not the kind of topic that you can impose on someone; it needs to be received in a natural manner by colleagues who are already relatively close to the subject concerned, for example the Strategy director. Our efforts cannot cease, and we should continue to boost enthusiasm, to inspire and to explain why biodiversity is important."

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5 THE **RELATIONSHIP** BETWEEN BUSINESS ACTIVITIES AND ECOSYSTEMS

"Living life by being connected with yourself, with others, with nature and the Earth is a huge challenge that is facing all of us."

Prinses Irene van Lippe-Biesterfeld

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5 RELATIONSHIP

What different types of relationship can be distinguished?

Inviting a wide range of companies to join the Community of Practice Business and Biodiversity was a deliberate choice in order to learn more from one another. After a number of meetings, it became clear that different groups of businesses saw different perspectives. Some businesses based their ideas on value creation with ecosystem services, while others were focused on reducing their negative influence or impact on the

Relationship between ecosystems and companies. For their

activities, businesses impact or depend on ecosystems.

ecosystem. This diversity, as it turned out, stemmed from the differences in the relationships between the various business activities and the ecosystems concerned. Is the company dependent on ecosystems for its value creation? Does the business have a negative impact via its business activities or do these activities in fact strengthen biodiversity? And precisely which ecosystems are affected by your business operations?

We arrived at a breakdown into three types of relationship between businesses and ecosystems, namely:

- Impact on locations
- Dependency via the value chain
- Pro-biodiversity

Category A. Impact on location

The category 'impact on locations' relates to business activities such as building an office block, a factory or a road, or the extraction of raw materials such as iron or coal. Business activities on a piece of land can disrupt or weaken the local ecosystem. It may become impossible for certain types of animals to cross a road to find a partner, woodland may be felled for mining, and oil production can pollute an entire delta. Business activities in this category are found in manufacturing industries, fossil-based industries, metallurgical and chemical sectors and construction. In their business models, these companies may not be dependent on the living ecosystem,

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but they do have a (negative) impact on biodiversity and ecosystems via raw material extraction and other business activities carried out at a location, such as building.

Category B. Dependency via the value chain

The 'value chain' category comprises businesses that use ecosystem services via the production chain. Examples include businesses in the food sector, drinking water production and the bio-based economy system. Agriculture needs ecosystem services such as clean water, bees and nutrients. Still, this sector may also have a negative impact on soil fertility, and if a water company extracts too much clean water from the dunes, the ecosystem in question dries out and is weakened. Companies in this category are dependent on healthy ecosystems for the continued supply of their products and generally have a negative influence on ecosystems via their business activity.

Category C. Pro-biodiversity

The third category comprises companies whose core business is aimed at strengthening ecosystems. Examples are the cultivation of seaweed for salmon cultivation or the construction of green roofs. Efforts to increase the variety of species on a country estate or in a recreation area also fall into this category. The common element for businesses undertaking probiodiversity activities is that they are able to think and act from an ecosystem perspective.

How to measure your relationship with biodiversity?

To determine the relationship between a business activity and ecosystems, more than 40 different instruments have been developed worldwide. Some of these calculate the impact of a location, of a product or of an entire portfolio. Other methods are aimed at the construction of a qualitative inventory, while others attempt to calculate impact. Yet another category converts the calculated impact into <u>economic value</u>. These instruments differ in terms of the level of knowledge on ecosystems that they require, the data that needs to be collected and the time that is needed to make the calculations.

To decide which instrument you wish to employ, you first need to identify your specific objective. To this end, the following questions need to be considered:

- Do you want to measure phenomena in order to determine the relevance of the theme for your business?
- Do you want to measure phenomena in order to be able to monitor the progress of your biodiversity policy?
- Do you want to measure phenomena to be able to communicate with customers and other stakeholders?
 First, you need to decide on your objective for making the measurement and then you need to identify the most suitable instrument.

The report <u>Making the Invisible Visible</u> offers a clear overview of the various tools. The website <u>The Natural Capital Hub</u> lists a variety of instruments that could prove useful. Natural Capital at Risk shows which sectors and regions have the greatest impact, and in the Netherlands, the Biodiversity Benchmark attempts to provide an indicator for sectors and business activities with a view to charting out biodiversity loss.

For the implementation of the theme of biodiversity in strategy and management, the <u>European Biodiversity Standard</u> can be used. This standard allows businesses to classify their performance on a 10-point scale. For certification purposes, this performance is measured and set against the standard. In the UK, 100 businesses have already applied the EBS system.

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How to innovate?

To direct the process of innovation with respect to biodiversity, a <u>mitigation ladder</u> has been developed. This ladder contains four steps:

1. Avoid negative impacts

Example: Avoid excavating undisturbed peat for intended use as a growing medium

- 2. Minimize negative impacts Example: Reduce raw material production through recycling and cascading
- 3. Restore damage caused Example: Reinstate mine excavation areas through redevelopment
- 4. Offset for remaining negative impacts *Example: Compensate for residual damage caused by dredging via the creation of 'new nature'*

The above steps should be completed in this order.

An ecosystem perspective

By developing a strategy that is specifically geared to the ecosystem on which you as a business are dependent or on which you have an impact, you will gain a completely new innovation perspective. What does the ecosystem need in order to retain its resilience and who else uses or impacts the ecosystem concerned? In this way, you will become aware of all the interactions, the values and risks for your business and the actions needed to allow the ecosystem to recover.

Ecosystem thinking leads to new partners, who you share the ecosystem's value with

By adopting an ecosystem perspective, you will learn who you share the ecosystem with, and you will identify new partners for cooperation and innovation. You can discover the nature of the costs or benefits incurred by other users and the value

Mitigation ladder (BBOP, Rio Tinto and Government of Australia)



that is taken away from or added to stakeholders. You can then start a dialogue with these stakeholders about the redistribution of costs and benefits. By formulating the added value of ecosystem services for different customer groups in real terms, a business model can be established with new products and services. The cases presented in the CoP show that ecosystem thinking truly leads to innovation and cooperation.

STORIES FROM PRACTICE

Eneco, Tata Steel, Kruidenier, Hortimare

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SCAN PLACES BIODIVERSITY IN A BROADER CSR PERSPECTIVE



ENVIRONMENTAL POLICY CONSULTANT EEFKE VAN DEN TILLAAR, TATA STEEL Integrated steel works in the IJmond delta situated

between two Natura 2000 areas

Eefke asked herself the question "To which extent should a steel manufacturer take responsibility for preserving and improving biodiversity?" She now recognises interfaces between biodiversity and other CRS aspects and has gained valuable insights into the impact and dependency between steel business and biodiversity, seen from an ecosystem services perspective.

Starting point: Natura 2000

"Within our environment department, biodiversity was a relatively unknown theme. My attention was drawn to the subject when the implementation of the Natura 2000 policy was presented as one of the most important tools of the European biodiversity strategy. Because we boast a number of Natura 2000 areas in the vicinity of our production site in IJmuiden, the Natura 2000 dossier had already been on our radar for some time.

Link between business and ecosystem services

People and businesses use a variety of different ecosystem services. Humans need these services to be able to live a healthy life. One obvious example for me was the essential human requirement to breathe in fresh, clean air: a regulatory ecosystem service. Less obvious, however, was the cultural value of a specific ecosystem that emerges in people's need to enjoy a relaxing walk in the dunes. The relationship between business and biodiversity only became truly clear to me when I viewed it from the perspective of various ecosystem services.

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Understanding interactions with a No Net Loss Scan

Parallel to our participation in the CoP, a so-called No Net Loss scan was carried out to gain greater insight into the interaction between our business operations and biodiversity. According to an input-output analysis, the various interfaces are specified in a methodical manner. The impact of the steel industry on biodiversity takes place in the process of raw materials extraction, the transportation of raw materials and the integrated steel production process itself. Generally speaking and compared to the production of food, for example, the steel industry is a business sector with a limited direct dependency on ecosystem services. Nonetheless, the production process does have a negative impact on ecosystem services.

CO₂ emissions, water use and land use are key factors regarding the impact on biodiversity

The scan revealed that the primary effects of the steel production chain concern CO_2 emissions, water use and land use. If you consider the impact at a different scale, however, a completely different picture emerges. On a regional scale, for example, NOx emissions play an important role with regard to the nature areas that are already exposed to excessively high nitrogen depositions. On a local scale, light and noise can also be relevant. CO_2 emissions, on the other hand, first and foremost have a global effect.

Biodiversity is inextricably linked with other environmental themes and CSR policy

The total impact of a production process on biodiversity is determined by a variety of indicators, including a number of environmental indicators. Reducing impacts is often driven by win-win considerations (environmental and business) or pushed by legislation. In general, we are already doing a great deal! Given the low dependence/risk status of the steel industry in general, further voluntary impact reduction on biodiversity is not an obvious next step, but in practice, the improvement of environmental performance needs to take into account an integrated approach in which difficult choices become unavoidable. Investing in the reduction of dust emissions to air reduces the impact on health, and investments in the reduction

"An eye opener during the CoP was the clear link between our business and the various ecosystem services"

of NOx emission are important for tackling eutrophication in the surrounding natural environment. However, reducing dust and NOx emissions requires energy, and higher energy consumption is related to climate change. Instead of reducing your impact, it may be easier to deliver a positive contribution to the development of biodiversity (elsewhere or in the form of small local initiatives) or to the development of products ensuring that the impact on biodiversity is reduced throughout the entire product lifecycle. To illustrate the point: lighter steel in cars leads to lower emissions during their economic life, while circular building concepts for steel reduce the use of primary raw materials."

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IMPACT ON 6 LOCATION

"For me, the functioning of organisms and their relationship with one another and the environment is an everlasting source of inspiration"

Louise Vet

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6 LOCATION

What is the starting-point?

Business activities can have a negative impact on ecosystems when they take up a particular location while the business itself is not necessarily dependent on the ecosystem at that location. These business activities have no direct relationship with the services supplied by the ecosystems they affect. Although the company is not dependent on the ecosystem, it can be called to account for its negative impact by others, for instance by local residents who see the name of a company on the sign put up at the construction site. Alternatively, NGOs may call

Business activity such as disruption or pollution has a negative impact on ecosystems.



mining companies to account for the damage they cause to local nature. When biodiversity is under threat, this can lead to damaged reputations or threaten a company's licence to operate.

What is the challenge?

For businesses which do in fact have an impact on biodiversity but which are not dependent on biodiversity, the question arises how far their responsibility reaches and what level of additional cost the company is willing to pay to compensate for its negative impact. After all, such an investment makes no contribution to the direct business process. What do you have to offer in return for the biodiversity loss if you build a new residential community? How can you determine the value of your impact and compensate for any loss? Because emotion often plays an important role for local residents, a rational and carefully considered story is not always enough.

How to measure impact?

A qualitative estimate of the impact on an ecosystem can be drawn up by means of an effect indicator. The Environmental Impact Report contains relevant information. Since 2013, EIRs have been subject to specific guidelines for integrating biodiversity. Using a Societal Cost and Benefit Analysis (MKBA), it is possible to determine the value of nature for relevant stakeholders. On the basis of CoP experience, we recommend including a detailed stakeholder dialogue in a MKBA. The insights generated in this ways will make a discussion about reducing and/or compensating for damage significantly more specific. Because biodiversity often loses out to economic arguments in an MKBA, the Netherlands Environmental Assessment Agency (PBL) is currently developing a method for including biodiversity in this tool. We recommend that considerations concerning biodiversity should

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be explicitly embedded within the MKBA calculation models for area development.

Which innovation strategy to choose?

A first strategy to ensure that fewer materials are needed is recycling. By extracting less raw materials, the burden on biodiversity will diminish. Recycling can in fact even become eco-restorative if, for example, plastic waste from the sea is used. Another strategy for reducing negative impacts is to compensate at another location. The Business and Biodiversity Offsets Programme (BBOP) offers the necessary inspiration. BBOP will help you formulate a strategy for compensation. Another direction for innovation is to add as much biodiversity as possible in building a road, an industrial estate or an office by opting for nature-inclusive building methods or by installing biodiverse roofs. Inspiring examples are the new offices of the NIOO in Wageningen and the policies developed for the Room for the River project. In the Nature Vision 2014 companies and private individuals are called upon to integrate nature in the design and implementation of their projects. When closing down or leaving a location, you can even add to biodiversity. One example is cement company Holcim, which leaves its locations after the excavation cycle with higher levels of biodiversity than these locations demonstrated when the company started its operations.

What is the business model?

For companies in the category 'impact on location', biodiversity is impacted in local interaction. Managing this is essential for the long-term reputation of the business and for an early alignment with possible future developments. What is concerned here is a process of considering investments and calculating effects. Through innovation and cooperation, companies in this category can become eco-restorative and build a biodiversity hub on location. Central in the strategy is an open development process with clusters of companies that increase biodiversity. IUCN is currently working on this topic in the Leaders-for-Nature programme, under the title of <u>'Areas for</u> the future'.

Who are the new partners?

For coalitions formed by companies that wish to add to biodiversity, government can be a key partner. To win tenders for building locations, try to integrate nature objectives in your infrastructure targets and project management, and try to do this prior to the tendering phase. It can be helpful to make a contribution towards achieving the goals laid down in the Dutch Nature Network (formerly the Ecological Main Structure). Make sure that biodiversity goals are integrated at the start of all projects. Investigate together with your partners what the shared interests of nature would be and what tasks and challenges would be involved in the building project. Longterm public-private participation projects in which design, construction and management are included in a single contract can be a particularly good way to move forward.

STORIES FROM PRACTICE

<u>Tata Steel</u>, <u>Eneco offshore wind</u>, <u>Heijmans</u>, <u>Heineken</u>, <u>Interface</u>, Living on Roofs

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Photo: Frans van der Stoep, NoFe

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SHORTER VALUE CHAINS MEAN LESS IMPACT



SUSTAINABILITY MANAGER CHRISTY KOOL, KRUIDENIER FOODSERVICES Food wholesaler introduces ancient Dutch breed to

strengthen Dutch biodiversity

In its role as food wholesaler, Kruidenier Foodservices wanted to demonstrate to its customers the added value for the biodiversity of its products. Christy Kool has been working to develop new value chains from the perspective of ecosystems since 2008. More recently, she has been working on supplementing the biodiversity criterion with sustainability labels. Since 2006, she has been responsible for the criteria for sustainable procurement in the catering sector. Unfortunately, Kruidenier BV had to discontinue its business operations in the spring of 2014. Christy Kool was responsible for HRM, quality and CSR. Since 2014, she has been ambassador for Metta, a new standard for biodiversity.

The 'Blaarkop' cow

"As far back as 2008, we took part in the BioCom project initiated by the Dutch government. Analysis revealed that our beef from Austria was having a major impact on biodiversity, as a consequence of CO₂ emissions resulting from transport. In response, and together with our value chain partners, we launched the Blaarkop project. This ancient Dutch cattle breed is perfectly suited for grazing in the peat pastureland areas of the Netherlands. Peat pastureland is renowned for its high groundwater levels, but it is rather vulnerable. Reducing water levels leads to soil desiccation and salination. land settlement and oxidation of the peatland. In other words, it leads to damage to the ecosystem and the landscape. By taking these considerations as a starting point and by breeding animals that can cope well with a wetland environment, it is possible to maintain the groundwater levels. The Blaarkop cow can live safely in the wet environments of peat pastureland without falling ill or causing the soil to become

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compacted. As a result, biodiversity was retained and the ecosystem was made more resilient.

Turnaround in economic model

The Blaarkop cow is a so-called dual-purpose breed, suitable for both milk production and meat production. We no longer focus exclusively on how much milk a cow can produce, but we are also involved in considering the total valorisation of the animal. In other words, we have to learn to value the different characteristics of the animal. This approach calls for new knowledge among farmers, and a turnaround in thinking. This involves more than focusing purely on biodiversity; in fact, it represents a turnaround in the economic model. To achieve

"The CoP opened up the perspective of a new economic model with other collaborative ventures and shorter value chains"

this turnaround, Christy was involved in the development of the Equal Opportunity Model. The EOM promises to make 'Fair Business' a standard approach according to which producers, customers and financiers are equal partners.

Shorter chains

We establish joint ventures that result in shorter value chains. During the CoP, the idea emerged of joining forces with the water company <u>Brabant Water</u> in order to encourage regional farmers to introduce new farming practices. Brabant Water has reached the Environmental Barometer Sustainable Land Management Gold Standard. When we at Kruidenier purchased products from these farmers, products that were certified with an environmental label classifying them as organic and biodiversity positive, those same products could then be sold to Brabant Water for their company catering. At the time, we also worked with the Municipality of Breda, who had expressed their wish to start selling local products in their company restaurants. By selling to the Municipality of Breda and to Brabant Water, we were able to improve not only soil biodiversity, but also the quality of drinking water in the region, and everyone was able to enjoy delicious local products. Today, I continue to search for ways of completing local cycles of this kind. It is a way of working that is extremely inspiring.

Sustainable procurement policy

Within the criteria set for the sustainable procurement for catering, a start has been made on placing biodiversity 'on the agenda'. According to the <u>Rare Breeds Foundation</u>, all animal products originating from rare breeds are classified as sustainable.

A biodiversity+ label

Viewed in terms of the economic model, the product must be demonstrably more sustainable for the consumer. In this sense, we adhere to a range of independently accredited labels developed for that purpose. Bionext, the umbrella organisation for the organic sector, contacted us because their system of organic labelling lacked measurable biodiversity criteria. We have now joined forces with Bionext and the foundation `Milieukeur' with the aim to include the added value of biodiversity in a uniform certification system: a form of biodiversity+ label, within a green deal."

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PRESSURE FACTORS VIA THE 7 VALUE CHAIN

"Let us not demand more of the Earth. Let us do more with what the Earth provides."

Gunter Pauli in <u>Blue Economy</u>

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7 VALUE CHAIN

What is the starting-point?

Certain companies have direct links with ecosystems because they are dependent on ecosystem services for their raw materials. Examples include businesses in the food, beverage and tobacco sector, the production of drinking water and the paper industry. These businesses need to find a balance between extracting a resource from the ecosystem on the one hand and the natural production and regeneration of the system in question on the other hand. Companies in this category are dependent on healthy ecosystems for their value creation, but

For its activities, a company may depend on and impact the ecosystem, which can lead to exhaustion or overburdening.



at the same time they also impact negatively on these systems, namely via their production chain.

What is the challenge?

Businesses that are dependent on ecosystems via their value chain have a clear need to understand the status of these ecosystems and how they can best measure their impact on these systems. They thus need to identify the risks that they run and how they can maintain their level of production. They also have to determine how they can transfer their investments, the investments that are needed to keep the ecosystem in balance, to the consumer. Still, they are not the only ones to carry responsibility. Other businesses influence the ecosystems as well and bear part of the responsibility. A level playing field is therefore essential for ecosystems to be kept healthy.

How to measure the risks?

One of the first sets of sustainability criteria in which biodiversity was included is the set of criteria known as the Cramer criteria for the production of renewable biomass. One of the indicators listed is that production should not take place in recently reclaimed land, which has been earmarked by government as a protected area or in a zone of 5 km around these areas. A method most suitable for measuring the impact of biodiversity in production chains is the 'pressure factors method'. This method is based on Life Cycle Analysis. In LCAs land use is not included, although land use is an important pressure factor on biodiversity. For this reason, methods such as ReCiPe and the Biodiversity Benchmark have been developed. The Biodiversity Benchmark indicates that 80% of the impact on biodiversity is caused by CO₂ emissions, water use and land use. In other words, once you know precisely where in the value chain greenhouse gases are emitted and/or where exactly water and land are used, you know where to find the major negative

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Pressure factors for beef imported from Austria (BioCom, CREM & The Gemeynt 2011)

Pressure factor (land / CO ₂ / water)	Quantity	Comment
Grassland Austria	1,713 hectares	Conversion of land use in the past; biodiversity value reasonably maintained
Land use Netherlands (offices/distribution centres)	12 hectares	Industrialised land, conversion of land use in the past, little biodiversity value
CO ₂ (equivalent) emissions (methane emission from cattle, energy consumption and transport)	> 20,762,122 kg CO ₂	More efficient transport, other energy sources and changed diet for cattle can reduce emissions
Water use	> 171,250 litres	No water stress in Austria/Netherlands at national level
Pressure factor (other)	Quantity	Comment
Cattle urination (Austria)	25,000,000 litres	Possible effect on soil and groundwater
Solid waste (manure/straw) in Austria and during transport to Netherlands	Unknown	Slaughter in Austria rather than the Netherlands avoids flow of solid waste during transport
Waste water (remains of biodegradable cleaning agent)	Unknown	Litres of cleaning agents used unknown; same for effect on biodiversity
Transport emissions (except CO ₂)	Unknown	Focus on mitigating measures

impacts that a business, product or chain has on ecosystems. You have to determine this level of impact with local stakeholders. The final 20% of the impact on biodiversity relates to issues such as waste. The No Net Loss approach includes land use, energy and waste, and considers the pressure factors land use, CO_2 and water. This pressure factor method was applied to the case of beef from the Kruidenier Foodservices company within the framework of the <u>BioCom project</u>. The <u>TEEB-for-business</u> report lists a variety of businesses that have an impact on ecosystems resulting from their chain of production. Worldwide, much work is underway on protocols and standards, for example by the <u>Natural Capital Coalition</u>. Internationally operating companies can join this coalition. In the Netherlands, the <u>Metta Standard</u> and the Metta Index have been developed. This standard makes it possible to quantify, to reduce and to compensate for the impacts of a business in order to become impact neutral. The Metta Index is a score

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that indicates the degree of impact on the environment, the landscape and the surroundings of an organisation or business in a given year.

Which innovation strategy to choose?

It all starts by saving on the use of raw materials within your own company. You can then look at the possibility of switching to raw materials with a lower impact or to raw materials from other, less harmful areas. Strategies include, for example, producing goods on a more local scale, shortening the value chain, creating a production cycle, or encouraging the supplier to produce more sustainably. To communicate about biodiversity with suppliers and customers, you can use productspecific certification and Environmental Product Declarations.

What is the business model?

Investments to reduce the impact on biodiversity can be recouped by introducing a certificate and/or a label. Research has indicated that consumers are willing to pay approximately 10% more for a sustainable product or service. By developing new certification programmes it is possible to opt for integrating biodiversity in existing programmes. Successful examples include the barometer for land management, the <u>Blue Flag</u> for yacht marinas, the <u>Green Key</u> for hotels, Bionext for foodstuffs, and the Environmental Label for a variety of products. In the valorisation of biodiversity, marketing is an important instrument. Increasingly, however, it is becoming apparent that simply working together in a value chain is not enough, but that an entire sector needs to act together.

Who are the new partners?

It is often necessary to work together with partners in the value chain and certifying bodies. Most of these you will likely have contacted earlier, for instance in relation to your CSR policy. The same applies to another well-known partner, namely the government. Although government has developed a series of criteria and standards for <u>sustainable procurement</u>, biodiversity is often insufficiently taken into account. Many businesses in the category 'ecosystem-dependent' are members of the <u>Sustainable Trade Initiative</u> (IDH) supported by the Dutch government. The IDH aims to encourage sustainable trade chains through certification and sector agreements, and it is active in a variety of chains, including the cocoa, tea, coffee, soy and fish sectors.

STORIES FROM PRACTICE

Brabant Water, Eneco biomass, Kruidenier, Heineken

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WE HAVE DISCOVERED AN ECOSYSTEM STABILISER!



ENTREPRENEUR JOB SCHIPPER, HORTIMARE

Marine farm grows seaweed as an alternative for soy and fishmeal



Job Schipper asked himself the question "How can you" effectively cooperate with other stakeholders in the farming of seaweed?" He has expanded his business model to include biodiversity solutions, and has now positioned his seaweed farm as an ecosystem stabiliser.

Alternative for soy or fishmeal

"We started farming seaweed to extract marine proteins as a sustainable alternative for soy and fishmeal. The process proved to have an immediate and positive biodiversity impact, because it is now no longer necessary to continue fishing for fishmeal or to cut woodland in order to plant soy. In the long term, we hope that farming seaweed will help us to supply at least 20-30% of all the proteins required by fish farms.

Tackling eutrophication

The farming of seaweed is highly effective to tackle the problem of eutrophication. To illustrate the point, let us consider the case of salmon farms, some of which are located in the fjords along the coast of Norway. Nutrients discharged by such salmon farms are easily absorbed by the seaweed. For us, this discharge is extremely valuable raw material. The high-quality marine protein that we generate can then be used for fish feed. Our initial business case was built around the production of these proteins.

A new biotope

But we discovered more. The massive seaweed fields turned out to be a biotope for an extensive range of other organisms. At sea and in the wild, seaweed always starts to grow at the

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level of the seabed. Thanks to our floating seaweed fields, however, we suddenly created a biotope in other, higher water layers: this proved to be beneficial for prawns, mussels and tiny fish that visited the seaweed fields for protection. Another issue that we managed to address relates to the influence of pests such as sea lice. Sea lice move from one salmon farm to the next via the upper water layers, and normally speaking this species has few natural enemies.

"Because I learned to consider the entire ecosystem, I was able to expand our business case"

In Norway, salmon farmers use pesticides to tackle this pest, but all of that poison is discharged into the sea. A seaweed field offers us a solution to this problem, as it is a home to many natural predators of the sea lice, including the lumpfish. The young lumpfish eat plankton, including the larvae of the sea lice, and they also clean the naturally existing fish around fish farms to rid them of their lice. If we put cleaner fish in the salmon cages on purpose, these fish eat the sea lice from the backs of the salmon. In fact, this is already common practice, but we can make another valuable contribution. By selecting locations for our seaweed beds that are close to and upstream of the salmon farms, we expect our seaweed fields to harbour many lumpfish and thus to act as a prevention against sea lice.

No more pesticides

We are now translating our new discovery into a saleable product. We are selling seaweed fields as a solution to the sea lice problem. If salmon farms take action against the sea lice, we expect they will be permitted by the Norwegian government to expand their operations and farm more fish. Hopefully, the regulations that are needed for this to happen will be put in place soon! Salmon farmers can then pay a fee for the right to operate their business on a larger scale and – perhaps more importantly – in a much more sustainable way. Thanks to these solutions, salmon farmers can now select alternatives for the use of pesticides, and this is another development that the Norwegian government has described as particularly promising.

Developing a new business case

Our business case is promising, but not yet fully developed. We are still very much in the start-up phase. We are currently scaling up in Norway, but we are still looking for investors in the Netherlands who wish to help us spread our operations to include the North Sea. We will then need to attract fish feed manufacturers before finally reaching the fish farmers. Effectively, we need to establish an entirely new sector.

The lumpfish, natural enemy to the sea lice, thriving in seaweed fields



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As present, our product is more expensive than soy protein, for example, but the quality is much better. We can offer marine proteins of true fish quality. We have not yet investigated the scale of the effects, but it is my firm belief that the positive effects on biodiversity are immense. We are convinced that fish numbers will grow significantly, particularly if we also plant a seaweed field off the Dutch coast.

Stabilising ecosystems

Over the course of time, biodiversity has become a central element in our business model. Thanks to the proteins that the process delivers, its natural pest controlling effects on sea lice and the improvements it offers in terms of fish numbers, we expect to earn half of our money through biodiversity. I never expected that to be the case. By cultivating large fields of seaweed floating at sea, we can stabilise ecosystems and build a business concept on the basis of an ecosystem service. We are set to be more than profitable."

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8 PRO-BIODIVERSITY STRENGTHENS ECOSYSTEMS

"You only have to kick-start mother nature"

John Liu in Groen goud

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8 PRO-BIODIVERSITY

What is the starting-point?

Pro-biodiversity businesses strengthen ecosystems and add biodiversity through their core business. A large part of the Netherlands consists of natural environments and ecosystems in the form of agricultural areas, country estates and gardens. As yet, however, these areas are insufficiently equipped for and valued as a source of biodiversity.

Business activity operates via dependency and strengthens impacts on the ecosystem, for example by restoration or expanding biodiversity



What is the challenge?

The greatest dilemma for pro-biodiversity companies is that the costs for the enhancement of biodiversity and its continued management are high, and that not all stakeholders who profit from this actually contribute to the costs. The challenge therefore lies in identifying the other benefitting stakeholders and demonstrating to them the value of the ecosystem services. A subsequent challenge lies in establishing close cooperation in search of new business models in which the investments and benefits are redistributed.

How to measure the value?

Measurements in this specific business category are first and foremost focused on calculating the benefits of the ecosystem services and then making them visible. A method developed for this purpose is The Economics of Ecosystems and Biodiversity, or TEEB. The TEEB city tool calculates the societal benefits of green measures and water measures for different designs. Measurements in this category are included in the societal cost and benefit analysis for historical country homes and country estates. The value of pro-biodiversity depends on the ecosystem service itself and the stakeholders who benefit from that service. The short film accompanying the biodiversity action plan illustrates the different values of green initiatives in an urban environment. In determining value, the calculation method for compensation programmes such as BBOP and the payments for leaving forests untouched, as stated in the framework of climate policies such as REDD+, can also be useful.

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Which innovation strategy to choose?

Pro-biodiversity means designing new products & services and tapping into new markets. The newly developed biodiverse roof offers opportunities for hospitals, for example, since patients have been shown to recover more rapidly if the view from their hospital beds is pleasant and green. Another innovative strategy for companies in this category is to offer biodiversity compensation. For this purpose, a system of biodiversity credits will have to be developed. A system of this kind could then be linked to a profit model. One of the barriers that investors are currently facing is that the scale of the projects in question is often too small. For them, combining initiatives could reduce transaction costs.

What is the business model?

Designing a new business model is the central theme of this pro-biodiversity category. Because pro-biodiversity projects often involve highly innovative ways of thinking and observing, numerous structural barriers have to be overcome first. It is then extra important to keep available and possible opportunities strongly in mind. It has proven to be helpful to think in terms of the total cost of ownership rather than merely in terms of construction and maintenance separately.

Who are the new partners?

New coalitions in this category can best be identified by considering other stakeholders who benefit from an ecosystem service that is developed or supported. Together with these parties, new business models can be developed and barriers in legislation and regulations identified. Leven op Daken (Living on Roofs), in collaboration with the Ministry of Economic Affairs, and roof coverers, gardeners, banks, provinces, municipalities and water boards are currently investigating how the benefits for and costs of biodiversity in the water chain can be part of a new financial model via a <u>Green Deal</u>.

STORIES FROM PRACTICE

Hortimare, Living on Roofs, Het Anker, Verwolde, Antropia, Interface

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Make AM

NOURISH YOUR DREAMS AND DARE TO SEDUCE



MANAGER SUSTAINABLE Development Jan Kempers, <u>Heineken Nederland</u>

In Zoeterwoude, the Netherlands' largest beer brewer has created a safe haven for biodiversity.

For Jan Kempers, thinking about biodiversity started with the question what he could do to place it on the brewery's agenda. By sharing ideas with stakeholders, he developed on-site projects that tempted people to consider the subject of biodiversity more deeply. The outcome was amazing. Grass verges were transformed into a paradise for butterflies, and employees built wooden bee hotels. Via the Green Circles programme, Kempers is working on turning the Zoeterwoude branch into a climate-neutral brewery, a sustainable economy and a pleasant living environment. With the Business and Biodiversity Helpdesk, HEINEKEN is now charting out the impact that its raw materials chains have on biodiversity.

Nourishing dreams and measuring on location

"I was contemplating what biodiversity could mean for HEINEKEN. Initially, the general attitude to biodiversity was somewhat sceptical; people here thought that it was not relevant to us. Personally, I find the concept of ecosystem services - considering different ways in which nature may benefit humans and the economy very appealing indeed. Partly thanks to our cooperation with the Province of Zuid-Holland, I have gradually learned that nature is the perfect tool to encourage people to pursue their dreams, and even to seduce them, if I may put it like that. To build that level of seduction. I started to look at what we ourselves could do at our brewery site. The first option I saw was to change our approach to site management. It was a very low-threshold measure, because site management costs money anyway. We invited Alterra to carry out a zero measurement on our behalf to identify our current status in terms of biodiversity. We also asked them to investigate the potential for biodiversity that could be created on our site.

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Visible results

One of our other goals was to achieve visible results. To this end, we removed 6000 m² of grass and planted flower seeds instead. For our gardener, this meant the introduction of a completely new concept, for which he even had to call the assistance of an ecological consultant. For the brewery site, we then commissioned a functional design to investigate what kind of natural environment we wished and would be able to create.

"Taking part in the CoP helped me discover what biodiversity actually means, also in our own lives"

The best option turned out to be a small-scale, flower-rich environment. Because such an environment is highly dynamic, it has significant advantages. If something should go wrong, if you need to build a new installation or use the area to lay a new underground pipeline, all you need to do is remove the flowers, dig the hole, cover it up and replant the patch with new flower seeds.

Supporting the pollinators

We have placed a special emphasis on strengthening the ecosystem's pollination agents, including bees. As most people will know, these pollinators are currently facing tough times. We planted flower bulbs to yield nectar early in the season. In the outer areas of the site, it is possible to introduce large herbivores and to create nature-friendly (river) banks. We also intend to transform the park-like grass areas into flower-rich pastureland. The grass will then only be mowed twice a year, rather than once every two weeks. As a result, the transition to green management will remain budget neutral. In other words, green management with respect for the natural environment is by no means more expensive, but simply different from regular horticultural management, and it also leads to a more attractive result. For 80 firms located in Zoeterwoude-Rijndijk's Grote Polder industrial zone, these arguments were enough to persuade them to join in. The enterprise is not complex, and it is not costly. And above all, it is not only attractive for visitors, but also good for the bees.

Guided tours for colleagues

We have linked our activities to the Green Circles project, which focuses on the various functions of nature and the environment. We also intend to create a fruit community by reviving the old fruit orchard that is still part of our business site. Finally, we intend to lay out trails, footpaths and a vegetable garden for employees. With this project, we have succeeded in making the intangible and technical concept of 'biodiversity' come to life. We have made it visible, tangible and smellable, and we have done this in a convincing manner, thus strengthening our awareness of our local natural environment. Many colleagues have asked for a further clarification of the project, and many of them wanted a guided tour to hear the story behind all the changes. So far, I have taken more than 100 colleagues on a tour of the site, and there is no doubt that the entire office population has been 'set in motion'. People enjoy walking among the flower fields. All that was needed was making an appeal to people's primary feelings and instincts, and letting them experience nature. That is what I seek to achieve. And I must admit that a discussion with the next-door neighbours about the installation of wind turbines feels completely different if you are surrounded by a field full of flowers."

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TIPS FOR INVOLVING 9 COLLEAGUES

"An ounce of hope is worth a ton of despair"

George Monbiot

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9 COLLEAGUES

Internal communication

To move forward in the field of biodiversity and ecosystems, you will need to get and keep your colleagues on board. During the course of the CoP, we collected tips on how to communicate about biodiversity and how to place it on the agenda within your organisation. In other words, how to create internal support and ensure that the subject becomes firmly embedded in people's minds.

Start small

Be modest and avoid too much attention on biodiversity if you do not yet have effective, practical or fun examples. Start small and 'below the radar' by producing an inventory of current issues that share an interface with biodiversity, such as climate policy, reduced water consumption, sustainability of raw materials and sustainable procurement. In addition, check what is already being done in terms of processes related to the licence to operate. Place these current issues within a strategic overview. The inventory will simultaneously serve as a baseline measurement.

Start on location

Make biodiversity tangible by investigating the possibilities at your location. Install a bee hotel, for instance, build a green roof, start a kitchen garden where employees can pick vegetables for themselves, or plant fruit trees instead of shrubs in the plant beds. The more your activities are related to the company's products, the better. Specific activities of this kind can then be expanded over the course of time into regional projects.

Use the right language

To bring and keep people on board, language and the way you frame the subject are essential. For inspiration, consider <u>Branding Biodiversity</u> by Futerra, and John Kotter's <u>Our</u> <u>Iceberg Is Melting</u>. Another example is the resilience thinking project of the Stockholm Resilience Institute which supplies appealing graphics. In all other respects, the general rules apply of effective communication and establishing fruitful

Involving colleagues in biodiversity at Heineken



connections with your target group. Talk to innovative people about new opportunities and ask financial experts for assistance in determining the value of ecosystem services. Make sure to position biodiversity as a component of CSR that needs special attention. Be positive and use humour.

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Use external pressure

External pressure may stem from indexes such as the Dow Jones Sustainability Index. You can organise this kind of pressure yourself. You could, for example, invite the Dutch Association of Investors for Sustainable Development (Vereniging Beleggers voor Duurzame Ontwikkeling) to ask questions about biodiversity during shareholder meetings. Make sure to offer good answers and present a strategy that is reasonable and viable. Pressure can also be exerted by your customers or purchasing clients, in marketing or tendering processes, for instance.

Launch inspiring partnerships

Form a partnership with an organisation that is working on biodiversity and that is used to cooperating with organisations such as the WNF or the IUCN. The IUCN has a network - <u>Leaders-for-Nature</u> – that offers support in formulating biodiversity strategies. The IUCN also organises master classes and supports businesses in drawing up action plans. You can also organise meetings with NGOs to discuss new project ideas.

Ambassadors

Identify ambassadors within your own organisation. Think of young talents, high potentials or people within the innovation department who adopt an out-of-the-box approach. Finally, you can try to find an ambassador for the cause within your company's Executive Board.

Link into existing systems

After some time, you will need to start embedding your results and translating insights into current CSR activities, for example existing ISO systems, climate or innovation policies. Biodiversity in ISO 14001 means adding a plethora of targets to

deliver value. Once you have included biodiversity in the scope, it becomes embedded throughout the system.

Select a quantitative impact target

Companies like Interface (<u>mission zero</u> in 2020), ASN Bank (<u>climate neutral</u> by 2030) and Unilever (<u>Sustainable Living</u> <u>Plan</u>: double turnover, halved footprint by 2020) are already recognizing the internal power generated by a quantitative mission. Learning from these companies will undoubtedly encourage your colleagues to actively contribute their own ideas towards achieving the mission.

STORIES FROM PRACTICE

Eneco, Heineken, Interface, Kruidenier

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SEARCHING FOR A SOCIAL EARNING MODEL



DIRECTOR ERIK STEEGMAN, Leven op daken

Knowledge platform for multiple use of space on green roofs.

With the introduction of their green roofs, Leven op Daken (Living Roofs) aimed at economic appreciation for the enhancement of biodiversity on buildings. The company spotted a number of promising ingredients for a new earning model. Together with conservancies, municipalities, provinces and other stakeholders, it is currently developing a revenue model with a view to accelerating its national promotion.

Increasing attention from construction sector

"My origins lie in the construction sector, where the term biodiversity is little known. The construction sector is familiar with CO_2 reduction and durable materials, but not so much with advancements in biodiversity. It is becoming increasingly clear that current generations have a huge responsibility to stop depleting the Earth's natural resources and exhausting its living environment, and that they should introduce more sustainable practices instead. Additional global trends such as urbanisation and industrialisation have also had a disastrous effect on biodiversity. Against that background, attention for sustainability in the construction sector is growing steadily.

The oystercatcher will nest anywhere

The world of roofs is all about the multiple use of space. Green roofs can be used to increase biodiversity. In spring, for example, oystercatchers build their nests on sedum roofs. This single fact could be used as evidence that green roofs can add biodiversity, but this evidence has turned out to be of relatively limited value. Bird experts describe the oystercatcher as the gypsy of the bird world. They are even happy to nest on gravel

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roofs! This means that creating a truly biodiverse roof calls for greater efforts.

A biodiversity-ready green roof

Together with its partners, Leven op Daken has developed new, durable and environmentally friendly green roof and façade systems, starting with roof gardens that are eventually developed into biodiverse roofs. A building's site furnishings are also included in our recommendations. Rainwater drainpipes are disconnected, water buffering is carried out on the roof itself, and business premises are given a water-storing biodiverse landscape, with a wealth of natural flowers, insect hotels, water features and wadis. The entire development is created in four stages. In phase one, we start with the Leven op Daken biodiversity-ready green roof. In phase two, we select the necessary vegetation. Phase three identifies facilities for insects and birds, and phase four focuses on local bees and bats. We asked the Helpdesk Natural Capital to formulate recommendations for us on the added value of the biodiverse roof within the sustainable building label BREEAM.

A mixed working group

We set up a working group that brought together a number of (grey) roof coverers, green gardeners and landscapers, with a view to developing an integrated approach to the roof-building process and to prepare a clear overview of related advantages. As a result, we can now build green roofs that deliver ecosystem services such as capturing fine particulate matter, reducing the cooling burden in buildings, reducing heat stress in cities, buffering water during heavy rainfall and increasing biodiversity. A green roof has a longer useful life than a black roof, and solar panels generate a higher yield when combined with other green initiatives.

A new earning model

We concluded that we had to find a new earning model. And once you have the advantages of a green and biodiverse roof, you can co-finance. The municipality, for example, can save on costs concerning expansions to the sewer system if there are green roofs that buffer water. At present, however, such savings do not return to the party investing in the roof. This is why we propose lower sewage charges for owners of green roofs.

"The CoP has definitively helped me change colour from grey to green"

This requires a national stimulation programme undertaken in collaboration with industry, banks, municipalities, provinces, central government and the water boards. Together, we will embark on the search for a new social earning model based on a win-win-win principle.

A new Green Deal

We have already financed the initial study for a Green Deal Green Roof Use. This <u>Green Deal</u> was signed on 10 September, and I am proud to say that the theme has generated considerable enthusiasm among a variety of market and government parties: it is a good fit with the tasks associated with climate adaptation. A previous study conducted by the Ministry of Economic Affairs related to TEEB in the city has certainly been a major help. We are very positive about the deal."

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10 INCLUDE **STAKEHOLDERS** IN THE CONTEXT

"We are shifting from controlling to improvisation. Anyone who works on resilience has to learn how to deal with unexpected events through trial and error"

Trend Speech 2014

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10 STAKEHOLDERS

Context

Any company that wishes to develop biodiversity will likely face many barriers, such as legislation that hinders innovation, a lack of knowledge and consumers unwilling to make an effective contribution. Innovations aimed at retaining biodiversity and strengthening ecosystems are often system innovations. And system innovations require a change in technical, social, economic and cultural aspects. To include all of these, other actors such as governments, NGOs, knowledge institutions and banks need to put in an effort and contribute their share. Below, we list a number of actions for these systemic actors.

The role of government

Policy instruments that are available to government to support companies in working to preserve ecosystems concern the following:

- Including biodiversity in <u>sustainable procurement</u>, tendering and sustainable GWW
- Providing information on the status of ecosystems, for instance with the <u>Atlas Natural Capital</u>
- Increasing awareness, for example via a helpdesk Natural Capital
- Increasing transparency, for example via initiatives such as the Green Deal Transparency of Natural and Social Capital
- Establishing and facilitating a regional Community of Practice
- Building and facilitating new coalitions around ecosystems
- Entering into <u>Green Deals</u> for biodiversity and new business models
- Providing room for experiments

- Offering fiscal support
- Adjusting bottlenecks in legislation and regulations by listening to pioneers.

The Business for Social Responsibility (BSR) network has recently published a worldwide <u>inventory</u> of policy instruments of governments.

Questions for science

Biodiversity in relation to business calls for a great deal of new knowledge. The CoP has drawn up a knowledge agenda which has revealed that knowledge in the following areas should be increased and made accessible:

- The status of ecosystems in the Netherlands and in the world
- · The scale on which ecosystems operate
- Determining the responsibility and strategy in respect of ecosystem services used by multiple stakeholders
- The meaning of ecosystem conservation with regard to their dynamic character
- Questions relating to measuring impacts and indicators
- Embedding biodiversity in existing instruments (labels, tax schemes, subsidies, sustainable procurement, tendering, etc.)
- Developing new instruments such as biodiversity credits and habitat banking
- The search for new business models.

Collaboration with NGOs

Nature and environmental organisations are increasingly often approached by companies for ideas and collaboration. WNF and the IUCN's <u>Leaders-for-Nature</u> programme already have several years' experience in cooperating with businesses with regard to biodiversity.

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An NGO has much to offer:

- · Development of a shared language on biodiversity
- Providing knowledge on the status of ecosystems
- Gaining insight into other parties that benefit from ecosystems
- Entering into a dialogue on the value of ecosystems
- Establishing a partnership to develop new business models
 for generating profit from ecosystem services
- Assisting in obtaining support from municipal authorities
 and local residents
- · Developing new services such as habitat banking.

<u>CSR Netherlands</u>, an organisation focused on corporate social responsibility in its broadest sense, is increasingly focusing on the topic of natural capital.

Stimulus from the financial sector

In terms of promoting biodiversity, the <u>financial sector</u> has a special role to play: they can act as 'enablers'. Banks and other financial institutions can give a clear boost to companies incorporating biodiversity in their strategies. They represent a special category in addition to 'location', 'value chain' and 'probiodiversity'. The risks and opportunities relating to biodiversity directly affect their investment interests. Possibilities for these financial companies include the following:

- Assisting biodiversity initiatives in sectors or businesses with high negative impact on ecosystems.
- · Fulfilling an advisory role via engagement policies
- Increasing awareness within Executive Boards by asking questions at shareholder meetings
- Playing a bridging role in new business models
- · Including biodiversity in sustainability training programmes
- Developing financial incentives.

STORIES FROM PRACTICE

Living on Roofs, Het Anker, ASN Bank, Heijmans, Tata Steel

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KEEP INNOVATING AND BECOME ECOSYSTEM RESTORATIVE



HEAD OF SUSTAINABLE DEVELOPMENT GEANNE VAN ARKEL, INTERFACE World market leader in modular floor coverings. Interface is committed to Mission Zero and aims to eliminate any negative impact it may have on the environment by the year 2020. It is their goal to become a restorative company by creating a better interior and environment through the production of carpet tiles that have no negative impact on the Earth. Together with an NGO and Filipino fishermen, the company has set up a cross-sectoral partnership to purchase ghost nets that are dumped into the oceans and on the beaches. These nets are then recycled into yarn for Interface carpets. In this way, the company's Mission Zero leads to continuous radical innovation, holistic design and restorative sustainability.

Mission Zero

"The book The Ecology of Commerce, with a special chapter on biodiversity loss, was the basis for the vision developed by our founder Ray Anderson, who named it Mount Sustainability. Once you reach the mountain's peak, you will have no further negative impact, and your positive impact turns into opportunities for restoration. We aim to have achieved this by <u>2020</u>. Back in the nineties, we asked sustainability experts for help to develop a business strategy that is based on how nature works. Thanks to learning from nature and <u>biomimicry's Life's Principles</u> in combination with the system conditions of The Natural Step, we now have a sustainability strategy that truly helps us to work as an eco-system in line with our planet's boundaries.

Start by reducing CO₂ emissions

To achieve our objectives, we are working hard at all of our production locations to reduce our CO₂ footprint. In our

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operations in Scherpenzeel, for instance, we're already working with 100% biogas, 100% green electricity and a closed water system. In 2014, the CO_2 output from our European production processes was reduced by as much as 98%.

Working on repair, reuse and recycling

We have also created new business models: first by selling maintenance services to extend the life of the flooring and then by encouraging its reuse. When one client wants to have a new floor, the old floor can be given a new life with another customer

"I don't see biodiversity as a narrow definition, but I regard it as a system approach for creating multiple sustainable values"

- and maybe even a third life. At a certain moment, however, our carpet tiles reach the end of their useful life, a point at which Interface can recycle them into raw material. And we do more: we not only focus on the end of our product's life, but we also manufacture our tiles with either recycled or bio-based materials.

Raw material from old fishing nets

The journey to a mountain's summit has many different routes; no single solution will ever be the one and only solution. For biodiversity, too, we need a variety of different solutions. Together with our yarn supplier, for example, we have joined forces to develop 100% recycled yarn created from recovered carpet yarn. Together with <u>The Zoological Society of London</u>, we discovered that every year more than 600,000 tonnes of fishing nets are dumped into the sea as waste, while more than 660 million people are dependent on that same sea for their food. We partnered in <u>Net-Works</u> to collect nets in small coastal communities in the Philippines. These old nets are then delivered to our yarn supplier. In this way, the fishermen in the Philippines become a material supplier in a circular economy, and at the same time they make a contribution towards solving a biodiversity problem in their environment by restoring the ecosystem. Birds, fish and also coral reefs no longer become entangled in fishing nets that have been dumped in the area, and the initiative also strengthens local communities. These communities can earn additional income and save money for future investments and education for their children.

Radical transparency

You need to have a thorough understanding of the environmental impact of the raw materials you use. Increasingly, these impacts are outlined in so-called <u>Environmental Product</u> <u>Declarations</u>, based on objective lifecycle analyses. An EPD helps you to compare the impact of the various products. A proper understanding of the environmental burdens in the supply chain also helps you make the right choices in your plans and designs for an inclusive circular economy.

Dynamic definition

I have reached the point where I wonder if we still need to come up with new ways of measuring our impact on biodiversity. I believe that biodiversity is in fact dynamic. It is not about the number of birds; it's diversity that we need. What you should do is to ensure that the necessary system conditions are in place. Nature will then create circumstances that are conducive to life. We don't need to measure things with near-limitless precision

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before we can decide what we actually need to do. Parameters are obvious and crystal clear if you work according to the system conditions outlined within the framework for strategic sustainable development of <u>The Natural Step</u>."

11 TRANSITION Towards a sustainable society

'I view the world as a collection of processes in which innovation is about changing relationships'

Caroline van Leenders

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11 TRANSITION

The biodiversity transition

The transition towards a system in which businesses include biodiversity in their practice is in its pre-developmental stages. Urgency and innovation are growing, but pressure on business regimes and room for alternatives remain limited. Although the first businesses have identified the necessity for action-oriented strategies, the nature of the challenge remains broad, diffuse and unstructured. This is the conclusion formulated by transition institute Drift in the transition perspective it prepared on behalf of the CoP B&B.





By distinguishing different categories, we have attempted to structure the discussion.

Images of the future

In order to work together on a transition, a vision for the future is essential. Here, too, it is important to distinguish between the different categories listed in this publication. For example, businesses that have no direct visible relationship with ecosystems but that do have direct ties with the land on which their buildings are located can contribute to a vision of the future at local, regional and international level. In their own local environments they can optimise biodiversity, they can compensate for their impact in the region, and they can contribute indirectly by reducing CO_2 emissions.

A number of companies have direct links to natural ecosystems, because they extract their raw materials and natural products from these systems. In the future, it is essential that these ecosystems do not become overburdened by extraction. To develop a vision of the future, it is vital that producers gain a tighter grip on the various links in the production chain. To achieve sustainable production, it will be necessary to switch to other raw materials, to obtain the raw materials from other less burdened areas or to collaborate with businesses adding biodiversity. In this respect, agricultural areas, country estates and gardens have immense biodiversity potential. To fulfil this potential, it is important that the relevant businesses, governments and consumers recognise the value of these ecosystems.

Contributions to the transition by the CoP B&B

The CoP B&B was one of the very first Green deals in a large group of deals aimed at sustainable energy. In 2013, the Green Deal CoP B&B won the runner-up award, a prize for

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a Green Deal that demonstrated clear results, offered green and growth potential and delivered outstanding performance in terms of cooperation and innovation. The award, organised among the 151 Green Deals, was presented at the Innovation Relay on 12 November. The jury report said of the entry: "The Green Deal Business and Biodiversity is hallmarked by unexpected collaboration between a variety of businesses and has developed a different, joint and innovative vision on ecosystems. This deal has achieved excellent results and has already led to the establishment of other Green Deals."

Results

So precisely what are these excellent results? At the level of the individual companies, the participants have achieved accelerated results in their own practices and, thanks to focusing on the subject of biodiversity; they have acquired a broader perspective. Some participants have achieved greater internal support, and others have gained a better understanding of the context of their activities in relation to municipalities, water treatment companies, customers and local residents, to name but a few relevant parties. All of them are convinced that through the CoP and the subject of biodiversity they have significantly broadened their vision.

At the level of the economic system, the CoP has contributed to the realisation that biodiversity is not solely a question of the extinction of rare species, but that a comprehensive system view is required to preserve the ecosystems on our planet. It has also become clear that attention for ecosystems leads to new knowledge, new innovation opportunities and unexpected coalitions with other businesses, government and NGOs. Furthermore, the CoP has structured the debate by developing three categories and thereby creating more and broader perspectives for action. The group's own diversity has made it clear that it is not merely a question of working towards No Net Loss, but that it is also necessary to work towards ecosystem <u>strengthening</u> and resilience.

Process management of a CoP

But what then is needed to achieve these results? A CoP works like a collective brain, and it creates room for learning. In this way, change can be achieved in a variety of ways, from cautious and slow to tempestuous and light-footed. All of these characteristics were reflected in the process and its results. Initially, some participants were a bit cautious, only to accelerate at a later stage, while others continued at a steady pace to arrive at the intended outcome. All in all, it proved to be the people who were the secret to the success of the CoP B&B. The CoP offered a reliable and solid structure in the process and freedom in terms of content. All participants entered the arena with an open and curious attitude; they clearly demonstrated a focus on their own practices and an eve for the overall situation. Their work was founded on a positive intent and a willingness to change. Any tension that emerged was openly discussed in an atmosphere of energy and active involvement. For a more detailed assessment, we suggest you read the essay 'A CoP as an instrument for accelerating the transition to a sustainable society'.

It is crucial that the participants set the agenda, that the CoP includes people who are capable of translating information into their organisations, leading their company in the desired direction and focusing on the context of the business. It was considered highly valuable that meetings were organised at the location of each participant, so as to take a good look behind the scenes. During the meetings, inspiration from external experts and presenters was sought; questions were discussed in depth and exchanged with one another. A CoP almost

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naturally takes on its own logical structure: three meetings to investigate the theme, then five meetings for in-depth practical study, followed by a few final meetings for distributing ideas and embedding the results in the broader context. Other lessons learned include the notion that in order to broaden impact, additional meetings are needed with NGOs, academics, civil servants, and other potential stakeholders. In addition, the CoP confirmed that it is important to keep your eyes open at all times in order to pick up on opportunities that arise along the way. Reflective monitoring played an essential role in making the ultimate results visible.

A new CoP, a new Green Deal and new outcomes

In addition to the results already outlined earlier, a new Green Deal has been signed as a result of the CoP that focuses on <u>green roofs</u>. Together with municipal authorities, academics, financial institutions and other businesses, one of the participants, Living on Roofs, is currently developing a new social business model. The Green Deal offers support in the joint utilisation of opportunities, and the removal of obstacles.

Thanks to participation by ASN Bank, a <u>new CoP</u> has also been launched in the financial sector. In 2014 and 2015, participants from twelve financial institutions including banks, insurers, pension funds and private equity considered issues such as: How can financial institutions contribute to conserving and improving biodiversity? What are financial institutions already doing and what instruments are available? How is information collected? What activities can best be tackled jointly?

The scientific questions that have been formulated so far will be integrated in the new NWO programme 'new business models and biodiversity'. And finally some participants continue to work on biodiversity beyond the scope of their companies. One participant, for example, is an active contributor to a government policy programme on nature-inclusive building, another is the driving force behind a <u>foundation</u> for the certification of biodiversity and a third participant has become a country estate coach for biodiversity. At the request of the CoP participants, a reunion meeting was organised to keep the network alive. It is our firm belief that new and surprising initiatives will continue to emerge.

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Interface, ASN Bank, Living on Roofs

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HOW CAN A BANK HAVE A POSITIVE IMPACT ON BIODIVERSITY?



CLIMATE AND BIODIVERSITY ADVISORS Jeroen Loots and Irene de Jong, Asn Bank

Sustainable bank is looking for No Net Loss investments.

ASN Bank entered the Community of Practice armed with questions on how to further incorporate biodiversity into its business. How can measurable targets be set to have a positive impact on the biodiversity of its investments? Based on the experience gained within the CoP Business & Biodiversity, a separate CoP has now been launched within the financial sector to exchange information and best practices.

Inspired by Interface

Biodiversity is one of the three pillars of ASN Bank's sustainability policy, alongside human rights and climate. During the session held at <u>Interface</u>, it became apparent that setting solid and measurable targets for sustainability is a highly motivating process that sparks a wealth of creativity and innovation within the organisation. This inspired us to set concrete targets for ASN Bank. As far as we know, we are the first bank in the world to have set itself the <u>ambition</u> of becoming fully climate-neutral by the year 2030. The challenge now is whether we can formulate a similar target for biodiversity.

Biodiversity is difficult to measure

Similar to 'climate', 'biodiversity' is a complex and multifaceted subject. Although businesses are starting to be more and more transparent about their CO_2 emissions, they rarely report on their biodiversity impact. Therefore, it is difficult to measure the performance of businesses and other institutions in this field. We have formulated not only a policy on biodiversity, but also

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a set of criteria that we apply when excluding investments in shares and (government) bonds. We exclude certain sectors such as those involved in mining and fossil fuels, and we study the policies of businesses and investigate related controversies. Biodiversity is also an important point of attention in the shareholder meetings of listed companies in which we have voting rights on behalf of the ASN Investment Funds.

The office

ASN Bank's only office is fully climate neutral. We are working to reduce the levels of our paper use: we exclusively use FSC-certified and fully reused paper, and our catering is fully organic. Inspired by Kruidenier and Heijmans, we have included biodiversity as a separate area of focus within our ISO 14001 programme.

Baseline measurement

At present we have insufficient insight into measurable indicators and results. In practice, we essentially implement our policies by excluding or avoiding investments in companies, institutions, countries and projects which are harmful to biodiversity. We are currently charting the footprints of our investment portfolios. These baseline measurements can then be used as a starting point for further reducing our impact and setting a long-term goal for biodiversity. We also plan to investigate how we can contribute to a positive impact on biodiversity via financing.

International cooperation

We have committed ourselves to the <u>Natural Capital</u> <u>Declaration</u>. The NCD is an undertaking launched by banks, investors and insurance companies to adapt the business model of the financial sector in such a way that it includes natural capital. The NCD has now developed a methodology according to which the financial sector can measure biodiversity, but it is not yet available as a ready-made and instantly usable measuring method.

"In the CoP, Interface showed us the power of a clear and quantitative goal"

A new CoP

We wish to place biodiversity firmly on the agenda of the financial sector. We aim to embark on this venture alongside other pioneers, so that other companies can also learn and work alongside us. We asked the Ministry of Economic Affairs to investigate the possibility of a <u>CoP in the financial sector</u>, and we are greatly pleased to see that it is now fully operative. Within the CoP Business & Biodiversity we sometimes felt a bit like outsiders in a separate category: the enablers. What we now need to do is to cooperate with and motivate other players from the financial sector. The central questions facing us now call for clear and effective answers: How can financial institutions contribute to the conservation and improvement of biodiversity? How can we set ourselves a task in this field, and how can we make it measurable?

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Like our honey. Fees! as we like our bees! Nederlandse Honing Landgoed de Reehorst Imkers lebe en Ingrid Monderman

Antropia Hoofdstraat 8, 3972 LA Driebergen

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THE ECOSYSTEM PERSPECTIVE GIVES A VIEW AT YOUR REGION



BUSINESS MANAGER WARONNE ELBERS, <u>Antropia</u>

Sustainable conference centre on the Utrechtse Heuvelrug.

Waronne talks about how biodiversity is very much part of her life and in her being, how she embedded it within her organisation, Antropia, and how she has now broadened her perspectives. Antropia brings its visitors into contact with the ecosystem in many ways, for instance via its local honey and bee workshops. Waronne operates as the business manager for Kasteel Groeneveld, a former castle that is now owned by the Dutch National Forest Service Staatsbosbeheer.

Biodynamics: rethinking agriculture

"I received my education at the biodynamic school for agriculture and horticulture, as a result of which nature and thinking in terms of crop cycles and seasons has become solidly embedded in my consciousness. Antropia has been managed for years according to the principles of biodynamics, and the design of our building is fully organic. At Antropia we believe that everything on our planet is connected with everything else, and that everything you do has an influence on the overall picture. When we consider our value chain, we also automatically consider the impact of our actions on this chain, and so all our purchases are sustainable. As much as possible, we opt for local products, and wherever possible we retain residual flows on site, for instance to be used as nutrients for our land. The layout of the car park area, which in our case lies at the very centre of the estate, has been integrated into the environment as naturally as possible.

Unconventional choices

In making decisions, we are constantly on the lookout for possibilities that are both economically healthy and enriching for individuals. As a result of our ecological principles and standards,

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we regularly face complex dilemmas that call for a considerable degree of product knowledge. This means that we often need to make unconventional choices. To give you an example: in the hotel, restaurant and catering sectors, recycling materials and refurbishing furniture are relatively unusual, but both approaches are in fact particularly attractive for all concerned: not only in terms of ecology, but also from an economic point of view. As a result, we are probably one of the slowest-moving catering businesses in existence. We are not a fast or trendy business, but this appeals to and matches our target group. Fortunately, the financial crisis has left us practically unaffected. What we saw amounted to a downturn of as little as 10% per year, as opposed to the 30% slumps experienced by many others.

Dispose or recycle

Our tableware had come to the end of its life cycle and was ready for replacement. When we investigated our options, we found that disposable tableware would be better for the environment only if it was made from recycled paper. We

"The group's diversity has helped me to realise that as soon as you start looking beyond the scope of your own business or your own value chain, you come into contact with biodiversity" then visited a tableware factory and asked them to explain their entire production process. We now know that the company that manufactures our cups uses hydrogen peroxide rather than chlorine to bleach its porcelain. This has a far less negative impact on biodiversity. To make things even better, we have now also applied the same approach for our washing agents.

Bee colony

We have a bee colony to help maintain the bee population and to increase their numbers. To make sure that the bees are able to find sufficient food, we have planted willow woodland. By way of incentive and as an appetiser for our guests, we serve the honey we extract from no fewer than fifteen beehives during business lunches, and we sell pots of our honey to visitors. Our next idea is to invite all the conference centres that located on the Utrechtse Heuvelrug to join forces and develop a honey-based sweet that can be handed out to conference visitors. Our beekeeper also provides bee workshops on request. At the end of the day, most participants realise that there are numerous similarities between the ways in which industry and a bee colony operate. With that in mind, visitors can reflect on nature while enjoying a pleasant and educational break during the course of their conference day.

Permanent development

We aim to include biodiversity as much as we can and in any change we introduce. For a business that operates completely ecologically, biodiversity is immensely important. It is vital to have constant access to an environment in which continuous development processes are facilitated and promoted successfully. It also means that you have to decide how far you are willing to go, not only in terms of people but also in terms of the entire planet; after all, the Earth is the feeding ground for mankind. It is as simple as that."

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EPILOGUE

The participants in the Community of Practice Business and Biodiversity have demonstrated their intense involvement and the contributions they have made are truly considerable. During the last meeting, they expressed their wish to hold another five sessions, in order to further embed newly acquired knowledge in their practices and to learn from the newly created sense of cooperation. We would like to thank all participants for their openness and trust, something which greatly helped to make the Community 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.

The Community of Practice was made possible by RVO.nl and the Ministry of Economic Affairs (EZ). We would like to thank Martin Lok (EZ) and Henk de Jong (EZ) for embracing the initiative of the CoP and for their assistance in linking the activities of the CoP to policy. PhD candidate Frederiek van Lienen was involved in organisation monitoring, as a result of which we retained a clear view of the knowledge issues and policy themes. We would also like to thank Frederiek for her initial contributions to this publication. Our thanks also go to the knowledge programme Duurzaam Door for making it possible to publish this document.

Every six months, the sounding board group reflected on results, with feedback on the developments from their environment. We are grateful to IUCN, VNO-NCW, CSR Netherlands and the Ministry of Economic Affairs for their constructive involvement. We would also like to thank Jetske Bouma for her clarifying ideas concerning the three categories distinguished here and Wijnand Broer for his reading of an earlier version of the text.

We hope that the insights that emerged from the CoP via the participants and this publication will continue to inspire and accelerate the transition for Business and Biodiversity.

Caroline van Leenders (*Rijksdienst voor Ondernemend Nederland*) Ireen de Nijs-Vergeest (*Rijksdienst voor Ondernemend Nederland*) Anne-Marie Bor (*AMBOR creatie*)

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FURTHER READING

1 COMMUNITY OF PRACTICE Business and Biodiversity

 Booklet: Ten tips for clever change, van Leenders 2009: www.transitiepraktijk.nl/en/experiment/publications

2 URGENCY FEEDS AMBITION AND INNOVATION

- Millennium Ecosystem Assessment: <u>www.millenniumassessment.org</u>
- Global Biodiversity Outlook: <u>www.cbd.int/gbo4</u>
- Planetary Boundaries: <u>www.stockholmresilience.org</u>
- Earth Overshoot Day: <u>www.footprintnetwork.org</u>
- YouTube: <u>Nature Is Speaking</u>
- Sustainable Development Goals (14 Life below water, 15 Life on land): http://sustainabledevelopment.un.org/topics

- BIODIVERSITY, NEW DEFINITIONS
 Convention on Biological Diversity: <u>www.cbd.int</u>
- www.pbl.nl/en/topics/nature-landscapes-and-biodiversity

4 VALUE OF ECOSYSTEMS

- Overview of ecosystem services (Table 2): <u>www.wri.org/ecosystems/esr</u>
- YouTube: <u>The Science of Nature</u>
- YouTube: Super-duper-solar-powered-everything-machine
- The Economics of Ecosystems and Biodiversity: <u>www.teebweb.org</u>
- Atlas Natural Capital: <u>www.atlasnatuurlijkkapitaal.nl/en/home</u>
- http://themasites.pbl.nl/natureoutlook/2016/
- <u>www.naturalcapitalcoalition.org</u>
- www.trucost.com/environmental-profit-and-loss-accounting
- www.trueprice.org

5 THE RELATIONSHIP BETWEEN BUSINESS ACTIVITIES AND ECOSYSTEMS

- Short film: <u>www.pitchfornature.com</u>
- Network: <u>www.leadersfornature.nl</u>
- EU Biodiversity and Business platform: <u>www.ec.europa.eu/environment/biodiversity/business/</u>
- www.naturalcapitalhub.org
- www.teebweb.org/areas-of-work/teeb-for-business
- World Business Council for Sustainable Development: <u>www.wbcsd.org/work-program/ecosystems.aspx</u>
- Manual Eco4Biz: <u>www.wbcsd.org/eco4biz2013.aspx</u>

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6 IMPACT ON LOCATION

- Green Infrastructure: <u>www.ec.europa.eu/environment/nature/ecosystems/</u>
- Green Circles: <u>www.groenecirkels.nl/en/Green-Circles.htm</u>
- Green Infrastructure for Tomorrow Together <u>www.gift-t.eu</u>
- Business and Biodiversity Offsets Programme <u>http://bbop.forest-trends.org</u>
- www.business4bees.com

7 PRESSURE FACTORS VIA THE VALUE CHAIN

- www.unglobalcompact.org
- The Sustainable Trade Initiative: www.idhsustainabletrade.com
- www.mvorisicochecker.nl/en
- www.pbl.nl/en/publications/sustainability-of-internationaldutch-supply-chains-progress-effects-and-perspectives
- www.metta-standaard.org/en/top-2/home-en/

8 PRO-BIODIVERSITY STRENGTHENS ECOSYSTEMS

- http://en.biodiversiteit.nl/bap
- www.net-works.com
- www.commonland.com/en

9 TIPS FOR INVOLVING COLLEAGUES

- Publication Branding Biodiversity: www.wearefuterra.com/our-projects/branding-biodiversity/
- Book: Our Iceberg Is Melting, John Kotter, 2006
- www.stockholmresilience.org/21/research/what-isresilience.html

10 INCLUDE STAKEHOLDERS IN THE CONTEXT

- Public sector: <u>www.bsr.org/en/our-insights/report-</u> view/global-public-sector-trends-in-ecosystemservices-2009-2013
- LinkedIn group: CoP Financial Institutions and Natural Capital
- Community of Practice Financial institutions & Natural Capital: <u>www.amborcreatie.nl/en/CoP_FiNC</u>
- Cooperation financial institutions and natural capital: <u>www.naturalcapitaldeclaration.org</u>

11 TRANSITION TOWARDS A SUSTAINABLE SOCIETY

- Transition tools: <u>http://www.transitiepraktijk.nl/en/</u>
- Six scenarios for nature (page 14), Key Findings 2011, UK National Ecosystem Assessment: http://uknea.unep-wcmc.org



ABBREVIATIONS

BAP	Biodiversity Action Plan	NWO
BBOP	Business and Biodiversity Offsets Programme	PBL
BES	Biodiversity & Ecosystem Services	REDD
BSR	Business for Social Responsibility	
CBD	Convention on Biological Diversity	RVO.nl
CoP B&B	Community of Practice Business and Biodiversity	TEEB
CSR	Corporate Social Responsibility	VAMIL
DANK	Digital Atlas Natural Capital	WBCSD
EBS	European Biodiversity Standard	
EHS	Ecological Main Structure (Dutch Nature Network)	WNF
EOM	Equal Opportunity Model	
EP&L	Environmental Profit & Loss	
FSC	Forest Stewardship Council	
GWW	Civil and Hydraulic Engineering	
IDH	Sustainable Trade Initiativel	
IUCN	International Union for Conservation of Nature	
LCA	Life Cycle Assessment	
MEA	Millennium Ecosystem Assessment	
MER	Environmental Impact Report	
MIA	Environmental Investment Allowance	
MKBA	Societal Cost Benefit Analysis	
CSR	Corporate Social Responsibility	
NCC	Natural Capital Coalition	
NCD	Natural Capital Declaration	
NGO	Non Governmental Organisation	
NNL	No Net Loss	
NKN	Natural Capital Netherlands	

Netherlands Organisation for Scientific Research
Netherlands Environmental Assessment Agency
Reducing Emissions from Deforestation and forest
Degradation
Netherlands Enterprise Agency
The Economics of Ecosystems and Biodiversity
Arbitrary depreciation of environmental investments
World Business Council for Sustainable
Development
World Wildlife Fund

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