Green Heritage

Dutch design
Foreword
The Millingerwaard. For a few years now, the Waal River has been able to run free again in this unique location situated between Nijmegen and the German border. Secondary channels have been dug in the alluvial meadows, giving the water plenty of room and keeping residents dry. Nature now derives maximum benefit from the dynamic processes that have been given a second chance in this area. The original river landscape and its great species diversity is returning. The Millingerwaard is also very popular with tourists for this reason: Delta nature as a source of income and a response to climate change.

The Westerkwartier, a varied and characteristic cultural landscape in the province of Groningen, is one worth nurturing. For years, Staatsbosbeheer has been working very closely with local residents and businesses to preserve the typical landscape, by managing and maintaining shelter belts, for example. Farmers naturally play a major role in this regional cooperation. This guarantees food production and employment, preserves the landscape, and protects and develops nature.
The New Holland Water Defence Line. Once intended as an ingenious system to flood the land and ward off the enemy, this is now a series of beautiful monumental sites throughout the western Netherlands, where bats can hibernate, artists can work, and businesses can continue to earn money. They also happen to offer the perfect rest stop for cyclists and hikers.

These are just three examples that offer insight into the great diversity of areas that Staatsbosbeheer protects, manages and develops on behalf of society. Apart from its wealth of plants and animals, this multi-functional nature also offers value for other cultural, social and economic objectives.

Founded in 1899, the organisation had to tame uncultivated lands, supply timber for the mines, and during crisis and other years, provide employment. Nowadays, Staatsbosbeheer contributes to the bio-based economy through the sustainable harvesting of wood and biomass and, through tourism, to the economic development in the region. Staatsbosbeheer works with businesses, social organisations and residents on the basis of a collective responsibility for nature and biodiversity. As a result, it is partially responsible for creating an attractive climate to live and work in.

Protecting and making sustainable use of nature is still necessary. By doing this, Staatsbosbeheer is doing its part to help achieve the international objectives the Netherlands has committed to working toward.

This book offers an inspiring glimpse into all the great things Staatsbosbeheer has to offer!

Martijn van Dam
Minister for Agriculture
Staatsbosbeheer is commissioned by the Dutch government to strengthen the position of nature in the Netherlands. As a leading national public body as land owner and manager of a sizeable amount of nature reserves we work to conserve and develop the Netherlands’ characteristic green heritage. Together with society, we are committed to ensuring that current and future generations are able to experience the many essential values of nature, balanced with sustainable use of our protected areas.
Memory of Holland
‘Thinking of Holland
I see wide-flowing rivers
slowly traversing
infinite plains,
inconceivably
rarefied poplars
like lofty plumes
on the skyline in lanes’

Thus begins the poem that best expresses the appearance and mood of the Dutch landscape. Hendrik Marsman wrote it in 1936 during a trip abroad, and 80 years later, we still recognise the country we live in in these lines.
Tamed by dikes
Nowhere else in the world are the results of human intervention as clearly visible in the unique landscape as here. Through land restructuring, we have had a major influence on the formation of the Dutch landscape. The Beemster is a great example. Unmanageable before a 42-kilometre dike was built, this inland waterway was ‘tamed’ and drained by 43 windmills. Once drained, the Beemster was redesigned as an agricultural area in 1612. This excellent example of land restructuring achieved global recognition in 1999 when it acquired World Heritage status.

World-class nature
Our country is a west European delta, low-lying with a lot of water, such as the Weerribben, created by the excavation of peat bogs. The Wadden Sea with its Wadden Islands has special value as a wetlands area, and is also a World Heritage site. The Netherlands has not only succeeded in gaining control over water, but also in keeping international ecological values intact, such as areas with the Natura 2000 designation, or national parks.

The Netherlands has over 160 Natura 2000 areas with a total surface area of over 1.1 million hectares. Approximately 69% is water, the rest is land. Staatsbosbeheer manages around 40% of these land areas. They are in good hands with us. 84% of the biodiversity in the Netherlands is found on our lands, and 17% exclusively in our nature reserves. The large copper butterfly is a good example. Part of an interconnected network of nature reserves in the European Union, these lands have been designated as such based on the Habitats and Birds Directive. Not only do we make sure that nature is protected, but also that certain areas retain their characteristic identity. We do this by helping to preserve landscape values and cultural-historical elements.
17 million people
Our country displays a surprisingly broad range of nature types in a small territory. It does it all on the 41,543 km² that makes up the Netherlands. A country of 17 million people, we are always considering how to structure our territory, which uses we will designate areas for, and how we can apply several different uses to these areas. A nation that has to make the most of the land area available learns how to set priorities. As Goethe said, it is in self-limitation that a master first shows himself. We combine nature values with other social functions. This means working together.
Staatsbosbeheer

Founded in 1899 to control uncultivated land, Staatsbosbeheer started by planting forests for timber production. Timber was used in the mines, amongst other sectors. In the early 20th century, the realisation grew that natural beauty was worth protecting. As prosperity grew in the 1950s, recreation became very popular. The hiking routes marked by coloured posts date back to this period. In recent decades, nature has been assigned increasingly more social functions. In order to realise these functions together with other parties, Staatsbosbeheer has opened its doors and windows wide.
Multi-functional nature
As a government organisation and social enterprise, we build connections and welcome new applications in our nature areas. This is how we bring people closer to nature; our goal is to enable them to experience nature. We protect Dutch nature in all its diversity. Within these limits, we look for and find plenty of ways to use nature in a sustainable manner. The nature that we manage as Staatsbosbeheer is the property of the Dutch state. In other words, it belongs to all of us. We use our lands responsibly and flexibly for many purposes, in order to ensure they have great ecological, economic and social value for the people of the Netherlands.
**International exchange**

We regularly look beyond our borders to see how our colleagues approach area management. Whether this is in a Eurosite context, where twinning is often the guiding principle, or in a Europarc connection, where the focus is on national parks development, we always try to share knowledge and experiences. Bilateral exchange with our neighbours in a river area, for example, gives us many new insights. The new partnerships we enter into often result in innovative working methods. Get inspired.
Ecology

Delta nature
Nature and the river: fascinating interactions in the Millingerwaard

Room for the river made room for nature in the Millingerwaard. The delta nature returned in its lushest form, as did the original river landscape. The local economy is thriving thanks to all the visitors returning to this area.

Room for the Waal

With its 700 hectares, the Millingerwaard is part of the Gelderse Poort, a nature reserve at the top of the Dutch delta. Located between Nijmegen and the German border, it is where the Rhine enters our country, and splits into the Lower Rhine and the Waal. If the rivers are not able to discharge large quantities of water fast enough in the spring and autumn, they can overflow.

This is why room has been made for the Waal in the Millingerwaard. Staatsbosbeheer’s efforts to excavate the alluvial meadows have enabled the river to discharge water over a much larger surface area during a flood event. The broad secondary channels dug by the Ministry of Infrastructure and the Environment also help contain the flow of water. These days, the water is evenly distributed between the Lower Rhine and the Waal at the bifurcation point. The thick clay layer on the alluvial meadows is removed, exposing the original sandy soil. The Millingerwaard soil contains attractive raw materials: ceramic and dike clay, industrial sand and gravel. Staatsbosbeheer commissioned K3Delta, a raw materials producer in Nijmegen, to redesign the Millingerwaard. The company has been active in clay and sand extraction since April 2015.
Natural processes
The raw, river nature in the Millingerwaard is part of a larger area, the Gelderse Poort, which in turn is part of the Natura 2000 Rhine tributaries area. The Natura 2000 areas form a network of nature protection areas in Europe that guarantee species diversity. This makes the Millingerwaard a link in a contiguous area where flora and fauna have more spacious habitats, resulting in large communities with healthy offspring.

The Waal is the lifeline of the Gelderse Poort, and of the Millingerwaard in particular. Now that the river is flowing freely again, there is a dynamic interplay between the river, nature and the landscape. Thanks to natural processes such as flooding, erosion and natural grazing, the original river landscape is returning to the Millingerwaard. Species that had disappeared are re-appearing in the landscape of riparian forests, ponds, marshes and wild flower fields. The conditions have been created here that allow the old ecosystems to return. It’s hard to believe now, but 20 years ago this was an agricultural region, with pastures like billiard cloth and fertiliser-soaked maize fields. The river nature was dying. Since then, truckloads of clay have been removed from the alluvial meadows. Fertilised soil has been replaced by the dynamics of the river.

Tourist attraction
Flood protection and nature restoration have led to an unsurpassed rich nature in the Millingerwaard. The high number of visitors each year proves that this area is a first-class tourist attraction that can be experienced in so many ways, on and off the trails, in and on the water. Tourism and recreation create a new economic dynamic that contributes to the area’s appeal as a place to live, work and enjoy.
Ecology

Large units of nature
Natuurnetwerk Nederland

In 1990, the Natuurnetwerk Nederland (network of natural areas in the Netherlands; NNN) was introduced under the name Dutch National Ecological Network (EHS) in the Nature Policy Plan of the Ministry of Agriculture and Fisheries (now Economic Affairs). The purpose is to create a coherent network of significant natural areas in the Netherlands, driven by the need to repair the deterioration of the acreage of nature areas and biodiversity.

Connections

The NNN is a network of both large and small areas in the Netherlands where nature conservation takes priority. The objective is to enlarge natural areas and connect them. Large units of nature are preferable for several reasons:

- They offer a suitable habitat for more species since the minimum size of species’ habitats is achieved more often;
- The environmental and water conditions may be better attuned to nature since there is less competition with other types of land use that impose contradictory demands;
- Natural processes are given more room since not everything has to be set in stone. This leaves more room for variation and dynamics.

In the current cabinet’s coalition agreement, the nature network will be designed to include corridors. The budget that the State and provinces agreed on will enable this network to expand by another 80,000 hectares, or approximately 15% of the nature in the Netherlands. In addition to Staatsbosbeheer, Natuurmonumenten, the 12 Landschappen and private individuals also manage parts of the nature network in the Netherlands.
Wildlife crossings
In order to physically connect natural areas, the barriers between them such as busy highways and canals must be surmounted. The government drew up the Long-range Defragmentation Programme for this purpose. This plan identifies the 215 barriers and describes ways to remove them. These barriers that the national infrastructure forms to the nature network must be resolved by 2018. This will be done primarily by building wildlife crossings, tunnels and passages.

Monitoring the use of the current wildlife crossings in the Netherlands has shown that all the large ungulates (roes, red deer, fallow deer, wild boar) use them. Foxes, rabbits, hares, hedgehogs, polecats and badgers also regularly use these crossings. Depending on the design of the crossing (underground, vegetation and pools or stump walls), pine and beech martens, squirrels, frogs, toads, newts, lizards, snakes, various mice species, moles, dragonflies, grasshoppers and ground beetles have also been spotted on the wildlife crossings. Bats for example also prefer to use unlit wildlife crossings to cross lit or unlit roads.
Ecology

Climate buffers
Nature and climate: Vlijmen-Den Bosch climate buffer

When we hear ‘climate change’, we don’t immediately think of drought. Sustained periods of drought are just as much a consequence of the greenhouse effect as rising sea levels and higher river discharge. A climate buffer helps compensate for the adverse effects of climate change. An area that is set up as a climate buffer adapts to natural processes. If it rains non-stop for days, the climate buffer will ‘catch’ this precipitation. It absorbs the excess water like a sponge. In times of drought, it releases the stored water in controlled amounts.

Den Bosch is located on a high sandy ridge surrounded by peat bog marshes. This is no coincidence. In the Middle Ages, armies trying to conquer a city had to first cross the marshlands surrounding them. Residents of Den Bosch didn’t always stay high and dry. When the streams that traverse Den Bosch couldn’t discharge water into the Maas fast enough, the city would flood. In order to keep Den Bosch residents dry, the HoWaBo flood prevention project was born. This project generously combines water storage and nature. The water storage area extends around the city from the southern Bossche Broek area up to and including the Engelermeer lake. If necessary, 10.5 million cubic metres of water can be stored, a need that is expected to arise once every 75 years. Apart from its flood protection purpose, it has also been assigned a nature development function. Great efforts have been made in this regard. The water management system in the entire water storage area has been overhauled. When the water rises, the area is flooded with stream water instead of water from the Maas. The climate buffer stores this clean water for drought periods.
New wet habitats

The Vlijmen-Den Bosch climate buffer puts the finishing touches on flood protection. By combining water storage, nature, recreation and agriculture, this climate buffer gives a powerful boost to a small area delimited by a built-up area: the Biessertpolder. Nature develops depending on the presence or absence of precipitation. Since the groundwater level is disconnected from agriculture, it is a lot higher now. Higher water levels mean much more robust nature. By subjecting the area to controlled flooding from local percolation water and stream water in the winter and spring, new wet habitats are created for flora and fauna.

Former agricultural land is excavated for new nature, making way for floral grasslands with bodies of water and hiking trails. Nature management is handled by local farmers who do a minimal amount of mowing and allow cattle to graze. Thanks to impoverishment of the soil and plenty of clean water, the grasslands are blooming more exuberantly each year. There are cuckoo flowers and lesser spearworts, but also goldfinches, partridges and meadow birds, and butterflies and dragonflies in abundance.
Blues in the marshes

A wet environment poor in nutrients is essential for the extremely rare blue moor-grasslands found to the south of Den Bosch. On a summer’s day, hundreds of the scarce large blue butterflies typical to the area may be seen flying around. After being re-introduced here in 1990, this Natura 2000 area is the butterfly’s only habitat in the Netherlands. Without its host species, the great Burnett and the common elbowed red ant, the scarce large blue cannot reproduce. The LIFE+ project Blues in the Marshes was created because of the vulnerability of the butterfly and its habitat. Blues stands for the scarce large blues, and marshes refers the blue moor-grasslands.
Economy

Bio-based products
Sustainable timber

When it was founded in 1899, Staatsbosbeheer was tasked to help manage the areas entrusted to our care, and to ensure they provide society with sustainable benefits. The first forests Staatsbosbeheer planted were destined solely for production. The Netherlands needed timber; long, wooden columns to shore up the mine shafts in Limburg. With trees planted in rows, the forests served as plantations where trees were the crops. Although the mines were closed years ago, the demand for wood is still high: the consumption of wood is one cubic metre per Dutch person per year. 10% of this comes from forests in the Netherlands.

Protective of our forests

Forests only make up 9% of our land mass, so we are very protective of them. The forests must serve many purposes: nature conservation, recreation, timber production. This requires carefully considered choices. In the forests with unique nature value - one-third of our forest acreage - Staatsbosbeheer does everything it can to sustain the ecosystems. We will only chop a tree down if there are no other options. Trees for the timber harvest are cut down in the multi-functional forests, where wood production is combined with recreation in nature. We keep wood production limited near cities to offer room for recreational activities.
Good forestry, more income
One billion people worldwide depend on wood to survive. Many forests are not actively managed however, and yield fewer products such as wood and food as a result. Partnerships and knowledge exchange can improve this situation. Staatsbosbeheer markets wood with the FSC certificate under the name Hollands Hout. FSC certification guarantees high-quality wood from sustainably managed forests. We harvest 70 to 80% of what grows back in the forest each year.

Sustainable timber is not just about sustaining forests, but also processing harvested trees. At Staatsbosbeheer, we process harvested wood in the best possible manner. Straight, quality timber most suitable for sawing into planks and beams is used for parquet floors, window frames, doors and kitchen cabinets. Thin and curved parts of trees are processed as sheet materials or paper. By grinding branches and tree tops to make wood chips, we also produce biomass for green energy to get the most out of the harvest. We stimulate research on new applications for wood.

Bio-economy
In a sustainable bio-economy or bio-based economy, energy, fuel, green products and plastics are produced from plant residue, algae and meat scraps. The organic raw materials make these products bio-degradable, unlike fossil fuels that emit harmful greenhouse gases.

Products made from organic raw materials include:
- Electricity and heat from burned wood chips
- Bio-energy from grass cuttings as a raw material
- Bio-plastics from corn waste as a raw material
- Paint from sugar beet pulp
Biomass

We manage the Dutch nature and cultural landscape as sustainably as possible. This requires maintenance: trimming trees and shrubs, removing tree growth and heath and mowing grass and reed. This work yields a continuous supply of biomass; hundreds of thousands of tonnes of high-quality, clean biomass. We are always looking for new ways to efficiently re-use this biomass, always working with other innovative market parties. Staatsbosbeheer not only supplies the raw materials, but also contributes expertise on the chain from harvest to finished product. A few of the new products we are currently developing:
**Bioblocks**

Together with an innovative Dutch civil engineering firm, Staatsbosbeheer is developing Bioblocks (www.bioblocks.nl). These building blocks are made from ‘kragge’, vegetation containing an organic material harvested during maintenance on swamplands like the Weerribben. In order to reduce the quaking bog typical of these wetlands, organic materials are removed, giving young hydrosere stages a second chance. Processing this vegetation to produce Bioblocks yields a building material that is not only 100% bio-based, but also stores CO2 for a long time. Bioblocks are used to build sound barriers and other infrastructural works.

**Egg cartons**

For several years now, Staatsbosbeheer has been developing alternative fibres for the paper industry. In stream valley areas such as the Drentse Aa, Staatsbosbeheer always mows the grasslands late in the season, yielding a great diversity in flora that is beneficial for people and animals. The grass cuttings we remove from these valleys are used for different purposes, one of which is refining. The fibres from the refined grass are used for sustainable products. Since 2014, we have been developing grass-fibre egg cartons with Huhtamaki (www.huhtamaki.com) and Newfoss. These are used as packaging for organic and free-range eggs for sale in supermarkets.
Hay for zoos
Since 2015, Staatsbosbeheer has been supplying natural hay for the yaks, camels, zebras and Przewalski’s horses at the Beekse Bergen Safari Park. Through a collective research and testing programme, Staatsbosbeheer wants to harvest and supply more natural grass for large herbivores in zoos. Utilising natural grass as animal feed allows it to be used in a very high-grade form, which is great for both the animals and the sustainable purchasing policy at Beekse Bergen.
**Biocomposites**
For several years, Staatsbosbeheer has been studying the possibility of replacing fibres in biocomposites with reed or natural grass. We have joined forces with several water boards such as the Hoogheemraadschap Hollands Noorderkwartier and Waternet. A subsidy has also been awarded for the development project, and the next steps are being taken with the Association of Water Boards. The objective is to present the first pilot products from reed and natural grass, such as benches, in 2016, but there are probably many other possibilities.

**Bioplastics**
Together with Avantium (www.avantium.com) and several large European companies, Staatsbosbeheer has applied for a subsidy to demonstrate technology that can extract sugars from woody biomass. These sugars can be used to produce bioplastic. Avantium has developed the PlantBottle for Coca-Cola. In the future, ‘wood’ cola bottles or Lego blocks may even be possible.
Economy

Sustainable energy
Staatsbosbeheer contributes to achieving the national sustainable energy objectives. We use the products from our sites, and also use our land and buildings in these efforts. Dozens of wind turbines, buildings powered by solar energy, and biomass heating systems run on our biomass from nature.

**Green heat from wood chips**
There is a high demand for clean, woody biomass. This material can be burned or fired without much processing, and has high-energy efficiency to boot. Nuon’s biomass power station in Lelystad has been running on wood chips from Staatsbosbeheer for 15 years now, supplying sustainable heat and electricity to 5,000 households and buildings in Lelystad. Since July 2014, Stadsverwarming Purmerend has been supplying 25,000 customers with green heat from bio-heating station De Purmer, also run on biomass from Staatsbosbeheer.

**Wind turbines in nature**
In the past, wind turbines and nature were not a good combination. Since the Energy Agreement was signed in the Netherlands by government bodies, businesses and social organisations, we feel the need to contribute to national sustainable energy ambitions. Wind energy in our nature network and even Natura 2000 areas do not have to be excluded because of this status, provided they satisfy policy, legislation and regulations.
Staatsbosbeheer is contributing to the development of wind energy plans. We are working to obtain provincial and municipal permits for suitable locations so we can then launch these locations on the market. Project developers will have the opportunity via building rights to develop and operate wind farms at the locations with permits. Financial involvement from local residents increases the chances of realisation.

A wind farm will be built on the Tielerwaard backlands near the Deil interchange, in the middle of the country along the A15 motorway. The eleven turbines that fit on this Staatsbosbeheer property will generate 30 megawatts per year. Staatsbosbeheer has sold its 20% interest in the development of the wind farm to the local citizens’ cooperative, giving the local residents a financial interest in the project. As Burgerwindcoöperatie Geldermalsen-Neerijnen, they are part of the development consortium, together with Staatsbosbeheer and four professional project developers.
Energy from gliders

Wind energy can also be generated by gliders. These aircraft do not have an engine, and are wind-driven. Based in The Hague, Ampyx Power (www.ampyxpower.com) has developed a method whereby gliders, like wind turbines, can convert wind power to electricity. They use PowerPlanes that are connected to a steam generator via a cable on the ground. Although this innovative form of energy supply seems very promising, the theory must still be proven in practice. Staatsbosbeheer and Ampyx Power have looked for a location for this. Demo projects may not be carried out until agreements have been made with the province, municipalities and local residents.
When we hear ‘sustainable tourism’, we automatically think of nature conservation, culture and human rights. Many tourist areas suffer from an increase in pollution and loss of culture. Amsterdam in particular is overrun with tourists. An ever-larger group of people want to avoid causing harmful effects when they are on holiday. At the same time, they want to contribute to improving nature and culture.
On tour with Van Gogh

Taking foreign visitors’ interests as a starting point, you can link many physical locations throughout the Netherlands to this concept. Take the passion of the Dutch master Vincent van Gogh for example, whose work tourists wait long periods in the queue to see in museums. The Van Gogh Museum in Amsterdam can be combined with the Veluwe, the Kröller-Müller Museum, the heritage sites in Brabant where he grew up, and with Drenthe, the province where he creating many of his paintings. The Netherlands Tourism Bureau (NBTC) tells the story of the Netherlands using lines drawn to these areas. They run through our green metropolis like metro lines, with Culture and Nature supporting the tourist product. The income from tourism in turn contributes to the improvement of culture and nature.

Vincent van Gogh’s (1853 - 1890) roots lie in Brabant. Born and raised in the province, his love for the farmlands, nature and the simple life were also born here. Inspired by painters from the Hague School, and after creating his drawing Peat Diggers in the Dunes, he went to Drenthe for a while at the start of his painting career. Peat appeared to be an inexpensive fuel for the major cities in the west of the country, and the peat landscape began disappearing at a rapid pace. Van Gogh’s works from this period (drawings, aquarelles, studies in oil, and of course his letters) cause time to briefly stand still, affording us a view of life on the peat bogs; the poverty, hard work, but also the serenity and beauty of the landscape. By managing many areas in Brabant and Drenthe, Staatsbosbeheer aims to give people the chance to experience the unique character of this landscape.
Holland Waterland
Just as you would in a metropolis, you can easily transfer from one metro line to another. The NBTC Holland Waterland ‘metro line’ runs from Zeeland via Kinderdijk and Maasvlakte 2 to Amsterdam and the Beemster, ending at the Afsluitdijk via Flevoland, the Wouda pumping station and the Frisian lakes. This line connects lesser known areas such as Laag Holland north of Amsterdam to more iconic destinations such as our capital. Staatsbosbeheer manages natural areas in this region such as the Eilandspolder and Waterland together with agrarian nature cooperatives. This is a unique region, located below sea level and characterised by wide, open spaces, nice straight lines, protected town- and cityscapes, old windmills, reclaimed land and panoramic views. This area offers plenty of space for nature but also for recreation. Local farmers sell organically grown vegetables and meat at a fair price. Farms in this area also supply meat from natural areas to prominent restaurants in Amsterdam. This way, sustainable tourism is given its due.
Social

Rural development
Regional cooperative helps Westerkwartier flourish

The Westerkwartier in Groningen offers such a variety of landscapes that visitors immediately understand residents’ attachment to the area. Consisting of marine clay, the soil in the north is so fertile that crops have been grown and cattle bred here for centuries. Starting in the 13th century, the Lauwerszee has had to make room for polders and dikes. Located in this open dike landscape with mounds and ditches, Middag-Humsterland is the oldest cultural landscape in the Netherlands and Northwest Europe. The hedgerow landscape appears to the south, where grasslands are separated by wooded banks. The land consolidation trend bypassed the area for the most part.

Regional cooperative

Staatsbosbeheer has been working with citizens and businesses in the Westerkwartier for years. Tenant farmers help us manage our lands by allowing young livestock and dry cows to graze there, and by harvesting hay. We also work with schools, town associations, municipalities and local initiatives. For Staatsbosbeheer, the people here are the intuitive owners of the region. We listen to them, exchange ideas with them, and together help promote the greening of the region. There are more than 150 kilometres of walking trails through the Westerkwartier including a ‘Barefoot Trail’, where hikers can feel nature, all the way down to their toes. Staatsbosbeheer consulted the local residents when it built these trails, and being so involved from the start, they are happy to help maintain these trails.
Sensor technology

In this innovative partnership, it is no longer a government calling the shots from afar, but a collective that is making decisions about regional design and management. We save money and develop new earnings models. We can also acquire knowledge within the regional cooperative and share it using new technology. We use sensor technology to study how, as members of the regional cooperative, we can use the grasslands as sustainably and efficiently as possible for agricultural, social and nature objectives.

National, regional and local governments warmly welcome the cooperative as an innovative force in local self-management and an excellent prelude to the approach to European agricultural policy.
Returning profits to the region

Nowhere else in the Netherlands boasts as many self-employed people as the Westerkwartier. They work in the agricultural and services sectors. Small-scale companies have trouble keeping their heads above water. They have better access to financial and other resources as a collective than they would as individuals. For this reason, in 2012 over 450 members of three agricultural nature associations (ANVs) decided to join forces and share responsibilities. They did this with Terra MBO, Staatsbosbeheer, and Landscape Management Groningen, creating new opportunities for food production, the management of natural resources, and the conservation and improvement of the characteristic landscape. Together we have gotten an organisation off the ground that is more than the sum of its parts.
Social

Care and Employment
Sheltered workplaces make trails safe in Drenthe
Staatsbosbeheer aims to increase people’s level of social engagement. We do this by using our nature areas to strengthen the regional economy and social cohesion. Including social, educational and care functions in our management activities is one way we do this. Working actively with municipalities and care institutions, Staatsbosbeheer offers people with a social, physical or mental disability a way to develop and participate in society. We also work with the Probation Service and the Child Care and Protection Board to offer jobs to people sentenced to community service. The community service location is a place where young people settle into a routine, and learn how to honour commitments. Through this work experience, we try to encourage them to pursue a vocational training programme.

Drenthe is beautiful. Of all the visitors coming to this province, the majority come to enjoy nature. Hotels, restaurants, B&Bs, campgrounds, and bicycle rentals all reap the benefits; some 14,500 people work in tourism. In other words, 1 out of 11 jobs is the result of tourist spending. Staatsbosbeheer manages over 760 kilometres of cycle paths and 812 kilometres of marked hiking trails in Drenthe. Good maintenance of these facilities is vital to Drenthe’s position as a travel destination. This maintenance is at risk however since subsidies for recreation are too low to cover the maintenance of the infrastructure.
In 2015, Staatsbosbeheer began a joint initiative with municipalities in Drenthe, the Recreation Board and the province to preserve the current recreational facilities in Drenthe. By linking the need for employment with the need to maintain recreational trails, a new form of partnership has emerged. Maintenance work is also carried out by a labour force receiving benefits under the former Sheltered Workplaces Act, which now falls under the Participation Act. The municipalities, province and Staatsbosbeheer all benefit from this. This pilot project will make up for part of the reduction in the national budget for recreation. This is how we can all work together to preserve the recreational facilities in Drenthe and part of Friesland. The effect of these types of sustainable structures is two-fold, and will help Drenthe to remain on the map as a hiking and cycling province.

Working with a disability
Putting as many people as possible to work is the idea behind the Participation Act which took effect on 1 January 2015. This also applies to people with a mental, physical or social disability. The intention is to enable them to do modified work while retaining their benefits. The municipalities are responsible for helping people with an occupational disability find work. Since the Sheltered Workplace companies’ role is limited under the Participation Act, municipalities are looking for sheltered positions at regular companies.
Zorgbeheereenheid Driestroom
Green metropolis

Anyone looking at the Randstad in the western Netherlands sees an incredibly rich landscape: the cities from the Golden Age, the landscapes of Rembrandt and Ruysdael, the robust forts of the Holland Water Defence Line, ruins from the Roman age, reclaimed land and polders, the vast, open Green Heart. This unique landscape has been shaped and maintained by centuries of care and purposeful urban planning, a green metropolis where 7 million people live and work. Staatsbosbeheer manages some of the areas that are part of the green-blue and cultural-historical network in the Randstad.

People

Bringing nature closer to people: this is Staatsbosbeheer’s mission. Not only because it is beautiful, but also because exercising and relaxing in a green environment is good for our physical and mental health. A green environment entices people to exercise. Studies show that greenery and nature contribute to the development of motor skills in children, considerably lower the chance of stress and burnouts, and reduce absences due to illness as a result. We also place extra attention on groups that don’t regularly spend time in nature.
Ecology (Planet)

Urban landscapes can offer a unique habitat for plants and animals: canals, old city walls, parks and pioneer vegetation on building lots. These habitats contribute to a city’s biodiversity. They are the capillaries of the green-blue infrastructure that nature brings to the city, closer to people.

The green-blue network also creates a pleasant urban environment. As a result of climate change, more extreme rainstorms are expected in the future, and the current sewerage system cannot discharge the expected capacity during peak loads. Wadis (drainage systems) in cities, ditches, marshes and small-scale retention basins built into the green-blue network alleviate the burden on sewerage. During heat waves, they can provide ventilation and cooling through evaporation, contributing to a more pleasant and safe living conditions for city residents.
Economy (profit)

The availability of urban greenery and green areas around cities also contributes to an area’s economic appeal and competitive position. Companies are more likely to choose locations in urban areas with plenty of parks, recreation options and open spaces. The presence of greenery also increases the economic value of real estate in the area.

City parks and public green areas in and around the city fulfil an important function for recreation and experience, but also in promoting local businesses such as catering and events. The dunes in the Randstad region make a large contribution to clean drinking water. Water company Dunea and Staatsbosbeheer signed a contract to ensure the continued combination of drinking water production and nature in the Randstad. This is an excellent example of the value of ecosystem services. The leasehold income generated by this agreement will be re-invested for nature projects in the Dunea catchment area.
Culture

New Holland Water Defence Line
Forts still standing strong thanks to new functions

The idea was as simple as it was brilliant: if you flood an area with 40 cm of water, the enemy army cannot get through, neither on foot nor by boat. This strategy was applied in building the New Holland Water Defence Line in the 19th century. Designed to protect cities in the west of the Netherlands from attacks from the east and south, the line eventually became useless when the forts proved to be no match against enemy planes and high-explosive shells.

Social functions

For a long time, the forts were largely ignored. Some of them were virtually overrun by nature after the Second World War. Fort Rijnauwen, an oasis of rare plants, mushrooms and animals near the city of Utrecht, functioned primarily as a nature element. We continue to monitor Fort Asperen, not because of possible enemies, but to ensure that bats can hibernate there undisturbed. Bats also seek shelter during the winter at other locations on the line. The forts have been assigned new social functions. Fort Asperen acts as an art fort once the bats have emerged from hibernation. Staatsbosbeheer leases the fort to the Fort Asperen Foundation which holds exhibitions there. Of the 800 monuments managed by Staatsbosbeheer, 15 of them are among the 50 forts and defence works that form the New Holland Water Defence Line.
Room for business

KunstFort Asperen, GeoFort, Fort Vuren and other forts have been given second lives. Staatsbosbeheer has leased them to the foundations that have converted the forts for new uses. A win-win situation. Even though the forts no longer serve their original purpose, their cultural-historical value has remained intact. The forts remind us of what and who the Dutch once were. In order to preserve the buildings and grounds, we offer entrepreneurs the room to integrate new functions into the here and now.

This is not something we can or want to do alone, so we work closely with provinces, municipalities and water boards. Staatsbosbeheer is part of Stichting Liniebreed Ondernemen, which supports businesses located in and around the forts. With the help of volunteers, entrepreneurs have set up offices, wine tastings, museums, B&Bs, restaurants, and meeting and wedding locations in the forts. Anyone who has attended an opera at Fort Rijnauwen on a summer evening will never forget how magical music, performance and location can be.

There are so many gains yet to be made when it comes to visitors from the Netherlands and abroad. A classic route such as the Loire Valley with its castles or the chain of country manors in the Vecht in Utrecht is of course not created instantly. And yet, we are convinced that the water defence line has what it takes to achieve a similar status. The application to add the New Holland Water Defence Line as a Unesco world heritage site is part of this.
World Heritage Sites

The hope is that the New Holland Water Defence Line will obtain World Heritage status in 2019 as an extension of the Defence Line of Amsterdam. The notoriety that comes with this status will boost tourism and the interest in the conservation and development of the forts.
Culture

Events
Nature in the starring role

Performing outdoors - this was the only way to go in the Middle Ages. These days, it’s a conscious choice. We want theatre where the sea goes from being a setting to a character.

Nothing makes a performance so magical as a stage made up of the beach, sea and clouds, or forest, heather and setting sun.

‘Culture in nature’ is a winning combination. Festivalgoers don’t let changing weather conditions or other uncontrollable factors stand in their way. On the contrary, people are drawn to the unexpected. The weather, time of day, location and the performance - they all contribute to the unique interaction between the natural environment and the show that has been created with the setting in mind.

‘Culture in nature’ represents a new vision. The open-air festival is a phenomenon the Netherlands can no longer ignore, and this has not escaped Staatsbosbeheer’s attention. As a social organisation, we keep our ears and eyes open to what’s going on. This helps us bring nature closer to people. We are also open to new partnerships and applications for our lands.

‘Culture in nature’ offers festival organisers and Staatsbosbeheer the chance to do great things together, initiatives that are better than each could be individually. Oerol on Terschelling, for example, or Into the Great Wide Open on Vlieland, Theater op ‘t Zand at Kootwijkerzand, FestiValderAa at the Drentsche Aa, Nijetrijne opera at the Rottige Meente, and Music in the Woods in the forest near Odoorn.
**Hospitality**

The forest rangers on Terschelling, Vlieland and beyond are involved in the festival preparations from day one. Staatsbosbeheer does its best to accommodate the artists’ wishes. On the other hand, we are responsible for nature, for today's and future generations. Festival sites are usually Natura 2000 areas. We always adhere to European agreements on preserving and stimulating the biodiversity in these areas.

This does not have to impede an activity in the area, however. This is why Staatsbosbeheer helps theatre-makers find a great location and customise it to their performances. Now and then something stands in the way of artistic expression, like a woodpecker nest, and then we must wait until the last baby has flown the nest. And if it doesn’t, the forest ranger will help the theatre-maker find another spot for their performance.

92% of the total areas Staatsbosbeheer manages are open to visitors. This nature is for everyone, so everyone is welcome. We also demonstrate this hospitality by organising activities on our lands. During the festivals, visitors can go on an excursion to explore the area. We enjoy sharing our expertise, but most importantly, we want everyone to experience nature, also during the Bach in the Forest event.
Culture

Heritage
Walcheren, a reconstruction area

In 1944, around 16,000 hectares on the island Walcheren in Zeeland were flooded when the allied forces bombed the dikes. The damage was profound. Salt water flowed into and out of the area through four dike breaches for a long time, damaging the soil, buildings and landscape. The air strikes also caused massive destruction. The winding dikes, remainders of creeks, hedges, lines of trees and mostly the thousands of small parcels that gave the island a cracked-glaze structure, were all wiped out in 1946. Over 300 farms and the road and rail network were destroyed. Starting in 1947, Staatsbosbeheer rebuilt the typical small-scale landscape here. As a result, the island (also aided by the Marshall Plan) became a shining example of integrated renewal. Now, 70 years later, this reconstruction is still an example of development based on an area's core qualities, and can serve as inspiration for current development plans.

Recovery plan

The recovery of the green nature and the cultural-historical qualities of the island were a priority in the redevelopment. A reconstruction plan was created for Walcheren that took into account the structure of the old landscape, but gave it a more efficient design to facilitate targeted use. A hierarchy was introduced in the planting of the landscape: trees were planted along main roads and near farms on the higher creek ridges, whilst only shrubs were planted along minor rural roads, and roads in the old basin areas remained unplanted. The slightly higher flanks and a few historical country manors in particular were redesigned with hedges, upright tree structures and plants and shrubs. The considerably larger plots are laid out in a mosaic of block shapes that still reflect the underlying creek and creek-ridge system.
Knowledge exchange
Walcheren is one of the reconstruction areas that are of national importance for the post-war period. These areas are a role model for the characteristic spatial developments in the Netherlands. Even after the Delta Works were built in the southwest Netherlands, the concern for these areas’ cultural-historical value is still indisputable. The National Cultural Heritage Agency contacted Staatsbosbeheer about a partnership. We help draw up plans, develop knowledge, use the spatial toolkits and organise platforms for reconstruction areas to exchange knowledge with relevant parties.

Walcheren now
The reconstruction works from that time have resulted in an extremely popular coastal location. The Manteling protects the hinterland of northwest Walcheren from the ruthless sea winds. It is a classic country-estate zone. Anyone taking a walk in the early spring will be treated to the exuberant blossoms of the ‘stinzen’ plants typical of these estates. At the ‘Zeeland Riviera’ near Zoutelande, beach visitors are protected from the wind in a type of microclimate. Countless hiking, cycling and horse trails wind around the country estates Berkenbosch, Duinbeek and Westhove. With its winding creeks, unending panoramic views and the highest bird density of all the delta waterways, this is the area around Veere, one of the most picturesque towns in the region.
Colofon


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