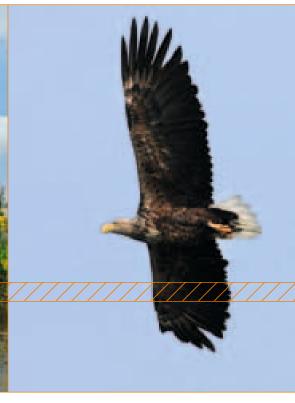


General information









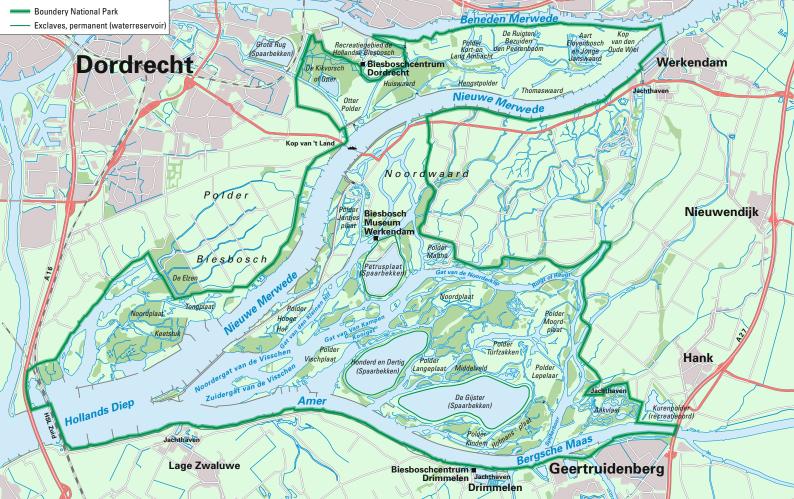
The Biesbosch, always in motion

The Biesbosch National Park is a green maze of rivers, islands and a vast network of narrow and wide creeks. The park is one of the largest and most valuable natural areas in the Netherlands. It's also one of the few remaining fresh-water tidal areas in Europe.

The Biesbosch National Park was established in 1994. It covers an area of approximately 9,000 hectares and is crossed by the Nieuwe Merwede river and bounded by the Amer and Beneden Merwede rivers. The northern part with the Sliedrechtse and Dordtse Biesbosch lies in the province of Zuid-Holland. The part in Noord-Brabant is called the Brabantse Biesbosch. The Biesbosch area has been in motion for centuries. Tidal influence has always played a big role and is still noticeable today. In addition, the area has always been used for hunting and fishing and for harvesting rush, reed and willow branches. The core of the Biesbosch still consists of many bolted willow woods, interspersed with grasslands and overgrown reed lands.

In the last few years, all kinds of new natural areas were created on the surrounding agricultural lands. The Spieringpolders, the Maltha polder, the Noordwaard and the polders Kort and Lang Ambacht are extensions of the Biesbosch that attract huge numbers of water and marsh birds. As a result, the Biesbosch National Park has become even more varied. This has not only increased its natural value; visitors to the area now have many new possibilities for visiting this unique reserve over land and over water.





Origin of the Biesbosch

The origin of the Biesbosch as a watery area can be traced back to the St. Elisabeth's Flood during the night of 18 November 1421. This flood disaster changed the agricultural area of the Groote and Zuidhollandse Waard into an inland sea that stretched all the way from Dordrecht in the northwest to Geertruidenberg in the southeast

From water to withy-beds

Around the year 1550, the first land reclamations of this shallow inland sea took place. Around 1850, two thirds of it had been reclaimed and put to use for agriculture. Shortly afterwards, from 1850 to 1870, the Nieuwe Merwede canal was dug to protect the Alblasserwaard polders from flooding. This divided the Biesbosch into two parts.

The rivers Maas and Rhine flowed into the Zeeland waters. The Maas water entered the area via the Bergsche Maas and Amer,



while the Rhine water entered through the Beneden and Nieuwe Merwede. These rivers carried enormous amounts of sand and silt. The silt was deposited at the turn of the tide in areas where the tidewater met and mixed with the river water. On the emerging sandbanks the first vegetation appeared: rushes followed by reed. It made the area



interesting for the reed and rush culture. The abundance of rushes gave this new area its name of 'Bies-bosch' which means 'Rush-woods'. Through further accretion the land became higher and dryer. The reed disappeared and willows began to grow. To be able to harvest sufficient willow wood, withy-beds (willows) were planted. Other means of making a living also became possible, such as duck decoys, hoop making, agriculture and fishing.

Diminished tidal influence

In the last century, new agricultural areas were created and after World War II houses and factories were built in the western part of the Sliedrechtse Biesbosch.

After the flood disaster of 1953 the Biesbosch changed permanently. It was decided to close most of the sea arms (the Delta Works Project), including the Haringvliet in 1970 by means of the Haringvliet Sluices. As a result,

the tidal movement was reduced significantly. Depending on the location in the Biesbosch only 20 to 80 centimetres remained. Shallow lagoons developed in large parts of the area.

Three large drinking-water reservoirs were constructed in the Brabantse Biesbosch. As from 1973 they have been supplying well-purified Maas water to water companies in the Southwest Netherlands.

The Biesbosch has not yet reached its final stage. Various plans to add new nature already have been completed in part. In the next few years, the appearance of the remaining agricultural lands will change considerably. Eventually, the Biesbosch area will cover some 12,000 ha.

Cultural history

The Biesbosch knew many traditional forms of land use, like withy-beds and reedlands, agriculture, hunting and fishing. Remnants of those days are still there, like the so called 'salmon huts', huts of willow workers and farm workers, duck decoys and the quays and grass dikes with their characteristic pools. Boundary marker trees of former terrain boundaries can still be seen in various places.

Willow cultivation can be said to have left most traces in the landscape. Willow trees dominate the Biesbosch. Man has used its branches and twigs for many purposes. To ensure sufficient harvest volumes, willow plantations were established in the form of so-called withy-beds. Documents from 1560 already mention withy-beds outside the dikes. For centuries willows were cultivated in the Biesbosch. The branches were cut or chopped once every 1 to 4 years. Around 40 different willow varieties were used. Depending on the thickness and



willow variety the wood was used for basketwork or binding of reed, for handles and beanpoles or as fascine wood for waterworks. The thin, flexible osier was plaited into gigantic mats. These fascine mats formed the dike foundation on which the dike embankment was constructed. From the end of the 1950s the exploitation of withy-beds diminished. Competition from synthetic materials such as nylon and plastic became too strong. The work in the withy-beds was hard and it paid little. Several huts of willow workers, where they

often stayed the entire week, are still to be seen during a trip through the Biesbosch. Some huts can be visited with a guide, allowing visitors to be taken back to the days of the willow workers.

In the Biesbosch Museum in Werkendam there is much to see about the cultural heritage and customs of the Biesbosch. Near the museum at the 'Pannenkoek' there is also a well-maintained withy-bed.



Types of landscape with their flora and fauna

The various moist and wet parts of the Biesbosch are home to many special animals and plants. In the area we find various waterfowl, reed warblers and meadow birds. Kingfishers and bluethroats are important and appealing summer birds. In good years more than 10 pairs of kingfishers and hundreds of pairs of bluethroats breed here. Because of the development of new wetlands in the area the great white heron and the little egret are almost everywhere. Here and there the rare bittern still breeds. The lush vegetation brings about a rich world of insects, with for example beetles, dragonflies, grasshoppers and many butterflies and moths.

The beaver is the figure head of the Biesbosch National Park. This animal appeals to the imagination and many visitors to the Biesbosch hope to catch a glimpse of it.

In 1988, five beaver couples from the Elbe basin in Germany were released in the Biesbosch as an experiment. Some more were added later. The animals are now doing so well that over 200 beavers are living in the area and they have built some 100 burrows. A well-known fact about beavers is that they construct dams to have enough water in their environment. Because of the current there is always enough water in the Biesbosch. Therefore they don't block off streams and only use the burrows to live in.

Beavers are vegetarians. They have a preference for tree-bark, branches and twigs. To get to it they are prepared to cut down entire trees. That is precisely why they fulfil such a useful role in nature management in the Biesbosch. By cutting down a tree every now and then they create space for something else to grow. They also like to eat the stinging-nettles that thrive in the neglected withy-beds. The beaver has some 50 to 60 plants on its menu!

Since the closing of the Haringvliet dam in 1970 there is much less tidal movement, as a result of which the number of mammals

has increased. Roe deer and foxes have conquered the area. The rare root vole is present in the Biesbosch just as the water shrew. The increase in small mammals also brought an increase in birds of prey. The brooding white-tailed eagle is one of the latest assets.

Tidal willow woods and withy-beds

The Biesbosch only has a few withy-beds left. Precisely at such places you can find the Biesbosch marigold. It's a variety of marsh marigold that can be found nowhere else in the world. This plant is larger than the common marigold and has bent rising stems. In this bend the plant forms 'spider-like' outgrowths to which the plant also owes its name. When the plant dies in autumn, the marigold spiders remain. They are carried away by the water and are washed up somewhere else. This highly specialised form of vegetative reproduction is a way of adapting to a freshwater tidal environment.



Most withy-beds have not been cut for years. They have developed into lush willow woods with topsy-turvy trees. These woods are home to rare species of moss and offer a good habitat for woodland birds like the robin, blackcap, lesser and greater spotted woodpecker, short-toed treecreeper, hobby and sparrow-hawk. Buzzard and goshawk breed in the Biesbosch every year, as do golden oriole and nightingale.

These tidal willow woods have a rough vegetation of many stinging-nettles, together with touch-me-not balsam, spotted jewel weed, great willow herb, enchanter's night-shade and purple loosestrife. The gigantic Himalayan or Indian balsam creates a real jungle. The pink flowers have a very characteristic sweet smell

Reed and rushes

The reed and rush culture used to be an important means of existence that disappeared when the tides fell away. When reedmarshes and rush-flats are not flooded

regularly, they run wild with all kinds of plants, like valerian, hedge bindweed, great willow-herb, bulrush and yellow iris. As time goes by it becomes a more and more attractive habitat for all kinds of water and marshland birds. On some reed-lands the reed is still cut every year. This is necessary to preserve a good quality of reed.

Grasslands

The grasslands in the Biesbosch are the property of Staatsbosbeheer. This State Forest Service leases them to local farmers under restrictive conditions. For instance fertilisers and pesticides may not be used. Hay lands in the Sliedrechtse Biesbosch have become very flowery due to this policy, for instance in Kraaiennest polder, parts of the Louw Simonswaard and Engelbrechtsplekske polders and Hengstpolder.

In summer all kinds of rare wild plants flower, such as yellow bedstraw, oxeye daisy, great burnet, brown knapweed and greater burnet-saxifrage. The sandy character of the river dunes of the Kop van den Oude Wiel makes it a place for real botanical highlights, such as red broomrape, meadow saxifrage, lesser meadow-rue, fairy flax, field scabious and large wild thyme.

Intensified cultivation of farmland has not affected the hay lands mentioned above. Also natural barriers, such as flooding and difficult accessibility, only over water, do not make these areas very attractive for intensive use.

During winter and spring, the rivers Rhine and Maas can provide high water levels. Many polders are then temporarily flooded or overflowing. This attracts many birds, especially white-fronted geese, barnacle geese and all kinds of ducks, like teal, wigeon, gadwall, shoveler and pintail.

Fish

The former abundance of fish species



has disappeared. The Haringvliet sluices form a barrier for typical migratory river fish like salmon, sea trout, twaite shad and European smelt. On the other hand, fish species that are less characteristic of the river area sometimes do very well. The bream is an example of such a successful species. The newly created habitats are much sought after breeding areas.

Open water and mud flats

The open water in the Biesbosch is a restingplace for water birds. The mud flats disappear under water when the tide comes in, but at low tide they are important foraging places for ducks and waders like lapwing, snipe, greenshank and common sandpiper. At high tide, these birds gather together on the surrounding grasslands that act then as a kind of high-water refuge. These places are mainly to be found in the Sliedrechtse Biesbosch, due to the larger tidal difference that still remains there. Twice every 24 hours there is a substantial difference of 60-80 centimetres. In the Dordtse and Brabantse Biesbosch this is only 20-30 centimetres. The distance that the 'tidal water' from the Nieuwe Waterweg canal has to travel is much longer for the two latter areas. On the higher parts of the flooded mud flats we find plants like reed, fen ragwort or bird's tongue, bulrush and meadowsweet.



Management

Management of the Biesbosch National Park is increasingly aimed at letting the area develop itself in the most natural way possible. Sometimes some human guidance or adjustment will be needed of course but in principle nature is left to itself.

In the long term, these areas will probably develop into marshy woodlands, which is the type of woods that used to cover the wet peat areas in the western part of the Netherlands for centuries. The Biesbosch has always been an important area for birds to rest, forage and breed. This watery area is of such international importance to waterfowl that a large part of it, the Brabantse Biesbosch, has been officially recognised as an international 'Wetland'. But there are also other European agreements, like Natura 2000, the Habitats Directive and the Birds Directive that confirm the value of the Biesbosch, Therefore hunting is normally not allowed in the national park.



Creating wetlands

Every autumn the workers of Staats-bosbeheer flood some grassland polders in the Biesbosch to turn them into wetlands. These polders are then deliberately put under water by operating culverts and/or windmills. Trenches and shallows fill with water and only the higher parts remain dry. Such soaking wet grounds have a magnetic attraction to wintering waterfowl.

Thousands of geese and ducks like greylag goose, white-fronted goose, shoveler, pintail, gadwall and teal stay the night on such grounds. Due to excessive rainfall or extreme water levels polders can also be flooded in a natural way.

Grazing

In the Biesbosch Staatsbosbeheer also uses cattle to help manage terrains. The

Green centres and new nature

There are three large quiet nature areas or green centres in the Biesbosch, which are not or hardly accessible to visitors. This is of importance to animal species that are easily disturbed and that also need a large area to live in. For example the osprey, the spoonbill and the night heron find refuge here. Over the past few years all kinds of nature development projects have been carried out. Beautiful landscapes were created that immediately turned out to have a great attraction to waterfowl. So far, over 2000 hectares of new wetland nature have been realised in for instance the Spiering Polders, the Kort and Lang Ambacht and Maltha polders, the Zuiderklip, the Noordwaard, the Jonge Neeleruigt and the Tongplaat. In the next few years more new areas will be added, which are partly situated outside the boundaries of the Biesbosch National Park



animals need to be transported over water and are used as natural mowing-machines. Every kind of animal has its own grazing pattern. Next to their normal menu of grasses and herbs, cows are also interested in woody plants. It is due to their grazing that the polders and other terrains retain their characteristics of the open field. In the Biesbosch most cattle is brought back to the stable during the winter period. Because of the fluctuations in water levels in the Biesbosch the grazing animals can only be used part of the year.

Water and soil pollution

The chemical pollution of silt and water is a serious problem. Most chemicals come in through the main rivers. This problem needs to be tackled at the source by means of international agreements. Fortunately, the water quality of the Rhine has improved a lot over the past years, leading to better quality silt sediments. Rijkswaterstaat has already sanitized several riverbeds and the

last major project is the clean-up of the Brabantse Biesbosch.

Pollution can have other causes too. In motorboat maintenance environmentally unfriendly products are still being used and wastewater also ends up in the area. This kind of pollution is being continually fought against.

Recreation

The National Park has an important recreational function. To manage this process the national park is divided into a number of recreational zones. To protect vulnerable natural values, specific parts of the Biesbosch are not accessible and certain creeks are closed to boats. The Biesbosch navigation map shows exactly which creeks are accessible and which are closed. The navigation map also indicates the recreational facilities. Because in central parts of the Biesbosch National Park recreation had to make way for the development of

green centres, the Aakvlaai polder was created as compensation. It's a type of miniature Biesbosch with creeks, beaches and willows.

The Park Authority of the Biesbosch National Park aims to use the Biesbosch as a pilot project for sustainable tourism. The use of electric 'whisper boats' is encouraged, walking and cycling facilities are improved and sustainable tourist and recreational activities are supported. The Biesbosch has over 50 hosts. These are businesses that act as ambassadors for the Biesbosch. They can provide information about the Biesbosch and extend a warm welcome to visitors. In 2012 the Biesbosch received the European Charter for Sustainable Tourism in Protected Areas.

Possibilities for visitors

A visit to the park is best started from one of the three main gates to the Biesbosch: the Biesbosch visitor centres in Drimmelen and Dordrecht and the Biesbosch Museum in Werkendam. There you can get information about the area and the possibilities for discovering the Biesbosch on your own. The Biesbosch visitor centre in Drimmelen is mainly an information point, while in the Biesbosch centre in Dordrecht you can also visit the exhibition 'The Biesbosch, a jungle in Holland'. The Biesbosch Museum covers the cultural history of the area and devotes extensive attention to 'Room for the River'. Regularly, temporary exhibitions on naturerelated themes are held at all gates. You can also find out everything about the recreational facilities of the Biesbosch, like charted routes, boat and walking excursions led by Biesbosch guides, round trips and canoe and boat rental. The area is easily accessible by boat from the various ports. In order to preserve

peace and tranquillity, the use of water-



ways and creeks is bound by regulations. Therefore, if you want to go out into the Biesbosch by boat on your own, a special navigation map with the rules and zones is essential. This map is available at the entrance gates and from boats rental companies.

For addresses of the entrance gates, please look at the back of this information booklet. Detailed visitor information is available on the website of the Biesbosch National Park: www.np-debiesbosch.nl.

National parks

Since 1994, the Biesbosch has been an official National Park. This is an internationally recognized concept. All over the world valuable nature areas and eco systems are given this extra protection as National Park. In addition to nature conservation the parks also focus on information, environmental education, nature-oriented recreation and research

The twenty national parks in our country together form a colourful mosaic of nature areas. The parks were officially set up by the Minister for Agriculture, Nature and Food Quality. Per 2012 all national parks were transferred to the provinces. For the purpose of Dutch nature policy these twenty parks form a whole: the System of National Parks in the Netherlands. Owners, managers and other stakeholders are jointly responsible for the conservation and development of

the quality of nature areas. The website www.nationaalpark.nl contains an overview of all national parks in the Netherlands.

In our country national parks are contiguous areas of at least one thousand hectares. The Dutch national parks may be relatively small, but they include valuable and rare ecosystems like dunes, peat bogs and heathlands that are also of international importance. Therefore, national parks are worth a visit. Thousands of families and classes visit the national parks each year.

Through the creation of footpaths and boating routes and by offering excursions, visitors to the Biesbosch are guided in such a way that negative effects are minimised. The visitor centres inform visitors about the effects of certain behaviour on other visitors and on nature.



Park Authority

On 10 March 1994 the Biesbosch was assigned the official status of National Park.

The Consultative Body in which all those directly involved, such as owners, managers and administrators, were represented drew up a joint Management and Planning Programme for the entire area. This plan was to provide sufficient guarantees for the sustainable management and preservation of the Biesbosch as a National Park. Since 2011, the former recreation authorities have merged into the first Park Authority of the Netherlands. In this Park Authority the provinces of Zuid-Holland and Noord-Brabant and the municipalities of Dordrecht, Werkendam, Drimmelen and Sliedrecht are working closely together with area manager Staatsbosbeheer. You may safely say that when an area has a National Park status, its natural value is so great that it certainly merits a visit. Therefore, go on discovery and enjoy the Biesbosch for yourself.



Information about National Park De Biesbosch

For further and up to date information, please see our website www.np-debiesbosch.nl.

The three centres mentioned below provide information about the Biesbosch including their exhibitions and other public activities.

Biesboschcentre Dordrecht

Baanhoekweg 53, 3313 LP Dordrecht Tel. 078 630 53 53 info.biesbosch@dordrecht.nl www.biesboschcentrumdordrecht.nl

Biesboschcentre Drimmelen

Biesboschweg 4, 4924 BB Drimmelen Tel. 0162 68 22 33 biesbosch@staatsbosbeheer.nl www.staatsbosbeheer.nl

Biesbosch Museum Werkendam

Hilweg 2, 4251 MT Werkendam Tel. 0183 50 40 09 info@biesboschmuseum.nl www.biesboschmuseum.nl For general information about the organisation en policy of the National Park, please contact:

Parkschap Nationaal Park De Biesbosch Postbus 8

3300 AA Dordrecht
info.biesbosch@dordrecht.nl

Information about nature management:

Staatsbosbeheer Biesbosch

Postbus 330, 5000 AH Tilburg Tel. 013 707 48 00 biesbosch@staatsbosbeheer.nl

General information about education:

IVN Brabant

Rechterstraat 55, 5281 BT Boxtel. Tel. 0411-614111 brabant@ivn.nl



Colophon

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