

## Basic Information

### Status:

Lower Saxonian section of the UNESCO Biosphere Reserve 'Flusslandschaft Elbe' (Elbe River Landscape), year of recognition: 1997  
 Legal framework: State Law on the Biosphere Reserve 'Niedersächsische Elbtalaue' (Lower Saxonian Elbe Valley), passed on 14th November 2002

### Location:

North-eastern Lower Saxony, 50 km south-east of Hamburg; Rural Districts: Lüchow-Dannenberg and Lüneburg; Area: 567 km<sup>2</sup>; River kilometres: 96.5 km from Schnackenburg to Lauenburg (from Elbe-km 472.5 to 511.5 on the west bank, from 511.5 to 569 on both banks of the Elbe); Altitude: from 5 to 109 m above sea level

### Natural Surroundings and Landscape Types:

Lowlands of the Lower Middle Elbe, Water meadow landscape with marshlands, marshy meadows, old river arms and residual riparian woodlands, wooded valley sand areas and inland dunes

### Natura 2000 Areas:

Special Area of Conservation 'Elbe Lowlands between Schnackenburg and Geesthacht' as per EU Habitats Directive; Area: 227 km<sup>2</sup>; Special Protection Area 'The Middle Elbe in Lower Saxony' according to the EU Birds Directive; Area: 325 km<sup>2</sup>

### Usage / Settlement:

Agriculture and forestry; rural settlement structure; Population of the biosphere reserve: 20,000, equivalent to 35 persons / km<sup>2</sup>



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A riverine landscape with  
 (a model) character

National  
 Natural Landscapes



Elbe River Landscape  
 Biosphere Reserve  
 Lower Saxony



## The Elbe Valley – a near-natural landscape with a rich diversity of species

### The river Elbe and its Surroundings

Even today, the river Elbe remains relatively close to its original, natural condition. Many natural bank structures, flood channels and oxbow lakes have been preserved. The Elbe regularly floods the surrounding countryside. Alluvial forests with willows, reeds and shrubs line the banks of the waterways. This is the home of the Elbe beaver, the population of which has increased to more than 300 individuals in the Lower Saxonian river section. Also, otters are to be found in many places. Over 100 pairs of storks breed in the biosphere reserve. The wetlands of the floodplain guarantee a sufficient supply of food and a high rate of breeding success. The flooded water meadows represent resting areas of international significance for migrating and overwintering wading and water fowl. When the white sandy banks of the Elbe become visible in late summer, plants can be observed which are only to be found in such river valleys, e.g. yellowheads, strapwort, the indigenous 'Elbspitzklette' (Xanthium album) and black poplars. Of the natural hardwood forests only small residues and individual oaks and elms remain in the riparian area.

### The Elbe Marshes

Within the dyked part of the Elbe marshes meadowlands which have been in use since historic times can still be seen in the landscape: enclosed marshlands near Lüneburg, so-called 'Wölbwiesen' (specially ploughed meadows with an undulating appearance), drainage systems, pollarded willows, avenues of fruit trees, hedges and gnarled old oak trees in the villages and meadows. There are still meadows and pastures in the area which are used for extensive grazing. However, they are dwindling on account of the increasing pressure towards intensified usage. With their disappearance, the longstanding diversity of the ecological communities in these areas is becoming less as well. Especially noticeable is the downward trend in the numbers of meadow birds such as plovers, redshanks, godwits or curlews. This region has become an ideal resting area for migratory birds coming from the northern tundra. Whooper swans and tundra swans, bean geese and white fronted geese all use the Elbe valley as a migration route and refuge in winter. As reminders of the river dynamics of the past, natural oxbow lakes, silted stretches and seepage water ponds provide rare habitats for endangered fish species such as the spined loach and European weather loach as well as amphibians such as the fire-bellied toad, tree frogs and the crested newt.

### Dunes and Forests

The inland dunes which characterise the Elbe valley are around 15,000 years old. South-westerly winds transported the valley sands and deposited them mainly on the eastern edge of the Elbe valley. Some of them attain a height of 35 m. The largest dunes arose between what is now Neuhaus and Tripkau. The area was afforested with pine trees in the 19th century. Nowadays, only the Stixer Dune is still mobile on account of wind action. The sparsely planted pine groves alternate with reindeer lichen, areas of grey hair-grass and open stretches of sand. These surroundings provide habitats for specialists such as woodlarks, nightjars, ant lions, sand bees and band-winged grasshoppers. Some of the valleys of the dunes have developed into small raised bogs. The remnants of old mixed deciduous woods are to be found on the nutrient-rich marsh soils with their high water tables. A characteristic of these woods is the high diversity of species. They are the homes of endangered birds such as black and red kites, black and middle spotted woodpeckers, white-tailed eagles and black storks.

Blue winged grasshopper



## The Elbe Valley – a historical cultural landscape with a wide spectrum of usages

### Agriculture

The construction of dykes along the Elbe began in the 14th century, and since then arable farming has played an increasing role in the marshlands. The fertile clay soils proved difficult to plough, but returned high yields.

Today, the main crops are winter grains and winter rape, whereby root crops are more prevalent on the lighter, sandy soils. The trend towards the utilisation of regenerative energy has led towards an increase in maize production.

On the floodplains of the Elbe and its tributaries it is usually only possible to use the land for extensive grazing or mowing. The widespread marsh grasslands are intensively used for the production of hay and silage. The harvest is used to produce high-grade fodder for dairy farms. The meadows full of umbelliferous plants which represent the naturally occurring vegetation here are only present in small areas. Contract schemes

with the aim of promoting nature conservation are in operation; in this way it is possible to harmonise agricultural activities with species and biotope protection to some extent.



White storks escorting the hay harvest

### Fisheries

In the past, the Elbe was one of Europe's most fish-rich rivers. However, the fish stocks began to deplete when the river was subjected to engineering measures from the end of the 19th century onwards, such as the construction of groynes. These constructions caused the disappearance of many shallow and still water areas as habitats for various fish species. A further depletion occurred as a result of industrial pollution.

Since the water quality has begun to improve again, the fisheries industry on the Elbe has started a comeback. Just within the stretches designated as biosphere reserve, 40 different fish species were observed in 1999. However, the yield in terms of basic food fish such as eel and freshwater perch has not yet returned to previous levels. Also, species such as sturgeon, shad, river lamprey, houting and salmon are either missing altogether or only infrequently observed. Thus there are only three full-time commercial fishing operations within the biosphere reserve, as well as 25 part-time fisheries. Angling as a leisure activity plays a major role on the Elbe.

Fisherman at work on the Elbe



Zander

### Forestry

Somewhat less than a quarter of the biosphere reserve is wooded. The dry valley sand soils and dunes support mainly pinewoods, which are of considerable interest from the nature conservation point of view. The proportion of deciduous forest is only 22% of the total wooded area. Deciduous trees are found in small breaks on the floodplains and in marshy areas. The state owned forests are administered by the Forestry Office in Göhrde. They are managed with a view to long term, sustainable and ecologically sound development. Some areas have been set aside to develop as natural forests without any management measures.

Many forestry administration measures are aimed at encouraging near-natural conditions, e.g. through an increase in the proportion of deciduous trees. Wild animals living in the woods and their habitats are protected. The necessary planning and measures for providing this protection are undertaken jointly by the forestry and biosphere reserve administrations.



Pine forest on the dunes near Zeetze



## The Elbe Valley – a landscape to be enjoyed

### ... with many ways to experience Nature

The countryside on the banks of the river Elbe represents an ideal place for nature tourists. The biosphere reserve administration supports the development of tourism in the region. Its aim is to enable visitors to experience nature without having a negative influence on it. The zones designated as 'C'-grade are included in a series of schemes promoting experience of nature in a supervised manner.

As well as the main information centre at the *ElbSchloss* in Bleckede further information offices are being established in Gartow, Dannenberg, Neuhaus and Preten. A carefully planned network of walking, cycling and riding paths is designed to help visitors 'keep to the right track' and to provide them with the information they need. Altogether visitors will find a wide range of possibilities for informed sightseeing, such as nature trails and information boards and leaflets which refer to each other. At selected locations observation towers offer panoramic views of the surrounding Elbe landscapes. For a more detailed insight, guided rafting tours on the Elbe itself enable visitors to find out more about the bank zones from a duck's point of view.

Observation tower near Niemwalde



### The *ElbSchloss* in Bleckede

Since May 2002, this baroque half-timbered building has housed the information centre for the Biosphere Reserve 'Lower Saxonian Elbe Valley'. It contains an exhibition covering over 1,000 m<sup>2</sup> which serves to display the unique nature of the Elbe countryside as well as the efforts being made to preserve it. The centre also organises special events and guided tours. There is a 20 m high tower next to the *ElbSchloss* which provides a view over the riverside marshes. The 'Umweltwerkstatt' – the 'environmental workshop' – has been set up to give children from kindergartens and schools the opportunity to discover nature at first hand. The *ElbSchloss* also contains the regional tourist information centre. Here, visitors can find out about the most attractive spots to see, obtain help in finding accommodation and get up to date news on current local events. A café, a souvenir shop, a wicker-workshop and the 'Bleckeder Künstlerstätte' round off the list of attractions. The centre has also been the starting point of various important tourism projects such as promotion of the Elbe fisheries, development of the Elbe cycle path and the German Stork Route.

Canoe tour along the Elbe



### In Contact with the Countryside

There is a wide variety of different ways for visitors to explore the rural beauty of the Elbe Valley. You can choose between walking, cycling, fishing, riding or even travelling in a horse drawn wagon. Don't forget to bring a pair of binoculars with you, as there is always something worth having a good look at – an Elbe beaver or saplings which it has felled, a group of frogs spawning together or the diverse bird world, for instance.

Well worth recommending is a boat trip along the Elbe. And for those who wish to get some exercise at the same time, guided canoe tours are a guarantee for a worthwhile experience. A cycle trip along the dykes provide an especially good way of gaining an impression of the Elbe countryside. You will pass by broad meadows, still waters, farmhouses and fruit gardens. The Elbe itself can be crossed via ferries and over the bridges at Dömitz and Lauenburg, making it easy to plan a round trip. Accommodation and places offering something to eat and drink can be found all along the routes, and those who like to be as close to Nature as possible have a selection of camping and caravan sites within easy reach of the Elbe.

Exhibition at the *ElbSchloss* Bleckede





Lowland of the river Aland near Schnackenburg



## The UNESCO Biosphere Reserves – a worldwide network

One purpose of the UNESCO Biosphere Reserves is to provide model environments in which the sustainable exploitation of natural resources can be researched and tested. The basis for this is the international UNESCO Programme on Man and the Biosphere (MaB). Between 1974 and 2007 525 biosphere reserves have been established in 105 states throughout the world. This global network is designed to make a significant contribution towards the solution of environmental problems. The future of our societies is dependent on our success in generating fair conditions for development throughout the world as well as enabling ecosystems to exist in a sustainable manner. At present there are 13 UNESCO Biosphere Reserves in Germany which cover an area of 1.75 million hectares.



## The UNESCO Biosphere Reserve 'Elbe River Landscape'

The UNESCO Biosphere Reserve 'Elbe River Landscape' was given its official status in 1997. It represents a riverine/floodplain ecosystem typical for Central Europe. The status as a recognised biosphere reserve is based on the area's singularity, quality and high potential for development as a model region for illustrating aspects of conservation, e.g. of biodiversity. The UNESCO Biosphere Reserve has an area of around 3,430 km<sup>2</sup> stretching for 400 km on both banks of the Elbe. There are sections lying in the Federal States of Saxony-Anhalt, Brandenburg, Lower Saxony, Mecklenburg-Western Pomerania and Schleswig-Holstein. The Lower Saxonian part represents 15% of the total, i.e. 567 km<sup>2</sup>, which corresponds with a river stretch of 95 km.

Sheep help to manage the landscape

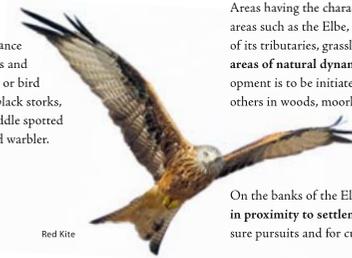
## Biosphere Reserve 'Lower Saxonian Elbe Valley'

The part of the UNESCO Biosphere Reserve 'Elbe River Landscape' situated in Lower Saxony has been given its legal status through a state law: The Lower Saxonian Elbe Valley Biosphere Reserve Act. The Federal Nature Conservation Act prescribes the definition of various types of protection zones. The aim of the zoning plan is to ensure adequate protection for nature and the countryside whilst at the same time allowing for the development of the social and economic infrastructure and functionality. The area of the biosphere reserve is managed by a special office, the Elbe Valley Biosphere Reserve Administration for Lower Saxony. To deal with important strategic questions concerning the development of the biosphere reserve, an advisory council has been inaugurated involving representatives from local government and those interest groups active in the region. The *ElbSchloss* in Bleckede serves as the information centre for the Biosphere Reserve 'Lower Saxonian Elbe Valley'.

White and Black Stork – Protected species according to Appendix I of EU-Birds Directive

## Natura 2000

Large areas of the biosphere reserve are of such significance that they have been designated part of the European protected area system known as NATURA 2000. The areas comprise the Special Protection Area 'The Middle Elbe in Lower Saxony' and the Special Area of Conservation 'Elbe Lowlands between Schnackenburg and Geesthacht', which overlap each other to a considerable extent. The species whose protection is considered to be of Europe-wide significance include for instance beavers and otters, the fire-bellied toad or bird species such as white and black storks, many birds of prey, the middle spotted woodpecker and the barred warbler.



Red Kite

## Zone types in the Biosphere Reserve 'Lower Saxonian Elbe Valley'

- Zone type A (16,540 ha):** Settlements and their surroundings, areas of agricultural and forestry usage
- Zone type B (20,100 ha):** Areas fulfilling the requirements of a landscape protection area – mainly grassland, arable land and woodland
- Zone type C (20,120 ha):** Areas having the characteristics of nature conservation areas such as the Elbe, its water meadows, the floodplains of its tributaries, grasslands and woodlands including the areas of natural dynamics, in which near-natural development is to be initiated (on state owned land), amongst others in woods, moorlands, bogs and bodies of water.

On the banks of the Elbe so-called **Elbe foreshore areas** in proximity to settlements have been designated for leisure pursuits and for cultural events.

## The Tasks of the Biosphere Reserve Administration

**Development**  
Managing the biosphere reserve so that it can serve its purpose as a model region for sustainable development is not a trivial task for the administrators. The technical basis for their work is a comprehensive biosphere reserve plan which undergoes regular review and redrafting. The main emphasis is laid on the aim of maintaining the biodiversity. The management team organises the measures designed to direct the movement of visitors to both their own benefit and that of the reserve. Also, it initiates and coordinates conservation, development and species protection measures as well as supplying the necessary know-how for the implementation of EU support programmes for sustainable land usage in harmony with nature. These programmes include grassland conservation, compensation payments, biotope conservation and species protection. In consultations concerned with planning and projects of third parties which affect the biosphere reserve the administration team represents the interests of nature conservation. Examples of such procedures are infrastructure and land usage planning, plot consolidation proceedings as well as construction works such as dyke, road and track construction. The administration is responsible for the coordination and support of research projects and measures as well as environmental monitoring. Another major field of activity involves educational schemes to promote sustainable development so that it becomes the basis of a forward looking learning process within the population at large. The biosphere reserve administration also works closely with local government and various interest groups as part of the regional management network. This involves cooperation in planning procedures, the distribution of special funding and the development of innovative ideas for the local tourism industry which have the aim of promoting sustainable regional progress.



**Sustainability as a Guiding Principle**  
In 2006 the Lower Saxonian stretch of the Elbe Valley was declared to be a 'model region for sustainable development' by the State Government. The purpose of this was to provide a framework for the development of strategies aimed towards the implementation of projects in the areas of sustainability and environmental protection. This means the development and promotion of the region by means of sustainable tourism as well as the preservation of the natural and cultural heritage in the region.

**Fostering the cultural heritages: avenues of fruit trees**  
Many rural roads are lined with old fruit trees – this is a cultural heritage which should be preserved. To this end projects have been initiated in the biosphere reserve for the care and appropriate usage of the fruit trees lining the roads and in orchards. There are information trails which give visitors an insight into a rich assortment of varieties in the Elbe region. It is the aim to promote sustainable usage through the marketing of the harvest. The result is a range of delicious fruit juices, dried fruits, preserves and schnapps.

Getting in touch with the Elbe with rafting tours



**Tourism as a Job Provider: The Elbe Cycle Path**  
The 340 km of (the northern section of) the Elbe Cycle Path are becoming more and more popular. To serve the increasing number of users, a comprehensive range of services and information sources has grown up along the route. These include bicycle rental depots, repair services, regional gastronomy, accommodation in hotels, 'hay hotels' and special cyclists' hostels as well as transport services and buses which can be ordered as needed. The Cycle Path gives its users an ideal opportunity to explore the natural and cultural diversity of the area with its museums, information trails and vantage points. Guides and other sources of information give orientation to make the practical and holiday aspects of a trip easy and enjoyable.

**An Impulse for the Region: Rafting Tours on the Elbe**  
To provide a further attraction allowing for sustainable, environmentally friendly development of regional tourism, rafting tours have been introduced as part of the Environment Ministry's 'Experience Nature' programme. Even the material of which the rafts are made is in keeping with the spirit of this programme: thermally treated wood. The rafting tours represent not only an additional attraction for the tourists, but create and maintain employment opportunities: for certified rural guides, rafting masters, restaurateurs etc.

Cycling along the Elbe dikes

