



SACHSEN-ANHALT

Landesverwaltungsamt



Living along a river



Biosphärenreservat
Mittelelbe





“By thoughts, which have not risen from acting nature and which do not beneficially work towards acting life, mankind is only helped a bit.”

Goethe, Maxims and Reflections



Riverside Woodland in the Steckby-Lödderitz Forest

Living along a river

'Unique' landscape of Middle Elbe – 'Biosphere' Reserve since 1979

Big rivers divide and connect. At all times, people have settled along riverbanks, rivers have been trading routes, energy has been created from water power and food has been obtained from water. Also today, the Elbe-River is an element of sustained creation of value in the region, in tourism, in the field of nature conservation and environmental protection and also as a federal water street in international goods traffic.

At the same time, one of the last nature-oriented river landscapes extends along the riverbanks, a special landscape of riverside meadows with impressive richness of flora and fauna, with bodies of stand-

ing water, floodways, inland dunes and marsh areas. Riverside woodlands form the landscape; the largest contiguous hardwood riverside woodlands in Central Europe can be found here. The landscape of the Elbe-River is also evidence for the work of former settlers, home for present inhabitants, the basis for land use, sanctuaries for nature lovers, a source of inspiration of artists and space for the manifold lives along the river.

Man and man-made landscape

The current publication was published in 2009, the year of the German Biosphere Reserve, on the occasion of the 30th anniversary of the existence of the

Middle-Elbe-Biosphere-Reserve, which was one of the oldest in whole Germany and which is presently one of 15 German UNESCO-Biosphere Reserves in total. Biosphere Reserves do not only focus on environmental protection. Man and the sustained utilization of the man-made landscape is the linchpin of all ideas and projects.



Kapenschlösschen – The seat of the administration of the Biosphere Reserve

Middle Elbe Biosphere Reserve

Protection and development with long tradition

Nature-oriented courses of a river have become rare in Central Europe. The Elbe-River flows through several German Federal States on its way from the spring in the Czech Bohemian Mountains to its mouth into the North Sea near Hamburg. It flows through the Federal State of Saxony-Anhalt for 303 river kilometres, through large floodplain meadows and forests, big cities and small settlements.

Sanctuary of floodplain

The last contiguous hardwood riverside woodlands in Central Europe have survived along the Middle Elbe in the Federal State of Saxony-Anhalt. A diversity of rare plants and animals, such as different kinds of bats, the Great Capricorn Beetle living on oak-trees, the Siberian Iris and the endangered Water Caltrop (Singhara) find their ideal habitat here. The Elbe-Beaver, nearly extinct at the beginning of the last century, has found a last sanctuary. In areas near shallow waters and the riverbanks, current-loving fishes, such as the barb and the European

chub, have their nursery grounds here. The UNESCO recognized the unique landscape of the nature reserve of the Steckby-Lödderitz Forest, which had already been allocated as a sanctuary for birds and beavers in 1929, as a Biosphere Reserve in November 1979. At the same time, the Vessertal Biosphere Reserve (Thuringia) also received this award.

Chance and obligation

Also incorporated into the Middle-Elbe Biosphere Reserve was the historical man-made landscape of the Dessau-Wörlitz Garden Realm, a famous and outstanding example for humanistically-embossed landscape design according to Horaz's principle of "Combining beauty with usefulness" (see page: Garden Realm)

This ingenious context offers great possibilities and is also a big obligation.

History at a glance



- 18th / 19th century: Planning and realization of the Dessau-Wörlitz Garden Realm according to the model of English country parks under Duke Leopold III Friedrich Franz von Anhalt-Dessau (1740–1817)
- Already in the 1920s: Active nature conservation through allocating nature reserves and beaver sanctuaries along the middle part of the Elbe-River
- Nature Reserve of „Steckby-Lödderitz Forest“ (about 3,850 ha) in 1979 recognized by UNESCO as the first German Biosphere Reserve, afterwards incorporation of further areas step by step
- 1988: Enlargement of the existing reserve by the 142-km²-wide man-made landscape of the Dessau-Wörlitz Garden Realm, since 2000 UNESCO-World Heritage Site
- 1990: Allocating large sanctuaries and Decree of Biosphere Reserve "Middle Elbe" on 43,000 ha within the last days of the former GDR, "Crown Jewels" of German Unity
- 1993: Foundation of the non-profit-making association for development and nature conversation of "Biosphären-reservat Mittlere Elbe e. V.", which supports project-related tasks in the Middle Elbe Biosphere Reserve
- 1997: UNESCO-recognition of the transnational Biosphere Reserves of the river-landscape "Elbe" upon request of 5 Elbe-Federal States, for Saxony-Anhalt it was also a further important enlargement to the area presently spanning the whole course of the Elbe-River in Saxony-Anhalt
- 2006: Recognition of the Middle Elbe Biosphere Reserve in Saxony-Anhalt on about 125,800 ha by the Saxony-Anhalt Ministry of Environment



Core zone



Caring zone



Development zone

Protection and Utilization

Model region for the cooperation between man and nature'

The special character of the Biosphere Reserve covers, besides conventional nature conservation, also economic and social working areas.

Protection of the natural environment and of the biologic diversity

Protection, preservation and recreation of natural and nature-oriented eco-systems of the characteristic floodplain with its floodplain meadows and forests, free-standing oak-trees, backwaters, inland dunes as an irreplaceable living area for flora and fauna, is one of the main tasks within the Biosphere Reserve. The protection of genetic resources is also involved in this. The sustained utilization of the natural goods like soil, air and water is a task of long-range importance in the light of global environmental problems. These are tasks for generations.

Development of a man-made landscape

The application of resource-saving technologies, the creation of regional value-added chains, as well as the gentle land utilization considering regional charac-

teristics, and last, but not least the promotion of environmentally-friendly and socially-acceptable tourism support the development of the man-made landscape in accordance with nature.

Education for sustained development, research, monitoring

An important aspect of Biosphere Reserves is the involving of the regional population. The development of sustained living styles and kinds of business in the framework of specific public relation as well as practice-oriented information and (environmental) education conduce to this. Interdisciplinary research in ecology, economy and sociology as well as monitoring environment play an important role, especially for the development of revaluation strategies for managing which have not been avertable any longer consequences of the climate change.

3 Zones for sustained cohabitation

The area of the Biosphere Reserve is divided into three zones, where human influence is controlled in different ways.

Core zone: No intervention into nature processes by man, nature is left to its own resources. Amount of area: around 3%.

Caring zone: Corresponds to the nature conservation areas (NCA) along the Elbe-River and its inflows; land- and water utilization have to take up a subordinate role. There is a strict order to stay on designated ways and paths.

Development zone: Summarizes the nature conservation areas and areas without protection status; intensively used man-made landscape with agriculture and forestry, business, tourism and utilization for settlements.





Heck Cattle as landscape preservers, here in the landscape caring project of Oranienbaum Heath

Living from landscape

Model region for sustained cultivating – always worth a visit

Already in the 1960s, it was realized and widely accepted that environmental problems, resulting from industrialization and growing population, represent an immense challenge. For this reason, the UNESCO launched the program called MAB („Men and Biosphere“) in 1970. Internationally networked and at the same time regionally positioned, concepts and programs based on the ideas of the MAB-Program have been invented, proven and brought to life in over 550 recognized Biosphere Reserves worldwide, to leave generations a world in good order and worth living in. The development tasks are always centred in the context of business, culture, education, nature conservation as well as socio-economic aspects. Important components of the European network of nature reserves called NATURA 2000 are centred in the Biosphere Reserve area.

Besides preservation of area-typical diversity of species and styles of nature-oriented ecosystems in a central-European river-valley floodplain and the maintenance of the world heritage of the

Dessau-Wörlitz-man-made landscape, the development and trial of model examples for environmentally -friendly land utilization are seen as tasks within the Middle Elbe Biosphere Reserve. Special responsibility is borne by the administration of the Biosphere Reserve as a reference point of the country for the protection of beavers and therefore, also as a contact partner for possible

conflicts between beaver protection and men. Regional economy profits by the characteristics of the Biosphere Reserve especially in tourism. The bicycle-track along the Elbe-River, the Bauhaus school in Dessau, towns like Wittenberg, Coswig (Anhalt), Bitterfeld, Magdeburg, Tangermünde and Havelberg, as well as the unique monastery of Jerichow attract nature lovers and culturally interested



The reaction ferry of Breitenhagen – silent, emission-free, environmentally friendly



Meadow mowing

people likewise. This is useful for the hotel- and restaurant trade and other providers in tourism. The construction and maintenance of bicycle- and walking tracks, the conservation of waterways in cooperation with Shipping Authorities, the structural transformation of flood control conceptions, they all create employment in the region. Regional products like wood, wool, beef, calf,

sheep as well as goat meat, milk products, organic fruit products ranging from fruits to juices, marmalades, and liqueurs are gaining image and importance through the Biosphere Reserve. The regional trade called "Middle Elbe" was developed on the initiative of regional companies. The initiating agents work together with the administration of the Biosphere Reserve.



Farm shop in Mildensee



Professional fisher man

Pulse generator for sustained developments



A harmonious together between man and nature is aimed at in the Biosphere Reserve. This means for the practical work a good balance between activities to do and not to do. It is especially important to let the people, working and living in the Biosphere Reserve, take part in the goals and in the transformation of the MAB-concepts. For this reason, Biosphere Reserves are not only keeper of an intact living environment, but they are also long-lasting pulse generators for regional developments, especially within the rural area. Conflicts between the requirements of nature conservation and the demands of regional economy, e.g. conflicts in land utilization or in the extension of the infrastructure, have to be solved consistently again and again. Intensive dialogues between all land users do this.



....The complete way from Dessau to Wörlitz has been designed in such a wise usage of its environment that you might think you are in one single, contiguous park. And in fact, you see everything from the most accurate point of view if you consider the area as a huge park, as a temple of nature; where the narrow, compressed Wörlitz-Park quasi composes the sanctum.

Carl August Boettiger, 1797



Even nowadays, the visitor is led through the landscape like in a garden of endless vastness. Via connection paths, alleys, dike crests, lines of sight, guided from point to point. To eye-catchers of architecture divided into small sections, to temples, statues, wells, to bridges and guardhouses built on riverbanks, as far as generous areas like meadows with free-standing oak-trees; waters, landscape parks and floodplain meadows.

World culture along wild riverbanks

The Dessau-Wörlitz Garden Realm in the Middle Elbe Biosphere Reserve

The humanistically spirited and enlightened Duke Leopold III Friedrich Franz von Anhalt-Dessau, born in 1740 as the grand-son of Leopold I, Prince of Anhalt-Dessau, nicknamed “The Old Dessauer“, created an aesthetically pleasing man-made landscape within the Elbe- and Mulde-floodplain between 1760 and 1817. He was supported by his closest advisor called Friedrich Wilhelm von Erdmannsdoff and inspired by several journeys to England and Italy. It was the first English landscape garden in mainland-Europe. The Horaz’s principle of “Combining beauty with usefulness” is represented as a unity between function and design in many details.

Anhalt as a European centre

After its completion, the historic garden realm consisted of the residence capital of Dessau, of the parks of Georgium, Mosigkau and Kühnau, as well as of the Luisium, Tiergarten, Sieglitz-Park and the Wörlitz-Park. The already existing castle- and park grounds of Oranienbaum and Mosigkau were included into

the overall design. Besides its aesthetic effect, the entire garden realm should be understood as an educational programme. For instance, the visitors were presented different styles of architecture, but also humanistic values were taught, such as the respectful coexistence between church and synagogue by arrangement of a line of sight, the so-called “Tolerance-View”. Duke Franz reformed education and agriculture in his small dukedom, he also involved fields, pastures, dikes and alleys into his garden realm and he formed a nature term that was designed for sustainability already 200 years ago.

„Wayfarer, respect nature and art and handle their works with care.“

During that time, Anhalt was a centre of diverse reformation activities, radiated to the whole of Central Europe and attracted spiritual leaders of this time like Johann Wolfgang von Goethe and Johann Gottfried Herder.

Preserving the heritage of mankind

The Dessau-Wörlitz Garden Realm with its area of 142 square kilometres has been part of the Middle Elbe Biosphere Reserve since 1988. In the year 2000, the Garden Realm was appointed to an UNESCO-World-Heritage-Site. The UNESCO-program called „Men and Biosphere“ and the World-Heritage-Convention stand here in an impressive context. The shared task between the administration of the Middle Elbe Biosphere Reserve and the cultural foundation of Dessau-Wörlitz consists of the preserving of this outstanding man-made-landscape and of the conservation of biotope diversity and landscape mosaics to maintain the world-heritage in its natural and imaginary substance for present and future generations.



Elbe-Beaver

Diversity along the river

Fauna within the Middle Elbe Biosphere Reserve

Due to its diversity of habitats and its orientation by nature, the Elbe-floodplain is home to a variety of partly highly-endangered animal species. Nowadays, a species-rich fish-fauna lives in the Elbe-River and its backwaters. Amongst them, there are representatives of flowing waters like asp and bleaks, as well as of still waters, such as bitterlings. After several years as a larva, dragonflies, such as the green club-tailed dragonfly, hatch out along the riverbanks. The fire-bellied toad can be heard in fuming water areas and small waters. In springtime, spring tadpole shrimp can be watched in temporary waters (temporarily water-leading waters, e.g. after floods). Large contiguous old hardwood riverside woodlands offer breeding places to middle spotted woodpeckers and red kites, but also to highly-sensitive white-tailed eagles, whereas, the white stork is a synanthrope and hatches nearly almost on buildings and towers.

The Elbe-River as a guideline and a wandering corridor

The Elbe-River-Valley is an important wandering corridor. Especially in autumn, the annual bird migration with its thousands of water birds, bean- and white-fronted geese, but also tundra- and whooper swans, as well as thousands of cranes is impressing (for bird-watching points see: www.mittel-elbe.com). Wandering bats like Nathusius' Pipistrelle and noctules use this guideline on their long flights between nursery roosts and wintering grounds. Supported by projects to release the animals back into the wild, an increasing number of fishes, such as river lampreys and salmon, have been verified on their ways between the North Sea and their spawning grounds in the Elbe-River and its feeding waters.



Elbe-Beaver

A typical animal species of the floodplain, nearly totally liquidated by hunting and illnesses in around 1900, has found a last sanctuary - the Elbe-Beaver. The broad, flattened tail, called paddle, is the most remarkable feature of the beaver. Furthermore, it is very shy and nocturnal. Grown up, it can be as long as 1.40 m (inclusive tail). Beavers have a very tight brown fur, which protects the beaver from coldness and wetness, but therefore, it has to be constantly cleaned and greased by the beaver. Special plant foods are on its menu, such as bark, leaves, branches from willow-trees, water plants, which the beavers can easily find within the Elbe-Floodplain. Nowadays, the beaver is a symbol and a popular figure of the Middle Elbe Biosphere Reserve and represents the success of the decade-long work of countless environmentalist. The pleasant development of the beaver population has led to a natural increase of the largest European rodent into other areas and has even allowed to provide whole families of Elbe-Beavers for resettlement projects both in Germany and abroad. Despite all success in preservation and a population number of 1,200 individuals only in the Middle Elbe Biosphere Reserve, the beaver is a highly-protected animal species. That means, it is neither allowed to disturb, hunt, catch or kill beavers, nor to damage beaver dams or -lodges to make sure that the sympathetic rodents survive. The attentive visitor can see the traces of the shy water-architects: gnawed off branches, walking paths along the riverbanks leading to the beaver-waters, beaver-lodges, conic section cuts, foot- and tail-prints in snow or mud.



Little ringed plovers hatch on untouched sand- and gravel banks in the groyne fields of the Rivers Elbe and Mulde.



The Great Capricorn Beetle lives as larva in old oak-trees, which can be numerous found in the forests and as freestanding trees on oak-meadows.



The Banded Demoiselle can often be seen as a sign for improved water quality.



The River Kingfisher



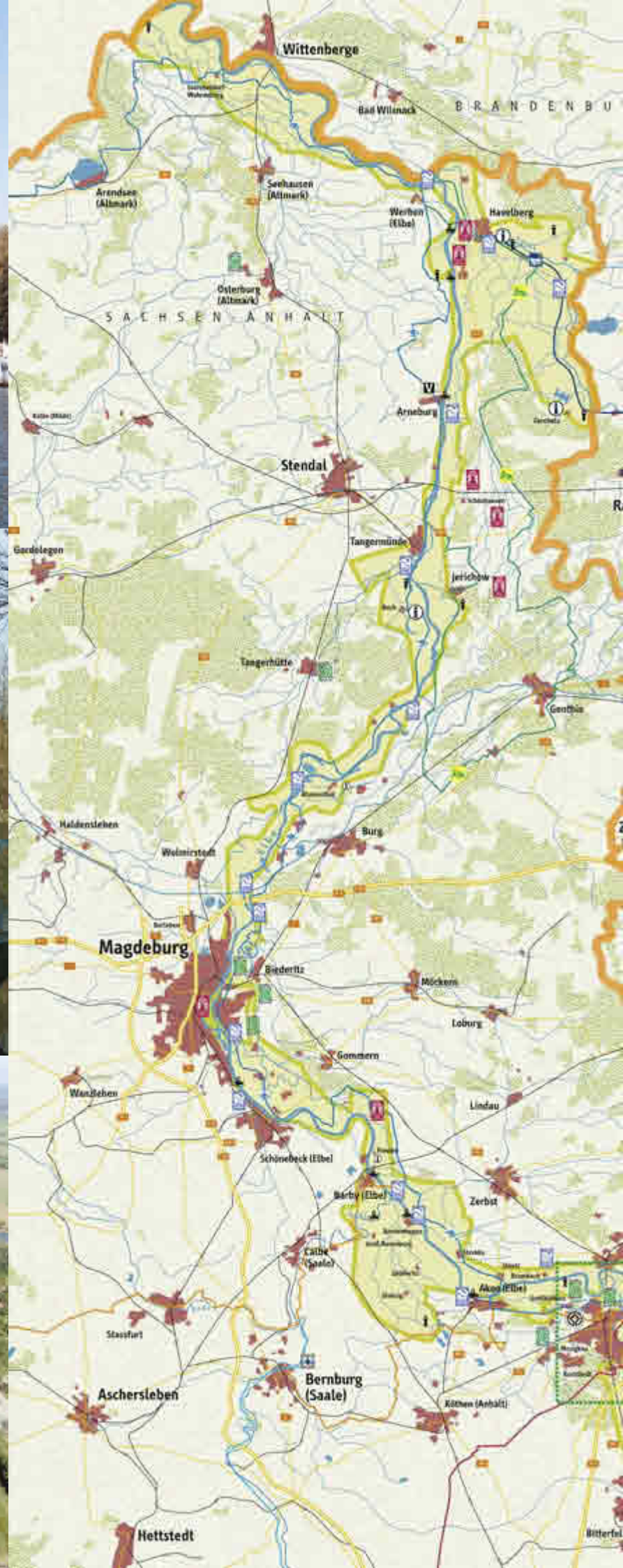
Tangermünde



Havelberg



The Magdeburg Water Bridge Network
in German called Wasserstraßenkreuz





Magdeburg



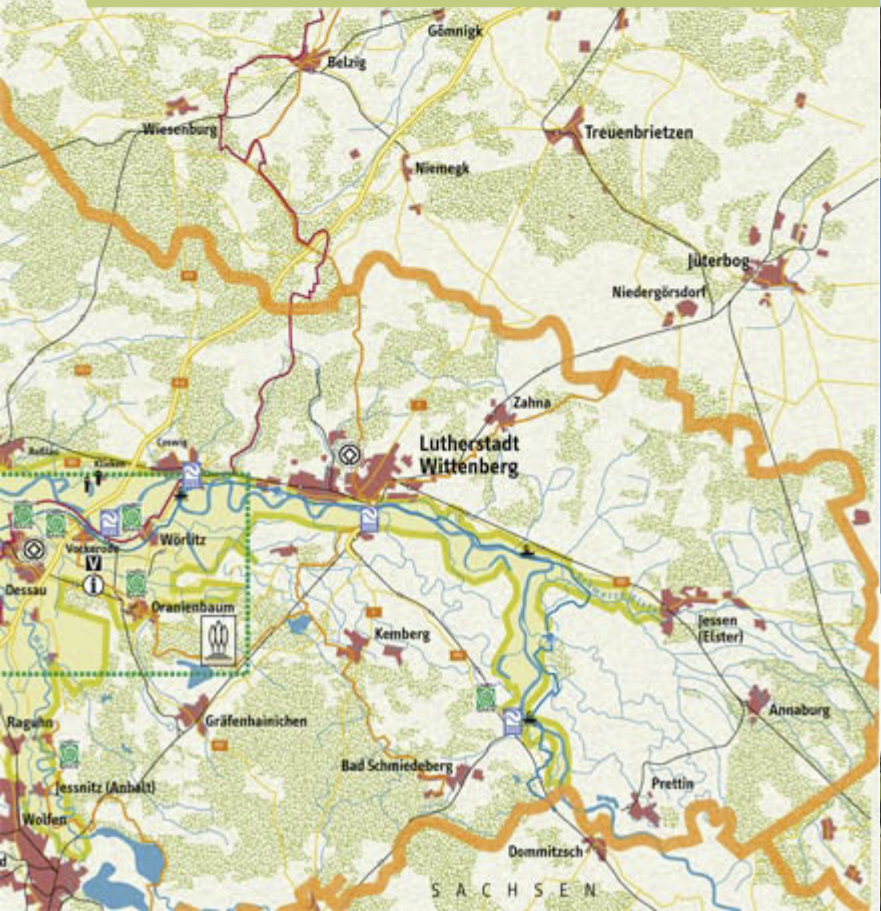
Luther-Memorial in Wittenberg

Key

-  Information centre
-  Environmental centre
-  Administrations
-  Blue Ribbon landing stages
-  World-Heritage Sites
-  Garden Dreams park-grounds
-  The Romanesque Road
-  The Hiking Trail E1
-  The European Bicycle Route R1
-  Circular-course through the Altmark-area
-  Elbe Cycle Route
-  Saale Cycle Route
-  Havelland Cycle Route
-  Ferries
-  Reaction ferries
-  Observation tower
-  Borders of the Middle Elbe Biosphere Reserve
-  Borders of the Garden Realm



Jerichow-Monastery



Dessau



Siberian Iris



Fruit blossoms – pure aesthetics und practical usefulness

Water Caltrop and Military Orchid

Rich flora of the Middle Elbe 'Biosphere' Reserve

More than 1,000 kinds of plants grow along the vast floodplain forests and -meadows, within the backwaters. They form the riverbank vegetation of rivers as well as the dry grassland and swards on the inland dunes in the Middle Elbe Biosphere Reserve. The English oak is, along with elm-tree and field maple, one of the principal species of hardwood floodplains and offers food and home to many animals. More kinds of insects than on any other plant in Europe find their habitat on an oak-tree. About 30 kinds of lichen grow on its bark. The Oak Leafroller, the Great Capricorn Beetle, the squirrel and the jaybird, they all have the German word for oak-tree in their German names. Falling off acorns are food for some kinds of game animals.

The plants of the riverside meadows are adapted to the change of water levels. Plant species from the south of Europe, such as the rare Salvinia or the highly-protected Water Caltrop, the Squinwort and the Southern Rorippa have become domestic in the Biosphere Reserve. The Siberian Iris, the Aster

linosyris or the Shining meadow rue have appeared from the east of Europe by natural factors from the east of Europe. In springtime, the blossoms of the wild cherry, the wild apple and the wild pear decorate the Biosphere Reserve.

Sanctuary

A sanctuary for endangered species of typical habitats of the Middle Elbe was created in cooperation with the Martin-Luther-University of Halle-Wittenberg in 2001. The garden consists of two partial areas: a 100-m²-sized area for plants of dry locations and a 500-m²-sized area for species of wet-dry locations. Presently, 21 species of the Red List of Saxony-Anhalt are being horticulturally cultivated in a preservation project.



The Water Caltrop

The starch-containing fruit of the water caltrop, also called water-chestnut, was a common food for our ancestors. Until the 19th century it was offered on market places along the Middle-Elbe and also served as animal food. Since 1987, this floating plant, anchoring at the bottom of muddy waters, has been on the list of endangered species. In the Middle Elbe Biosphere Reserve, it can be found on several locations in backwaters. This plant is in blossom between July and August and then forms hard-shelled fruits, which give the plant the name due to the resemblance to nuts and chestnuts. In former times, this sweetly-tasting fruit was also used for bread flour and, due to its rich content of tannin, it was also used as ink in a mixture with iron-containing water.





After the ice-flooding



Floods in the Rosslau Luch-Area

In the rhythm of water

Floodplain and floodplain forest

The river is the heart of the floodplain. The constant change from high waters to low waters, as well as the dynamics of ground water linked to that; determine a sensitive balance of symbiotic communities and habitats within the floodplain. Changing water levels, also occurrences of floods, are not a catastrophe for these symbiotic communities, on the contrary, they are life giving. Where the erosive power of water acts, typical floodplain structures, such as floodways, backwaters and kolks, are formed. Floodways are of special significance. They transport the flooding water into the floodplain and afterwards also back to the river. Many species, such as fire-bellied toad,

triop, reed canary grass and *Iris pseudacorus*, are specialized in such conditions. Nature-oriented conditions are distinctive, especially for the lower part of the Mulde-River as a tributary of the Elbe-River. The richness of forms of the water- and riverbank-structure offers valuable habitats to a diversity of floodplain-typical species. This part of the Middle Elbe Biosphere Reserve is regarded as one of the biogeographically most valuable stretches in Germany and is an allocated nature reserve.

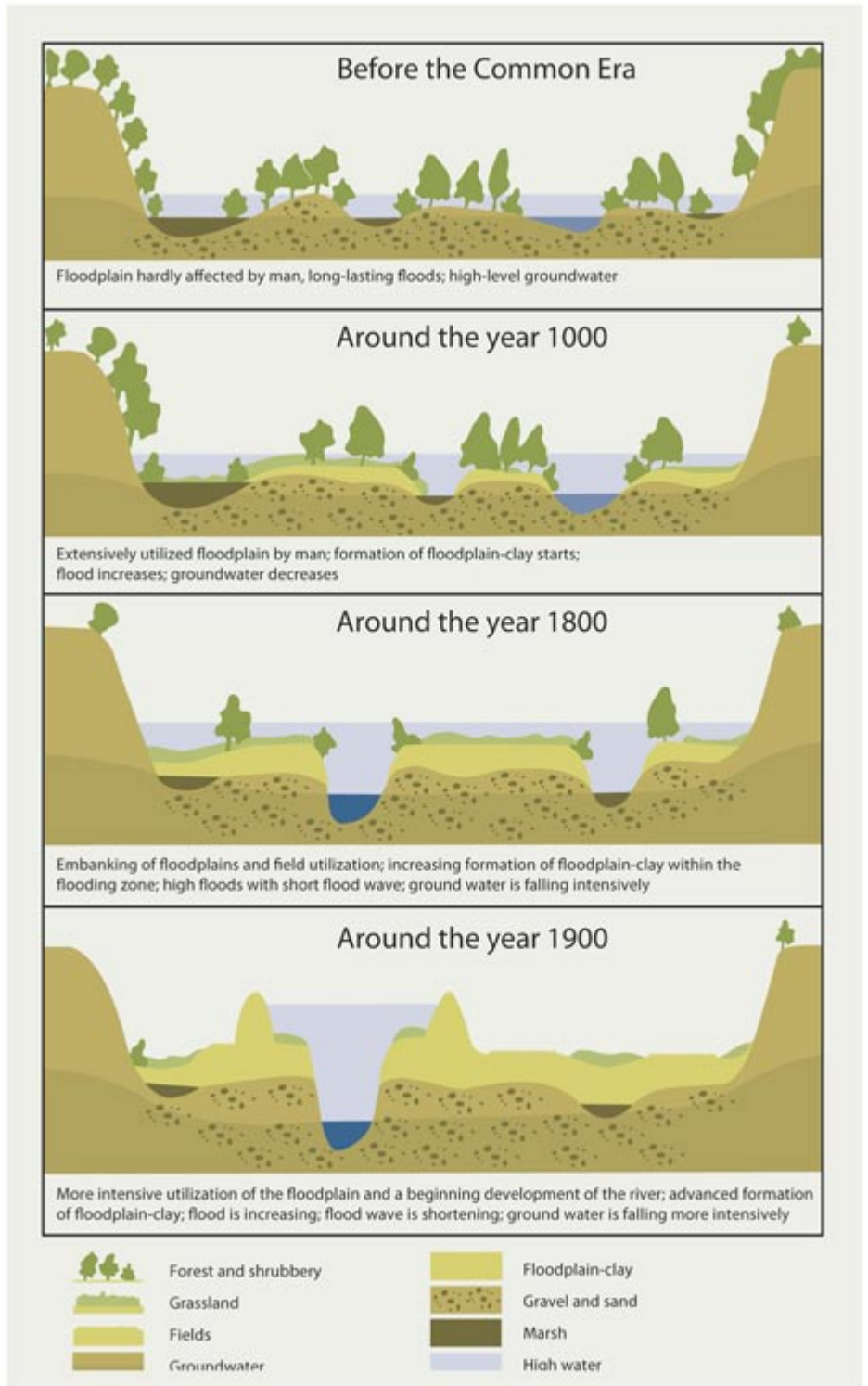
The ecosystem of the floodplain forest
Floodplain forests and -meadows are called plant communities, which are

located in the flood plain area of a river and which are dependent on its flow conditions. The river determines their dispersion and the sequence. Plants can survive periods of floods and of hydrological droughts. They employ the high fertility of the floodplain soils, which receive new nutrients with each flooding. Natural forest structures have also become rare in the floodplain, nowadays, the floodplain forest is marked by forestal utilization. An ecological development of forestry contributes to a stabilization of the ecosystem of the forest and provides bigger resistibility in case of disturbances. Individual old trees, woefully fallen storm-damaged wood, loose

parts of the crown or wood collapsed into mildew, are important structural elements in the forest. Bats, pine martens and small mammals find shelter in crevices and hollows. They are habitats for a variety of birds, such as the brown owl, in form of aerie-, cave- and drumming trees, song- or hunting posts.

Deadwood is not dead

The fact that within this system even deadwood is not dead, but full of life, is proven by innumerable insects, mites and fungi, which depend on the different stages of age and decomposition of trees. Fungus mycelia in mildew-wood change this into valuable nutrients and germ substrates, and this makes an important contribution against the acidification of the forest soil. The natural forest provides old- and deadwood in a relatively high and constant amount. Whereas in commercial woodlands, perfected forest hygiene and selective tree chopping often prevent trees from reaching a natural, mixed age structure, in the Middle Elbe Biosphere Reserve, it is ensured that the floodplain forest can fulfil its functions as a natural storage system, sanctuary and habitat in a sustained way.



Historical development of a river-landscape (according to Ellenberg, adapted)



- cultivated area with fields and forest – inland dunes – lowland moor – valley border



Lake Kühnau – renaturation project in the 1990s, amongst others, by means of the Allianz-Environmental Sponsoring.

River needs space

Floodplain-management within the Middle Elbe Biosphere Reserve

The embanking of the river, caused by the fact that settlement and cultivated areas always come closer to the river, deprives vast floodplain areas of its natural dynamics. The cooperation of symbiotic communities is changing due to this, different species are disappearing, waters are silting up, and the typical floodplain forest is losing its livelihood. The Elbe-River has lost around 80% of the originally existing floodplain areas by human doings, such as embanking, soil sealing and straightening of the course of the river. The consequences of the disastrous Elbe- / Mulde-Floods of the year 2002 show once more the necessity of sustained renaturation of the riverside landscape, which absorbs water masses at high water-levels and releases them

step by step. The objective of floodplain-management is therefore to allow or restore the natural river dynamics, to give the river spaces for expansion, also called retention areas, and to create or maintain real flooding conditions in the floodplain areas. In the framework of renaturation projects, backwaters, the typical and biogeographically most valuable parts of the floodplain, are desludged and a nature-oriented condition is recovered. A resettlement of species, which had already disappeared, recovers under certain pre-suppositions. The two presently biggest and most important floodplain-management projects in Europe have been being carried out in the Middle Elbe Biosphere Reserve.



EU-Life-Project Klieken-Floodplain

WWF-major project of Middle Elbe

The WWF started the project „Middle Elbe“ in 2001, its most important project in Germany. A continuous composite of real overflowable floodplain forests from the mouth of the Mulde-River to that of the Saale-River shall be created by 2018, with the flora and fauna, the societies and symbiotic communities typical for floodplains. It is the objec-



Sensitive working with heavy machinery

tive of the project to support landscape preservation and flood control - and to give the river more space by creating real floodplain conditions. The necessary measures are implemented step-by-step. Amongst them, there are the acquisition of areas and the allocating of sanctuaries. The avoidance of utilization conflicts is only possible by the active involvement of the human population. One part of the project is, amongst others, a relocation of

the dike of 600 ha in size as part of flood-control and simultaneous protection of the rear dike height. The project of „Mittlere Elbe“, developed by the Middle Elbe Biosphere Reserve and sponsored by the WWF, the Federal State of Saxony-Anhalt and the German Federation, is a project of prestigious meaning for Germany and Europe.

The major nature preservation project of “Untere Havelniederung”

Objective:

- Development of typical structures of rivers and floodplains

Actions:

- Renaturation of embankments to give space to natural riverbank structures (reed beds, brims)
- Connection of back-waters to the Havel-River
- Creation of fish ladders for migratory fish species

Sponsor: NABU Deutschland

Total project area: about 18,700 ha

Project duration: until 2022

Project costs: about 24 million EUR

Sponsorship: German Federation, The Federal States of Brandenburg and Saxony-Anhalt.



Exploring habitats – Understanding correlations

Knowledge and perception of nature

Research within the Middle Elbe Biosphere Reserve



Research within the dialogue on the "Day of the Open Area"

The fact that Biosphere Reserves are model regions also means to carry out research work in terms of the goals of the Biosphere Reserves. Research results supply decision tools for environmental policy and - management. The interdisciplinary, application- and target- oriented research projects in the Middle Elbe Biosphere Reserve focus, amongst others, on the registration and documentation of nature environment and land usage in past and present. Universities, environmental research centres and companies, working in the fields of environmental research and landscape planning, jointly

explore the relations between humans and environment, or define requirements for the preservation of the diversity of species. That means for instance, that locations of endangered plants are documented and at the same time, the optimal location factors - soil conditions, supply of water and light etc. - are compared to the actual conditions, and measures for possible improvements are described.

Research projects

Current research projects are **the development of cost-effective strategies** for the preservation and development of habitats according to the Habitats Directive on vast areas, in cooperation with the Anhalt- University of Science Appliances, The German Environment Foundation and other partners, or the concept for **the development of softwood floodplains** as a contribution for environmentally-friendly flood-control along federal waterways together with the University of Marburg and the Water and Shipping Authority of Magdeburg. On the basis of **the project of the relocation of the Rosslau-Oberluch-Dike**, scientists explore here, in cooperation between the Helmholtz-Centre for Environment Research in Leipzig, long-term effects and ecologic correlations of such renaturation measures related to man and nature. With this project, Rosslau was selected location for the Federal Initiative "Germany - Country of Ideas" in 2009.



Puzzle of a tree in the "Auenhaus"

Realize nature

Visitor centres in the 'Biosphere' Reserve



The "Auenhaus"

was created in the frame of the Expo 2000. This information centre of the Middle Elbe Biosphere Reserve is located near Dessau-Rosslau. The transparent facade of glass and wood enables nature lovers, families and school classes views into the world of the riverside floodplain. An interactive presentation in the entrance hall gives first impressions of the topics of the reserve. The model of the Elbe-River runs through the house as a silver-shining band representing the theme of the exhibition. Replications and functional models create correlations, which, in nature, are often hidden to the eyes.



The "Beguinenhaus"

was built in the 13th century for a monastery-like society; it is the oldest building in the town of Havelberg and is seat of the information centre of the Middle Elbe Biosphere Reserve. The employees not only inform about the Biosphere Reserve, but also about touristy and further regional offers. Especially pupils get to know more about their region as well as about flora and fauna along the rivers of Elbe and Havel, in an entertaining way. The information point is located on the heavily-frequented Elbe Cycle Route.



The Beaver Enclosure

The Elbe-Beaver has found a last sanctuary along the Elbe-River between the towns of Wittenberg and Magdeburg. The traces of the beavers can be seen in many places; nevertheless, nature lovers can see the shy and nocturnal rodents very seldom. The beaver enclosure was created in the year 1997. An area of about 1.2 ha in size - inclusive waters - situated near the Kapenmühle has been a reserve for a whole beaver family since then. The characteristic: The beaver family can be watched in its lodge through a viewing window.



Backwater of the Elbe-River in winter

Thinking globally and acting regionally

Model region within climate change

As a whole, summers have been becoming dryer and warmer in Central Europe, which is a result of the climate change. At the same time, an increase of extreme events like heavy rainfalls and floods are expected. The availability of water is therefore, besides protection from natural disasters, a central issue of the future. The kind of wetland renaturation exemplarily carried out in the Middle Elbe Biosphere Reserve, makes a contribution to the retaining of more water within the floodplains and therefore to the creating of a new livelihood for plants and animals as well as to ensuring good conditions for agriculture and forestry. Biosphere Reserves exemplarily develop and test sustained solutions for the challenges of the global climate change. Nevertheless, a further and decisive change comes from the Biosphere Reserves: the change in awareness.

UNESCO-Biosphere Reserves are locally anchored and globally crosslinked. It is never a question of conserving “old” relations like from pre-industrial times, but it is a question of a dynamic regional

development, where typical areas of unspoiled nature are maintained as a natural heritage for future generations and used for the beings presently living here. Many different areas of the society cooperate together to implement this idea of Biosphere Reserves: representatives of education and science, politics and authorities, business and culture jointly work on the maintenance of landscapes and on the goal that the simultaneous utilization of resources do not represent a conflict.

Biosphere Reserves are regions of hope, they give examples of future-oriented and responsible living and acting, at first in little and later applicable to larger areas.

Adresses

Biosphärenreservat Mittlere Elbe

Am Kapenschlösschen 1, 06785 Oranienbaum
or: PF 1382, 06813 Dessau-Roßlau
Tel. 034904 4210, www.mittelbe.com

Auenhaus

Auenhaus information centre
Am Kapenschlösschen 3, 06785 Oranienbaum
Tel. 034904 406-31, -10

Informationszentrum Havelberg

Beguinenhaus, Salzmarkt 1, 39539 Havelberg
Tel. 039387 20625

Biberfreianlage (near Kapenmühle)

Tel. 0340 2206141

Kulturstiftung DessauWörlitz

Schloss Großkühnau, 06846 Dessau-Roßlau
Tel. 0340 646150

Förder- und Landschaftspflegeverein

„Biosphärenreservat Mittlere Elbe“ e. V.

Johannisstraße 18, 06844 Dessau-Roßlau
Tel. 0340 2206141

Tourismusverband Sachsen-Anhalt e. V.

Große Diesdorfer Straße 12, 39108 Magdeburg
Tel. 0391 7384300

North Sea

Baltic Sea

Biosphere Reserve
Schleswig-Holstein
Wadden Sea and Marsh islands



Biosphere Reserve
Hamburg-Wadden Sea



Biosphere Reserve
Lower Saxony
Wadden Sea



Schleswig-
Holstein

South-East Rügen
Biosphere Reserve



Mecklenburg-Western
Pomerania

Schaalsee
Biosphere Reserve



Riverside Elbe Biosphere Reserve
Mecklenburg-Western-Pomerania



Biosphere Reserve
Niedersächsische Elbtalaua



Riverside Landscape Elbe
Biosphere Reserve-Brandenburg



Lower Saxony

Riverside Landscape
Elbe Biosphere Reserve



Schorfheide-Chorin
Biosphere Reserve



North-Rhine
Westphalia

Saxony-

Brandenburg

Middle Elbe
Biosphere Reserve



Spreewald
Biosphere Reserve



Karstlandschaft
Südharz
Biosphere Reserve



Anhalt

Oberlausitz Heide-
and Teichlandschaft
Biosphere Reserve



Vessertal-Thuringian Forest
Biosphere Reserve



Saxony

Rhön Mountains
Biosphere Reserve
Hesse



Thuringia

Rhineland-
Palatinate

Pfälzerwald-Nordvogesen
Biosphere Reserve



Saar-
land

Bliesgau
Biosphere Reserve



Baden-
Württemberg

Schwäbische Alb
Biosphere Reserve

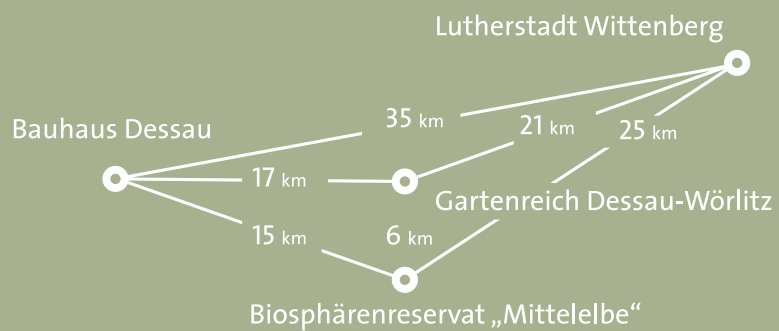


Bavaria

Berchtesgaden Alps
Biosphere Reserve



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Landesverwaltungsamt Saxony-Anhalt
Biosphärenreservat Middle Elbe
Kapenmühle PF 13 82
D-06813 Dessau
Tel.: +49 (0) 3 49 04 / 4 21-0
Fax: +49 (0) 3 49 04 / 4 21-21
E-Mail: bioesme@lvwa.sachsen-anhalt.de
Internet: www.mittelbe.com, www.gartenreich.net

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