LIFE-Natur-Projekt

Oberes Maintal

LIFE Nature Project

Upper Main Valley

Status Report

Bund Naturschutz in Bayern e.V. · LBV · Landkreis Lichtenfels · Landkreis Bamberg · OBERFRANKEN STIFTUNG · Bayerisches Staatsministerium für Umwelt und Gesundheit

Contents

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1. Project data

Project location	Rural Districts of Bamberg and Lichtenfels
Project start	1 January, 2010
Project conclusion	30 June, 2015
Project duration	66 months (incl. 12 month extension)
Total budget	€2,221,568
Eligible costs	€2,221,568
EU contribution	€1,110,784
(%) EU contribution	50 %
Eligible costs	100 %

2. Summary

The LIFE+-Nature Project “Upper Main Valley” encompasses an area of 3,150 ha in the districts of Lichtenfels and Bamberg in the Upper Main Valley. It takes in alluvial floodplains along a stretch of the river Main that is about 70 km long and extends from Theisau in the North East to Viereth in the South West. It is of particular significance for biodiversity and the biotope network of alluvial floodplains in Bavaria.

The LIFE+ nature project has set out to create typical floodplain wetland habitats, especially shallows and backwaters and species-rich lowland hay meadows with wet hollows. The objective has been to create and enhance 10 habitat types listed in Annex I of the Habitats Directive and to establish or support 12 species listed in Annexes II or IV respectively. Further objectives included conserving and enhancing the habitats and populations of 40 species of breeding and 26 species of migrating birds in accordance with Annex I of the Birds Directive.

A large quantity of land, including bodies of water, was purchased and developed to cater to the habitat requirements of the target species.

This work was flanked by extensive public relations activities.

The LIFE+ nature project was implemented primarily by an external project agency, but also by staff from the local (“lower”) nature protection authorities in the districts of Bamberg and Lichtenfels. Staff at the Bavarian State Ministry of the Environment and Consumer Protection were also involved, as were the Upper Franconian Government, the Bavarian Society for the Protection of Birds and the nature conservation association *BUND Naturschutz in Bayern e.V.*


Lichtenfels
Bamberg

3. Project objectives

The Upper Main Valley between Burgkunstadt and Bamberg forms a corridor of supra-regional importance linking floodplain habitats. As a migratory corridor and resting place for migratory birds, it is of European significance. The Upper Main Valley is a key element in the Natura 2000 network of biotopes across Europe. It makes a vital contribution to the biodiversity of the region. Looking only at the category of birds, it can be noted that 62 of the species listed as threatened or endangered in the Federal Republic of Germany or in Bavaria feature in the Bavarian species distribution maps of the region. The alluvial floodplain of the Upper Main is a core area for the common kingfisher and forms part of the area where the second-largest Bluethroat population in Bavaria is located.

The LIFE+ nature project “Upper Main Valley” is geared to enhancing and continuing to develop the floodplain as a regional artery and as a major corridor in the biotope network. While lowland riparian forests, species-rich lowland hay meadows and hydrophilous tall herb fringe communities were also developed, the creation of shallow water zones was at the heart of the project. Although the floodplains along the Main feature countless bodies of water created through gravel extraction, extensive shallows are rare. Many of the quarry lakes have steep banks and only a narrow strip separating land and water. It is, however, precisely this transition zone which represents a key habitat for numerous species and is a rare habitat in the Main Valley.

It is envisaged that the shallow water zones created will be colonized by reed beds made up of, for example, reeds and bulrushes. These are particularly significant as breeding grounds for numerous bird species. Shallow water zones are also important as staging areas for migratory bird species. They are, moreover, also an important habitat for fish, especially as a rearing habitat. Young fish are safe from predators, and shallow water is warmer.

In addition to these shallow water zones, the LIFE+ nature project was also geared to creating near-natural bodies of standing water, periodically wet hollows and nesting opportunities for bird species that breed on exposed gravel, such as the little ringed plover or the common tern, and for large birds such as white or black storks.

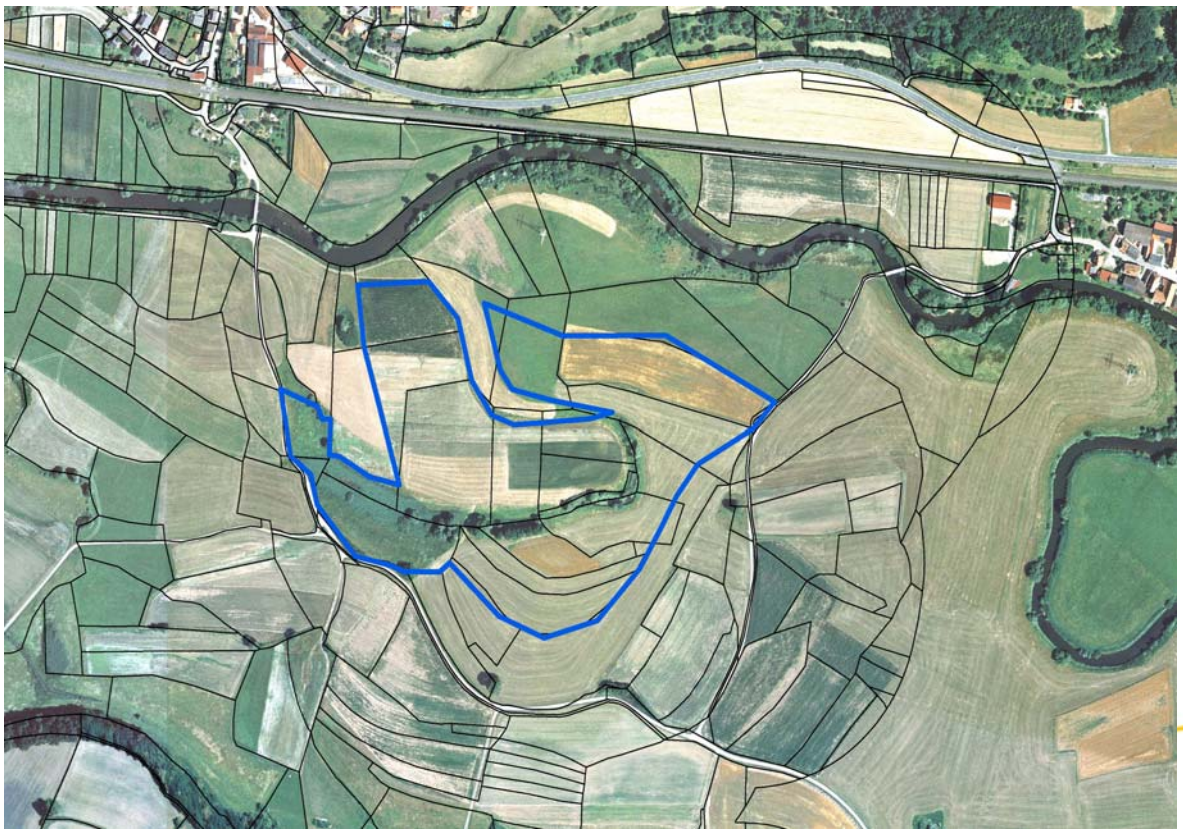
The project also set out to create a large number of facilities for observing nature and absorbing information on the natural landscape and its inhabitants.

4. Purchasing of land

The acquisition of land by the public authorities was, to some extent, a prerequisite for undertaking landscape restoration works. Both agricultural land and land used for quarrying or covered by water was purchased in both districts, Bamberg and Lichtenfels. In total, 9.9 ha of agricultural land and 31.4 ha of quarrying land or land covered by water were purchased.

Placing the emphasis squarely on extraction zones and bodies of water made it possible to spare agricultural land to the maximum possible extent. The provision that the areas purchased were to be used for nature conservation purposes was entered into the land register.

An example of a purchased land scenery

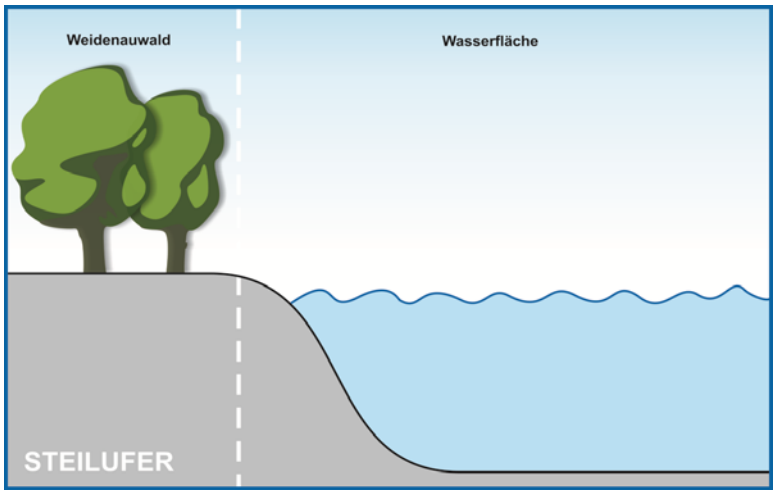


5. Specific conservation and development measures

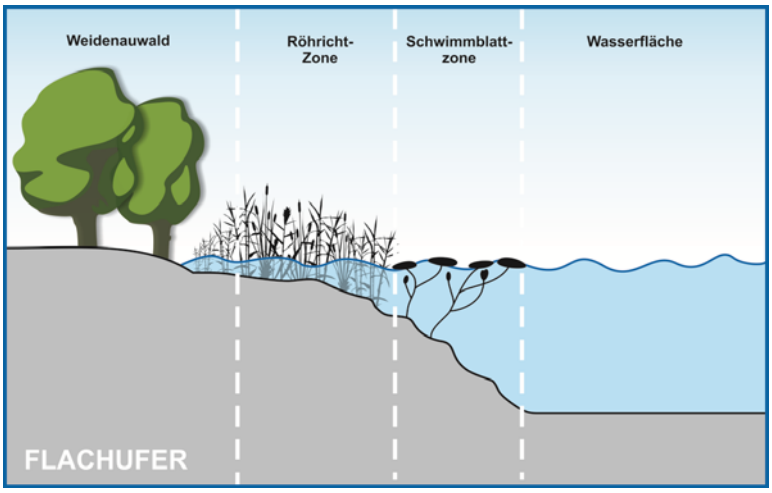
Specific conservation and development measures were at the core of the LIFE+ nature project. These were implemented on the land which had been purchased and on tracts of land that had already been in public ownership.

5.1 Creation of shallow water zones

Many old quarry lakes in the Main Valley have steep banks. The transitional zones of ecological interest that separate land and water are rare and limited in size. As such, one of the main objectives of the LIFE+ nature project was to create more valuable habitats for flora and fauna by creating extensive shallows. A large number of birds rest in these shallow water zones. They are particularly important as a habitat for migratory birds. However, breeding birds will also find nesting sites here as these shallow water zones are colonized by reeds and bulrushes and extensive reed beds develop. Fish will also benefit, as shallow water zones serve as their “nursery.” Juvenile fish are safe from predatory fish here, and shallow water is warmer.



Original bank zones with steep embankments



Restructured bank zones with shallow embankments: a biotope for reed beds and floating plants

Shallow water zones were created both by removing soil to a depth of approximately 30 cm below the level of the water surface and by filling quarry lakes with excavated soil. This involved extensive earthmoving works that were executed by local construction and civil engineering companies.

Over the years, these shallow water zones will develop into reed beds featuring reeds, bulrushes, iris and purple loosestrife. Deeper water will be colonized by floating plants such as water lilies.

In total, 17.5 ha of shallow water zones were created as part of the LIFE+ nature project. As such, the biotope structure of the Upper Main Valley has been significantly enhanced.

5.2 Creation of areas of standing water

Without human influence, a river changes its course across an alluvial plain repeatedly. Meanders often become cut off from the river and develop into side arms or oxbow lakes. When rivers have been channelised and straightened, these backwaters and oxbow lakes no longer develop. Many older backwaters have been filled in or have disappeared as gravel extraction proceeded. As such, the creation of new areas of standing water was a key aim of the LIFE+ nature project.

Natural bodies of standing water in the floodplain are characterised by the undisturbed surface of the water and by near-natural vegetation. In the context of the LIFE+ nature project, a total of 8.6 ha of new areas of standing water were created and partially planted with reed beds. These backwaters and oxbow lakes are valuable habitats for countless species of birds and spawning habitats for amphibians. In structuring these areas of standing water, the original structure of the Main floodplain was borne in mind. In some cases, it was possible to restore side arms and oxbow lakes that had previously existed.

5.3 Creation of periodically wet hollows

At first sight, the Main floodplain appears to be relatively flat. The natural contours of the landscape are, however, characterised by countless hollows and ditches. Today, against the background of the intensification in the use of the land which has taken place, these varied structures have also often been lost. However, they represent valuable habitats.

In spring and after extensive rainfall, the hollows can be clearly recognised. At these times, they are filled with water for several weeks at a time. This regular flooding means that particular plant species such as sedges and rushes (*Cyperaceae*) grow in these hollows. Rare plants such as orchids are also found there. These meadow hollows are especially important for fauna. Many meadow-breeding birds forage for food in the mud at the base of these hollows, poking through the damp soil with their specially adapted beaks as they search for worms and insects.

In the context of the LIFE+ nature project "Upper Main Valley", a total of 5.7 ha of periodically wet hollows were created. These newly created hollows are approx. 30 cm deep and are thus only covered by a shallow layer of water when flooded. Their slopes are gentle, and they can be mowed easily.

5.4 Sowing of species-rich meadows

Species-rich wildflower meadows have become steadily rarer in the Main Valley. As the creation of bodies of standing water and periodically wet hollows required the existing sward to be removed in some cases, these areas were re-sown with a particularly species-rich meadow mix. The seeds were harvested by threshing hay from specially selected donor meadows in the Main Valley. In the following year, these seeds were sown in suitable locations. As such, erosion was avoided by re-planting developed areas quickly.

This newly created meadow acreage is mowed regularly, but it is not fertilised. Farmers in the Main Valley look after the meadows. In total, 9 ha of new, species-rich meadows were sown.

5.5 Creation of nesting rafts

A near-natural floodplain would feature extensive gravel bars and areas of sand that are free from vegetation. As a result of the regulation of watercourses, such sites no longer exist. Bird species such as the common tern or the little ringed plover that breed on exposed areas of gravel have become very rare as a result.

The construction of floating nesting rafts, which have been placed on several quarry lakes, aims to close this gap and make this habitat more widely available in the Main Valley. The nesting rafts have been constructed by the Bavarian Society for the Protection of Birds. They are filled with a thick layer of gravel, so that bushes and trees cannot colonize them. In total, five nesting sites have been put in place in suitable quarry lake sites between Hochstadt and Baunach.

5.6 Construction of nesting platforms for large birds

Artificial nesting sites for large birds that nest in trees, such as black or white storks, have been erected at suitable locations. These include both nesting platforms in trees and free-standing nest platforms mounted about 10 metres off the ground on wooden posts.

These nesting platforms have been provided in particularly quiet areas that are free from disturbances. In total, six free-standing nesting platforms and six nesting platforms in trees have been erected.

5.7 Start-up planting of reed beds

Reeds in shallow water zones make up particularly valuable habitats. Only a small number of generally small reed beds were present in the Main Valley, mostly on the banks of quarry lakes. For that reason, young reed plants were grown from seed and subsequently planted in suitable shallow water zones. Where small reed beds had to be cleared in the course of construction work, these were introduced into the newly created shallow water zones as large bales. Over the coming years, a large proportion of the shallow water zones which have been created will be covered by extensive reed beds that will serve as a habitat for breeding bird species and as a nursery for juvenile fish.

5.8 Development of wilderness areas

Undisturbed areas that can develop naturally, free from human influence, are very rare throughout Germany. In the Main Valley, several largely inaccessible and undisturbed areas exist. It is envisaged that these areas should remain free of disturbances and should be allowed to develop according to their natural dynamics without steering measures. These areas are to be designated as protected conservation areas over the coming years.

6. Public relations and environmental awareness

Measures taken to create and enhance habitats have been flanked by activities geared to informing the public about the project and creating opportunities for environmental education. These PR measures have included the creation of a project flyer, a travelling exhibition, information boards and a website (Life-Oberes-Maintal.de). In addition, numerous guided tours, excursions, press conferences and public meetings have taken place.

The creation of environmental information and education facilities is of particular significance.

6.1 Nature watching towers

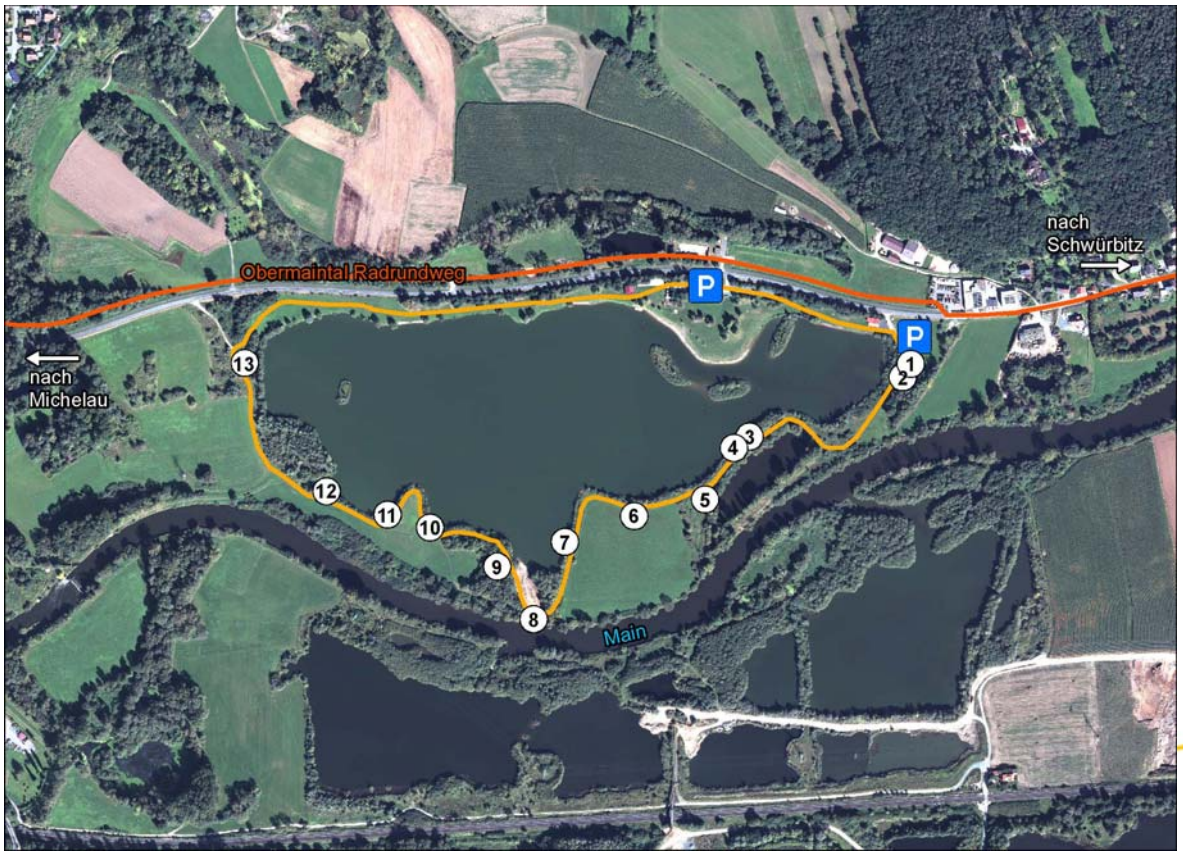
Large nature watching towers have been erected in Dörfleins (close to Hallstadt) und in Unterbrunn (near Ebensfeld). These are located at sites which allow a good view of near-natural habitats and are suitable for the observation of water fowl. Information boards with illustrations of the most commonly observed bird species have been mounted in these nature watching towers. The towers are accessible at all times.

6.2 Nature trails and information points

Attractive nature trails have been created on the banks of Rudufersee, a lake near Michalau in the rural district of Lichtenfels, and of Südsee, located close to Baunach in the rural district of Bamberg. Both of these nature trails lead visitors around the respective lakes, staying close to the banks in each case, and provide them with interesting insights into nature in the Main Valley at their 13 (Rudufersee) and 16 (Südsee) information points. Each of these circular walks takes around an hour.

Information leaflets have been created for both trails. These are available from the respective local councils and can also be downloaded from the project website.

Information points giving an overview of the objectives of the LIFE+ nature project and the specific features present at the respective locations have been erected at eleven locations in the project area. Each information point features a minimum of two information boards. They are located on recreational walking and cycling routes.



6.3 Facilities for observing nature

Basic facilities for observing nature in the form of wooden screening walls or shelters were created at a total of six locations in the environs of attractive quarry lakes. These facilitate the observation of migrating, resting or breeding bird species without causing disturbance to the birds. All of the nature observation facilities are close to walking and cycling routes.
Information boards with illustrations of the most commonly observed bird species are located in the shelters.

6.4 Leaflets and public awareness

Leaflets showing the respective routes and stations were prepared for the two nature trails in Baunach and Unterbrunn. These are available from the respective local authorities and can also be downloaded.

All of the permanent nature experience facilities that have been created are presented and explained in a further leaflet. This leaflet is available from the rural district authorities of Bamberg and Lichtenfels and from the local councils within the project area. It can also be downloaded from the project website.

Furthermore events and field trips were carried out during the entire period of the project.