Living Rhine Floodplain near Karlsruhe, Germany

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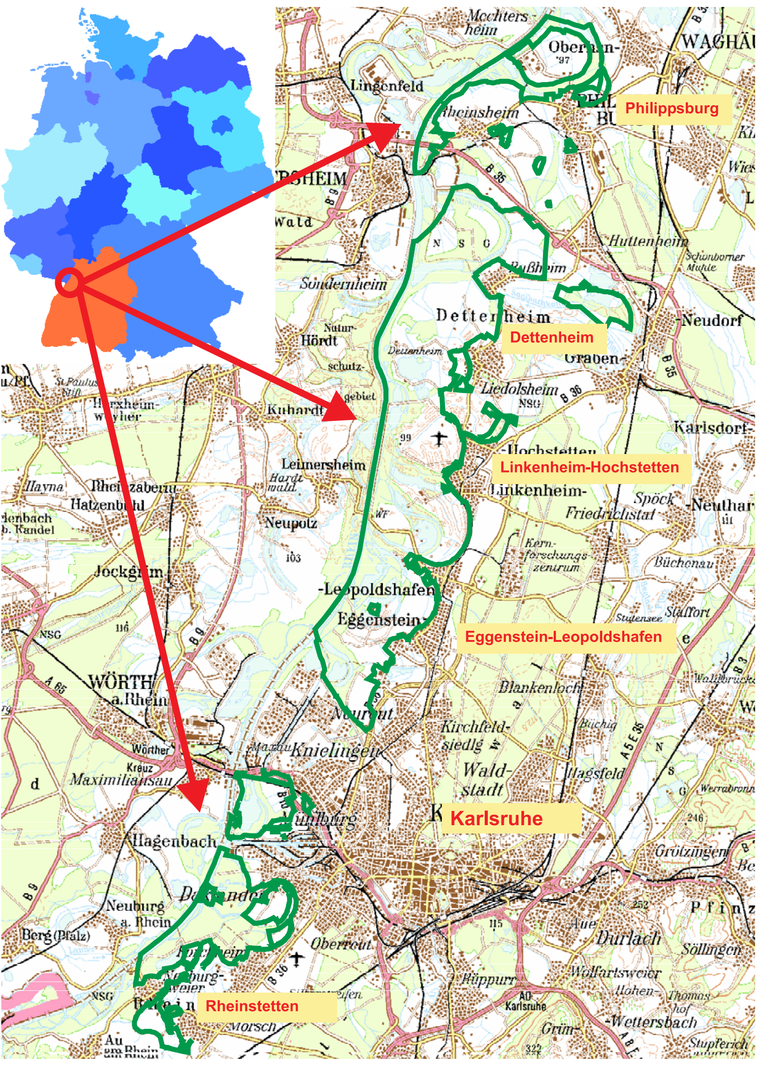

Fig. 1: Project area

Project area

The project area is located within the state of Baden-Württemberg in the Federal Republic of Germany. It comprises the morphological floodplain of the Rhine to the north and south of the city of Karlsruhe and covers an area of about 7.485 hectares. The lenght of the project reach is 38 km with an average width of 3 km. Since the project area is bordering the state of Rhineland-Palatine only the right-hand floodplain area is included. In addition to the city of Karlsruhe (275,000 inhabitants) five smaller communities are situated in the neighbourhood. All of them contribute to the project as partners (Fig. 1).

Present situation

The Upper Rhine was channelized in the early 19th century cutting off large meander bends in the floodplains around the city of Karlsruhe (Fig. 3). The construction of dykes resulted in a narrow strip of 200-300 m in width which remains exposed to the flood regime of the river ("Active floodplain", Fig.2). Most of the former river channels were left as isolated water bodies in the protected side behind the dykes ("Former floodplain". Fig. 2). Numerous gravel pits were dredged exploiting the upper layer of sand and gravel deposited by the river over thousands of years. A network of drainage canals - many of them without maintenance - is covering the former floodplain.

Most of the natural floodplain forest was replaced by hybrid poplars leaving only small relicts of willow stands (*Salix alba* and *Populus nigra*). Due to bank protection and river training former processes of lateral erosion and deposition were terminated even in the active floodplain. Behind the dykes the dynamics of the flow regime still results in fluctuations of the groundwater level with surface inundation of small areas by water pressure at larger flood flows.

Conservancy value

Despite human intervention the project area is including a wide variety of valuable habitats sheltering relict stands of typical species of the natural floodplain flora and fauna. The occurrence of lime-rich marshes with *Cladium mariscus* and *Carex davalliana* as well as the main type *Callimorpha quadri-punctaria*, underlines the uniqueness and the great importance of the Rhine alluvial meadows in the project area from the point of view of wildlife conservation.

Waterbody in the active floodplain with willow trees (*Salix alba*) and large woody debris

Student contest for logo finding

Objectives and measures

In the *active floodplain* morphodynamic processes will be initiated in limited areas in order to improve the natural spreading of softwood stands. At the same time the lateral connectivity between the river channel and floodplain waterbodies will be restored at several sites enabling an exchange of the aquatic fauna.

Several waterbodies in the *former floodplain* suffering from continuous organic siltation will be dredged thus rendering an early stage of succession. This includes a former meander of the Rhine with 3 km in length. A special programme was designed to enhance the relict populations of FFH species. For example a number of abandoned drainage canals will be restructured into suitable secondary habitats for *Misgurnus fossilis* and *Vertigo angustior*. *Trapa natans* was introduced into several separated waterbodies and *Marsilea quadrifolia* will be cultivated by old agricultural practises. An extensive maintenance programme was elaborated to enhance habitat conditions in special FFH habitat types.

A considerable part of the project comprises the removal of hybrid poplars with planting of native woody species in suitable areas.

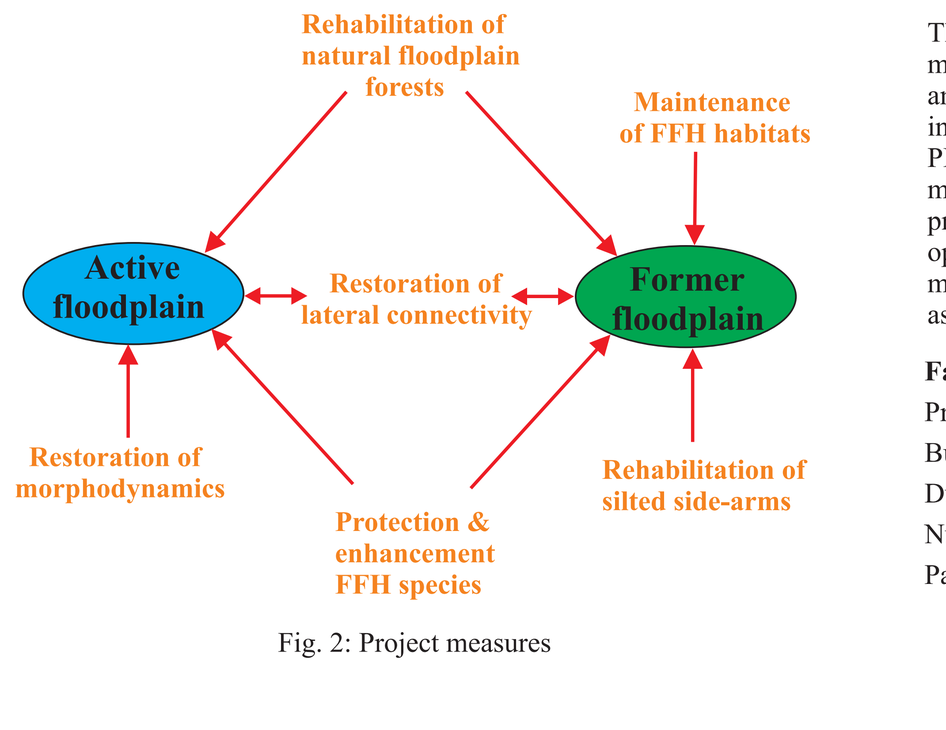

Fig. 2: Project measures

Public relations

The LIFE project needs the support of the local people, and many measures need to pass a legal procedure in city councils and state authorities. Therefore it is essential that the project includes a professional public relation part. Journalists and a PR agency are contracted to feed articles into the local news media, a wide range of publications will inform about the project on various levels, web cams will be installed and operated by volunteers of a local nature conservancy group, a mobile electronic guide will be developed, guided tours as well as seminars are offered etc.

Facts and figures

Project area:	7.485 ha
Budget:	7 mio Euro (50 % by the EC)
Duration:	Dec. 2004 until May 2010
Number of measures:	150 including publications
Partners:	6 communities, nature conservancy authority, water authority, fisheries management authority, 4 nature conservancy associations, 3 fishery associations, 1 research institute

Trapa natans introduction

Rehabilitation of a silted side arm

Fig. 3: Central part of the project area in 1875

Restoration of lateral connectivity

Cladium mariscus

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