

North Rhine-Westphalia Floodplain Program

Floodplain renaturation, biotope protection, structural improvements of streams, involvement of stakeholders



(1) A tributary of the Sieg in Röcklingen rejuvenated through its natural dynamic

In March 1990, the **Floodplain Program** was launched with the goal of restoring the large water bodies and floodplains in North Rhine-Westphalia to their near-natural state in order to allow flood dynamics as natural as possible. The status of aquatic ecosystems and dependent terrestrial ecosystems are significantly improved by **structural improvement of streams** and the **renaturation of floodplains**. Also, participation of stakeholders as required in the Water Framework Directive (WFD), in the Floodplain Program is a model of good practice through the participation of interdisciplinary working groups.

Area



River basin districts and state: Ems, Meuse, Weser and Rhine; North Rhine-Westphalia

Names of water bodies: 11 rivers with their floodplains (Ems, Lippe, Ruhr, Sieg, Agger, Berkel, Erft, Issel, Niers, Rur, Swist)

Classification within the river basin and state analysis: „at risk“, especially in the Lower Rhine river basin district

Critical load factors and impacts: structural deficits, intensive anthropogenic expansion of rivers, diffuse pollution

Protection status: Nature Reserves, FFH and EU Bird Conservation Areas

Reason / Cause

A large number of rivers in North Rhine-Westphalia (NRW) have been straightened, modified, and unnaturally trained in the past to make agricultural use or residential development possible. To avoid periodic flooding, many rivers were lined with concrete and surrounded by artificial levees. These anthropogenic interferences interrupted essential functions of the rivers and their floodplains, such as nitrogen retention, biological self-purification, flood prevention or habitat function, so that today the few rivers and floodplains in good ecological status in NRW are highly endangered habitats.

Objective

The goal for the Ministry of Environment, Planning and Agriculture in developing the **Floodplain Program** is the preservation and restoration of natural water networks and floodplains. The program is aimed primarily at restoring the water dynamic as naturally as possible without major anthropogenic disturbances. Rivers and their floodplains, from source to river mouth, should be developed ecologically an specific together and major water bodies should be linked with their floodplains as a state-wide biotope network. Furthermore, the Floodplain Program has the goal of preventing further anthropogenic development of the floodplains, and thus protects it as a habitat.

Measures

The main measures of the Floodplain Program include the conservation and restoration of natural waters sections and elements such as springs sources, silting areas, oxbow lakes as well as alluvial and other humid forests. Furthermore, the renaturation of watercourses and floodplains through tree planting, discontinuation or extensification of use as well as the creation of riparian buffers serve as important elements in implementing the program. The preservation and creation of extensively used grassland in the flood areas protects against soil erosion, decreases nutrient and pollutant entry and links habitats. On the one hand, the Floodplain Program's fixed usage requirements protect wild flora and fauna, and on the other hand, they enable positive change in aquatic ecosystems as well as in the directly dependent terrestrial ecosystems and wetlands. The preservation and recreation of the original floodplain morphology should lead to a more natural water dynamic and improved flood protection.

Measures for local implementation of regional plans include:

- decommissioning of weirs
- release of water
- tree planting
- purchase of floodplains and buffer strips (through water management or foundation) and extensification of the purchased land
- creation of alluvial forests

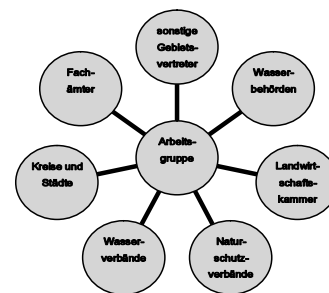
The individual measures are implemented with the help of various tools, including land use planning, nature conservation, and water management. They allow for the textual and graphic agreement of goals and measures and secure their liability. Another possibility for implementation are nature protection contracts with land owners.



(2) Emancipated part of the Lippe in the Disselmersch

Actors / Procedure

The statewide project involves both public and private actors. The competent authorities for the management of the main watercourses are the public environmental agencies and the „Wasserverbände“, special public law river management organisations. They receive support in the planning process through interdisciplinary working groups. These groups are made up of representatives from water management authorities, agriculture, forestry, agricultural policy, cities, municipalities and counties as well as from members of nature conservation and agricultural associations (adjacent figure). The authorities receive further assistance from biological stations and environmental organizations in supporting projects and protected areas. A component of the implementation of the Floodplain Program is the action plan. Conceptual, it follows the guiding principles designed for every river based on state analysis and projected development potential. The concept imposes no direct legal commitment, but the water authorities are tied to it and must take this into account when making decisions. Promoters of the concept are the public environmental agencies and the „Wasserverbände“, which are supported by technical contributions from agriculture, water management as well as from nature conservation. Often, the measures can be implemented in the context of landscape and intervention planning (especially compensation and replacement measures) by municipalities and other institutions.



(3) Working group divisions

Conflicts

Especially with respect to the renaturation of flood plains, conflicts can arise with farmers because often an extensive use of the land is necessary. To minimize these conflicts from the outset, it is helpful to assure early participation of agricultural stakeholders in the planning process. In determining what measures to take, attention is paid to their social acceptability (tenants' interests), the principle of voluntariness and compensation.

Costs / Financing

Funding for the Floodplain Program comes from the state, federal and EU level and amounted from 1995 to 2004 to approximately 10-20 million euros per year. A large amount of funding was made available from water management. The „Joint Task for Agricultural Structures and Coastal Protection“ also contributes financially to projects. The EU funds come from the INTERREG and LIFE projects. In addition, since 2002, in some cases funds come from wastewater taxes.

Results / Assessment

The Floodplain Program serves mainly the (re-) establishment of near-natural floodplains, which support the retention of water and promote cost-effective compliments to technical flood prevention. In addition, the implementation of measures improves quality and structure of water and thus positively affects the entire ecosystem. Because of its impacts on surface waters and dependent ecosystems, the Floodplain Program in NRW makes an essential contribution to the implementation of the WFD. Another focus is early and **full participation of stakeholders**. This promotes the acceptance of goals and measures and allows different voices to express their competing concerns to create a common goal. The Floodplain Program wants the concerns of environmentally-oriented (water-) management stakeholders and Native conservation stakeholders to be taken into equal account.

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Picture sources: baerens & fuss (map); R. Berg, www.vdg-online.de (1); B.Beckers: ABU/Biologische Station (2); own presentation (3)
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