

Working with Nature Project database



General information

Name of navigation or waterborne transport infrastructure project	Flood Spillway Rees
Country	Germany
Project location (nearest town or city)	Rees, Emmerich, Wesel
Key project objectives	The nearly 90o elbow of the Rhine near the city of Rees is affected by intensive river bed erosion. Decline of navigable water levels is a remarkable effect. And the location of the City forms a bottleneck for river discharge. The City is exposed to danger of severe flooding. The construction of a Flood Spillway in the sinistral floodplain will reduce risk of bed erosion, maintain navigable water levels, minimize expensive bed load supply, relieve risk for floods and enhance nature's value.
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Organisation	Waterways and Shipping Office Duisburg-Rhein

Project data

Characteristics of environment	
	Inland waterway
	Rural
	Temperate
	Protected areas
Key project dates	
Project is not in the planning phase. Date project planning started	1995
Project has consents/approvals. Date approval was obtained	
Project construction not yet started. Construction start date	2009

Date project will be completed 2015

Type of project

New construction or development

Maintenance program or initiative

Inland

Waterway

Other

multi-purpose: navigation + flood control + nature development

Brief description

On the Lower Rhine ongoing river bed erosion causes harm to navigable water levels. By constructing a flood spillway passing the sinistral floodplain at the City of Rees a significant portion of river discharge will be transferred to the spillway starting to operate at a water level threshold of Mean Water Level +100cm. Reduced flow velocity in the main river channel will reduce risk of bed erosion. At the same time the City of Rees will be relieved from danger of severe flooding as the maximum peak of highwater level will be lowered by 8cm. While realising the project intensive compensation measures are performed within the construction area aiming at enhancing nature's value in the floodplain and societal interaction of inhabitants needs (e.g. farming, recreation, nature conservation).

Indicative size

More than 10 million US\$

Working with Nature philosophy

Were steps taken to understand the environment before any work was started on the development of the design of the project?

Yes

Before the legal planning procedure was started the best location for the flood spillway was selected from a variety of planning alternatives. Valuation criteria considered areas being nature-sensitive for constructional interference. As a result a location for the spillway was selected avoiding sensitive areas and at the same time interfering such areas having low nature values or being robust against interference.

Were stakeholders or potential partners involved from the very beginning in the initial process of identifying potential options or solutions and agreeing on a preferred option (i.e. instead of being consulted on already defined options)?

Yes

Stakeholders from nature conservation, farming, flood control, and administrative deputies from the local community level were included in the pre-selection process for the most compatible solution for the spillway location. Discussion meeting with the contracted consultant and the above named stakeholders were organised by the Water and Shipping Office

Was a solution identified which provided a clear 'win-win'?

Yes

Right from the beginning of the project it was clear that both commercial navigation and flood control will benefit from the flood spillway. Whilst pre-planning additional win-win-

situations have been detected and implemented in the process. mainly nature conservation, farming, and recreation.

Was the project designed to work with and make use of natural processes (e.g. 'letting nature do the work')?

Yes

Did the project include benefits for nature or other environmental enhancements beyond what was legally required?

Yes

Partly: nature related compensation and enhancement is being carried out to an extent exceeding the required legal demands generated by an Environmental Impact Assessment (EIA)

Did the project follow, in order, the steps described in the Working with Nature Position Paper?

Yes

Including stakeholders (step3) and understanding the environment (step2) have been more or less a parallel process. The project objectives have been clear from the very beginning (step1). Project design has internally been started after step1 and has been revised and re-designed in the discussion and consultation process including stakeholders, with the final design as a result. The selected planning then served for the constructional planning and for the the legal plan approval procedure (EIA).

Reasons/motivation for taking this approach

The area of the Lower Rhine has to be regarded as sensible concerning land use reclamation and demands of political lobbyists like nature conservation, farming, flood control, or re-creation. By experience it is not useful to exclude stakeholders from the intention to realise such a big project like the flood spillway. Only including the people being responsible for decisions in that area leads to progress in the planning procedure and above that in the legal plan approval.

Cost implications

Costs were lower than the conventional approach to this type of project (i.e. cost savings were made)

Can not really be calculated at the moment as the realisation phase is ongoing. Pure construction presumably causes lower costs, but need for compensation then will notably increase the project costs.

Additional funds were provided from third parties

YES ! As the project contributes significantly to flood control the legal body responsible for flood protection measures in that area remarkably contributed to the overall project costs (in this case: Federal State of Northrhine-Westfalia).

No extra costs compared to conventional approach

Can not really be calculated at the moment as the realisation phase is ongoing. At the moment there are no numbers to compare traditional compensation costs generated by legal demands and the present situation including nature in the project itself.

Costs were marginally or significantly higher than a conventional approach to this type of project

Can not really be calculated at the moment as the realisation phase is ongoing.

Percentage of the total cost that was an additional cost

Can not really be calculated at the moment as the realisation phase is ongoing.

associated with
adopting these
elements of
Working with Nature

Did existing legislation help or hinder your application of the Working with Nature philosophy?

The approach
adopted did not
help to meet legal
obligations

Some of what was
done was needed to
meet existing legal
requirements; part
exceeded those
requirements

Well known is that ecological damage caused by the construction has to be compensated due to legal demands (EIA, Act for Nature Conservation). Additionally well known is that fulfilling the minimum of the legal requirements does not lead to an effective project realisation and public acceptance. In that context existing legislation and the knowledge of the local societal and political situation indirectly helped to apply the WwN approach

No problems were
experienced with
existing legislation

The approach was
not taken despite
legal requirements

Legal requirements
did not prevent the
Working with Nature
philosophy being
applied

Further information

Webpage of Waterways and Shipping Office Duisburg-Rhein (contents in German)
http://www.wsa-duisburg-rhein.wsv.de/Projekte/Flutmulde_Rees/index.html