

## **Dutch national Room for the River project: Integrated approach for river safety and urban development**

Le projet national néerlandais « Faire place à la rivière » : une approche intégrée de la sécurité de la rivière et du développement urbain

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### **RESUMÉ**

Deux inondations catastrophiques survenues au milieu des années mille neuf cent quatre-vingt-dix ont eu pour résultat un changement radical dans l'attitude vis-à-vis de la sécurité dans les zones fluviales néerlandaises. Contrairement à l'approche adoptée pendant de nombreuses décennies, au cours desquelles les rivières étaient enfermées et la hauteur des digues augmentée, le mot d'ordre du nouveau millénaire a été de « Faire place à la rivière. »

Cette approche a eu pour résultat un programme national comprenant plus de trente projets dont le coût total dépassera les 2,2 milliards d'Euros. Le projet « Faire place à la Rivière Waal » à Nimègue est le projet le plus important et le plus coûteux, tout en étant celui qui a le plus d'impact et aussi le plus de notoriété. Le projet démontre que l'élargissement de la zone disponible pour la rivière est tout à fait compatible avec le développement de nouvelles qualités urbaines. A Nimègue, on a transformé la menace des inondations fluviales en une opportunité de créer une nouvelle zone au bord du cours d'eau et un îlot urbain dans la rivière Waal. Cette approche unique a été primé à l'échelle nationale : le projet a été récompensé par le prestigieux *International Waterfront Award* à New York le 29 octobre 2011, et la stratégie de communication du projet a remporté le *Red Dot Public Space Award* à Berlin le 7 octobre de la même année.

### **ABSTRACT**

Two near-flooding disasters in the middle of the nineteen-nineties resulted in a fundamental change in the attitude towards safety in the Dutch river areas. In contrast to the approach adopted for many decades, when the rivers had been enclosed and the height of the dikes had been raised, the creed for the new Millennium was: 'Room for the River'.

This approach resulted in a national programme comprises over thirty projects costing a total sum of over 2.2 billion Euro. The 'Room for the River Waal' project at Nijmegen is the largest and the most expensive, has the biggest impact, but also the project with the greatest exposure. The project demonstrates that expanding the area available to the river is also highly compatible with the development of new urban qualities. At Nijmegen they have turned the threat of river flooding into an opportunity to create a whole new waterfront and an urban island in the river Waal. This unique approach has also led to international recognition: the project has been rewarded with the prestigious *International Waterfront Award* in New York at October 29<sup>th</sup> 2011 whereas the project's communication strategy won the *Red Dot Public Space Award* in Berlin at October 7<sup>th</sup> of the same year.

### **KEYWORDS**

Integrated Water Management, Regional Planning, Stakeholder Management, Urban Development.

## 1 INTRODUCTION

January 1995: Europe has been savaged by storms for days. The water level in the Dutch rivers begins to rise rapidly. The risk of dike breaches becomes greater and greater and would result - in the flat Netherlands - in flooding for miles. A total of 250,000 people are evacuated.

These extreme water levels resulted in a debate on the manner in which the Dutch should deal with higher river discharges. The Dutch realised that their approach of reclaiming land from the rivers and raising the dikes adopted over the course of many years was no longer adequate - and even dangerous. It was time *to give the river more room*. This change in policy is based on the understanding that continually increasing the height of the dikes is not feasible. Higher and higher dikes would result in unjustifiable risks in the event of a dike breach. Giving the river more room by, for example, relocating the dikes, excavating secondary channels and even constructing bypasses would enable the river to handle the increasing volumes of water - and in safety. Giving the rivers more room would accommodate climate changes and simultaneously increase safety.

## 2 ROOM FOR THE RIVER: SAFETY AND ENVIRONMENTAL QUALITY

Room for the River is unique by virtue of the Programme's twin focus on both safety and the appeal of the landscape. The Programme is based on the concept that the measures will not only need to contribute to keeping the Netherlands safe from floods but will also need to constitute investments in what is referred to as 'spatial quality', improvements such as the development of new nature, urban development and the restoration of cultural historical values. The 'Room for the River' Programme initiated by the National Government to implement this strategy is comprised of over thirty measures which, in combination, will ensure that the Dutch river region will comply with the required safety standards in the period to 2050. Expanding the river beds will lower the water levels and reduce the risk of flooding. The Programme, costing a total of 2.2 billion euros, is scheduled for completion in 2015.

### 2.1 Case: Room for the River Waal at Nijmegen

One of the narrowest bends in the Dutch river system is in the River Waal (a branch of the Rhine) at Nijmegen. The narrowest point in the river's winter bed is just 450 metres in Nijmegen, while the winter bed is 1,000 to 1,500 metres wide immediately upstream and downstream of the bend. In view of the forecast of higher discharges resulting from climate changes, failure to take measures will put the safety of this location of the river in serious threat. For this reason the government decided to relocate the dike on the northern bank of the River Waal some 350 metres land inwards to widen the winter bed. In addition, a secondary channel will be excavated in the new winter bed. At high water levels this channel will supplement the rivers and avoid excessive increases in the water level. Consequently, the secondary channel increases the river's capacity.



Figure: The measure explained in steps

### 2.2 A drastic measure

The relocation of the dike at Nijmegen is one of the most controversial measures in the Room for the River Programme, since the northern bank of the River Waal at Nijmegen is not virgin land. The village of Lent (also part of the Municipality of Nijmegen) stands proudly on the northern bank: the relocation of the dike will result in the demolition of fifty houses and the disappearance of a number of companies. Moreover, Nijmegen is the oldest city in the Netherlands, founded by the Romans with historic values and an appreciated waterfront. For this reason the announcement of the plans resulted

in strong protests, initially from Lent's inhabitants and, consequently, from the Municipal Executive as well. However, the government saw no alternative to the necessary relocation of the dike.

### 2.3 Nijmegen embraces the river Waal

The Nijmegen plan is based on the principle that the river will give something back to the city's inhabitants, even though they first have to give something in exchange. The Nijmegen project is unique in that it is in an urban location and, moreover, is in an area that is changing rapidly. Both these elements offer tremendous opportunities for the addition of something unique to both the city and the river. The Municipality of Nijmegen is now working on the detailing of its 'Urban River Park' plan for a region which combines a range of functions, creates a valuable public area and will serve the city's inhabitants. The central government and the municipality expect that their plan will receive broad support from the city's inhabitants.

### 2.4 Threat turned into a great opportunity

In contrast to the past decades, when the city had turned its back to the river - the river that had given Nijmegen its rationale for so long - the city is now gradually turning to face the river again. The Room for the River Project constitutes the central link in the fulfilment of this ambition. This main project links the various projects around the River Waal and will contribute to the unification of the north and the south. In creating a high-grade public space offering room for recreation, public facilities, an appealing quay, opportunities for water sports and housing the project will bring the new (northern) and old (southern) parts of Nijmegen together. All these improvements are linked to - and, possibly, feasible as a result of - the need to take the necessary measures to prevent flooding.

The distinction of the plan has also been recognised by the inhabitants of Nijmegen. After years of opposition, the plan was given applause when finally presented to the public in 2009. Despite large sacrifices, people also see the great opportunities the project offers by creating a river park, nature development and a new water front.



Figure: Artist's impression (left: the River Waal, middle: the island and the new channel, far right: 'De Waalsprong' development)

## 3 CONCLUSION

Room for the River has set a new standard in water management. Self-evidently, river safety remains an important objective and the underlying reason for projects like this, but by supplementing this objective with other regional goals the quality of the project increases. And as a result the support for it. The plan becomes more durable and sustainable and more acceptable for all parties involved. In a complex world where space is limited and stakeholders are becoming more and more mature new planning approaches are needed. The integrated approach shown in Room for the River has proven effective. Winning the internationally renowned Waterfront Award illustrates this.

## LIST OF REFERENCES

Room for the River: [www.ruimtevoorderivier.nl](http://www.ruimtevoorderivier.nl)

Municipality of Nijmegen: [www.nijmegen.nl/ruimtevoordewaal](http://www.nijmegen.nl/ruimtevoordewaal)

Waterfront Center: [www.waterfrontcenter.org](http://www.waterfrontcenter.org)