

# On the role of the civil society in ‘Room for the River’ in the Netherlands.

R.M.J. Schielen<sup>1</sup>

<sup>1</sup>Ministry of Transport, Public Works and Water Management, Department of Integral Water Management and Waste Water Treatment, and University of Twente, Faculty of Engineering Technology, P.O. Box 9072, 6800 ED Arnhem, The Netherlands.  
e-mail:r.schielen@riza.rws.minvenw.nl

## Abstract

We will discuss the planning process of ‘Room for the River’, a major program in the Netherlands which involves about 30 different flood plain plans. The way these plans have been communicated to the general public turned out to work well. Not all opposition could be cancelled, but in general, there is understanding for the projects. Also the discussion related to climate change and the implications of using flooding risks in relation to exceeding changes (of water levels) is discussed.

## Introduction

In the Netherlands, some major projects in the river-area have been designated and are at a stage that they will be carried out in the next decade or so. They are all part of the national program ‘Room for the River’ that already started some 10 years ago with preparatory studies. Key issue of the program is the concept that increasing dike-reinforcement is no robust solution for the increasing design floods that the Netherlands are facing. Instead, ‘spatial’ solutions like flood plain-plans, dike relocations and by-passes around major cities are put forward as solutions. They increase the discharge capacity of the river and at the same time, do not increase the water levels at design conditions (which match the present height of the dikes).

‘Room for the river’ is tackling what is called the ‘short term task’: the increase in the design discharge of 1.000 m<sup>3</sup>/s (from 15.000 m<sup>3</sup>/s to 16.000 m<sup>3</sup>/s at Lobith, The Netherlands). This increase is due to the method that is adapted in the Netherlands: once every five years, the design water levels are calculated again, using the historical high discharges of the past period. The projects which account for this increasing design discharge are chosen such, that they anticipate on what is called ‘the long term task’: a further increase in design discharge to 18.000 m<sup>3</sup>/s. This long term prediction is based on several studies and the scenario’s of the International Climate on Climate Change. ‘Room for the River’ should be ready in 2015. In the mean time however, studies and discussion about how to deal with the precious space in the Netherlands in relation to flood protection continues. Issues like accommodating the ‘the long term task’ (design discharge of 18.000 m<sup>3</sup>/s) or a different system of norms of the dike sections along the river branches are studied.

## Room for the River

The technical problem of Room for the River is clear: accommodate a design discharge by spatial plans such that a discharge of 16.000 m<sup>3</sup>/s at Lobith can safely be guided through to the North Sea. Only at places where spatial plans are impossible or cost too much money, dike reinforcement may be an option. A second goal is to increase the spatial quality (say the combination of nature, recreation, agriculture, awareness, etc). Room for the River is a so called Key Planning Decision (KPD), a formal procedure of the Dutch Government for large infra-structural projects in which four steps are to be distinguished: part 1 is the outcome of the first stage of the study which is a set of coherent measures which ‘solve’ the hydraulic task. Part two is the bundling of the formal objections and reactions of the public against these projects. Part three are the (possibly adapted) plans due to the formal reactions of the public. Part 4 is the final plan (i.e. the final set of projects),

approved by the Dutch Government and which is meant to be carried out. There are about 30 projects defined, along the three Rhine branches in the Netherlands.

The way this is achieved is quite an interesting process. From the beginning, the public has been informed in an extensive way. Throughout the years, a lot of public meetings have been organised, in which the plans were explained and the opinion of the public was asked. A lot of information was put on the (Dutch) website ([www.ruimtevoorderivier.nl](http://www.ruimtevoorderivier.nl)). The meetings have been organised throughout the formal planning process with main task to inform the public, to generate a broad base of willingness to accept and to achieve awareness. This has been recognised and appreciated by the public, as could be noticed from the meetings. Nevertheless, there was also a lot of opposition. About 3000 reactions of the public with respect to the intended projects in Part 2 of the KPD were filed. These were mainly of directly affected people, who did not want particular measures in their neighbourhood (a typical NIMBY-reaction). However, the KPD allowed the public only to argue against the location and nature of the measure. The exact planning of the measure is something that is done in a new procedure (with an own environmental impact assessment) after the approval in KPD part 4. It turned out that it was not easy for the public to differentiate between these various stages in the planning process.

It is clear that the measures with the most impact can count on the most opposition. Most projects in the floodplains (where very few people live) do not resurrect to much resistance, although it is that farmers may lose land, and flooding frequencies of flood plains may change due to excavation. Measures with an impact outside the floodplain (dike relocations, bypasses) affect the people in a much more severe way. Houses may be lost, agricultural land may no longer be used as such, and hence the opposition is strong. On the other hand, these plans reflect the 'room for the river'-principle the best. Moreover, they are often planned in areas where there is a tremendous pressure on the available space. Not carrying out the measure now, will probably mean that the space will be occupied for other purposes than flood protection in the near future. In the current stage of 'Room for the River', there are 3 dike relocations and 1 big bypass left.

### **The relation with other developments in the Netherlands**

'Room for the River' is based on the chance that water levels exceed the design levels. This chance is for the larger part of the river area 1/1250 (per year). The line of reasoning is that whenever the discharge is larger than 16.000 m<sup>3</sup>/s at Lobith (and provided that the discharge divides itself in the appropriate ratio over the bifurcation points) the water overtops the dikes. The dikes are in general not designed to allow overtopping, and hence they will breach. However, there are many other mechanisms which may lead to the collapse of a dike. Piping is an important one, and so is the failure of the inner or outer side slope of the dike. Also structures within the dike itself may fail. At this moment, a large study is in progress which explores these mechanisms. In this way, a step is made from exceeding probabilities to flood risks. The next step is then to couple this at a cost-benefit analysis to calculate the acceptable risk for each dike section. This may lead to a different norm system in which different dike sections may have different norms. This discussion however, is still academic. At present, the approach with exceeding probabilities is put into Dutch legislation and beyond discussion for the near future.

There is also the question of insurance of properties in and outside the floodplains. At this moment, it is not possible (in the Netherlands) to have an insurance against flooding risks. Nevertheless, there are some preliminary plans to allow more activities (e.g. housing) under very strict conditions in the flood plains. It seems that a discussion about the insurance concepts should go along with this. Much may be learned from other countries. In France for instance, it is an obligation to be insured to flooding risks. It might be interesting to compare the different approaches.

Then, there is the discussion about the climate change. In 'Room for the River', the government anticipates on a climate change by making spatial reservations for measures to be carried out in the future. However, it is still not completely clear how the global warming will affect the Rhine and the Meuse discharge, and the sea level rise. In the Netherlands, we carefully look at the climate scenario's of the IPCC, and we try to develop, based on the IPCC scenario's more local ones which apply on the Netherlands. This is done by the National Institute for Meteorology (KNMI). From the latest scenario's it can be derived that precipitation in the winter increases and the summers become dryer. Also these developments may lead to a change of view of the current policy in flood protection.

Finally, we have to deal with European guidelines, as the 'hoog water richtlijn'. As the Netherlands are at the far end of the chain, it is likely that this affects other (Rhine and Meuse) countries more than the Netherlands.