



To the President of the House of  
Representatives of the States General  
Binnenhof 4  
The Hague  
The Netherlands

Lange Voorhout 8  
P.O. Box 20015  
2500 EA The Hague  
T +31-70-3424344  
F +31-70-3424130  
E voorlichting@rekenkamer.nl  
W www.rekenkamer.nl

**DATE** 10 november 2009  
**SUBJECT** Audit findings on Weak Links in Coastal Defences Programme

We are writing to inform you of the findings of our audit into the execution of the Weak Links in Coastal Defences Programme, which is part of the Flood Risk Management Programme. The audit concentrated on the cost aspect.

We are concurrently publishing a diagram in poster form showing various findings of our audit into the Weak Links in Coastal Defences Programme, as well as a number of sub-projects which are being performed as part of this Programme. The poster is appended to this letter.

Our audit was triggered by the proposals made by the Veerman Committee<sup>1</sup> on the state of the country's long-term water defences. The adoption of an integrated approach is one of the cornerstones of these proposals. In other words, the committee urged the government to improve the country's sea and river defences and at the same time to take action in other areas such as housing, employment, nature conservation and energy. The Weak Links in Coastal Defences Programme shows, albeit on a small scale, how such an integrated approach might work in practice, as it involves strengthening the seawalls and making certain improvements in the spatial environment at the same time. We believe that the

---

<sup>1</sup> This is the committee otherwise known as the Delta Committee chaired by Professor C.P. Veerman. The committee reported to the government at the end of 2008 on a number of matters, including the long-term protection of the Dutch coastline and the hinterland against the effects of a rise in the sea level.



execution of this programme should help to illustrate the likely impact of implementing the other recommendations made by the Veerman Committee.

2/8

Based on the findings of our audit, we would like to draw your attention to five points that may have a bearing on flood risk management projects undertaken in the future. These are as follows:

- an integrated approach to planning;
- the additional cost of an integrated approach;
- cost control by the regional water authorities;
- knowledge management by the Directorate-General for Public Works and Water Management;
- the demand for and supply of consolidation sand.

Before examining each of these points in detail, we should first like to outline the background of the Weak Links in Coastal Defences Programme.

#### *Background of the Weak Links in Coastal Defences Programme*

In 2003, a joint study performed by the Directorate-General for Public Works and Water Management and the regional water authorities showed that there were ten points on the North Sea coast where the protection provided by the seawall was no longer up to standard. The Secretary of State for Transport, Public Works and Water Management decided, in consultation with the agencies responsible for maintaining the country's water defences, that the latter should be improved at the points in question to bring them into line with current standards of coastal protection by 2020 at the latest. The authorities decided that they would make certain improvements to the spatial environment at eight of these locations at the same time.

The resulting deliberations culminated in what is now known as the Weak Links in Coastal Defences Programme. The Programme seeks to bring about simultaneous improvements in both the quality of the country's sea defences and the quality of the spatial environment. The idea now is to strengthen the coast at the ten locations in question by the year 2015. The Ministry of Transport, Public Works and Water Management is paying for the project, at least in so far as it involves the strengthening of sea defences. A sum of €743 million has been set aside to this



end. Local authorities are paying, in some case in partnership with private-sector parties, for the work leading to improvements in the spatial environment.

3/8

#### *An integrated approach to planning*

The Veerman Committee's report emphasised the linkages between coastal protection and other aspects such as employment, housing, farming, nature conservation, recreation, landscape formation, the infrastructure and energy.

Planning and executing an integrated policy, i.e. a policy that seeks to achieve a number of simultaneous goals, is a complex business that requires a high standard of programme management. This is because every additional policy objective comes with new stakeholders all of whom need to be properly consulted in good time.

The latter point is particularly relevant here. Even though the projects hitherto undertaken as part of the Weak Links in Coastal Defences Programme have been relatively limited in scope (in terms of the degree of protection and the quality improvements they seek to achieve) compared with the aims of the Veerman Committee, they have nonetheless proved difficult enough to accomplish in practice.

The Weak Links in Coastal Defences Programme was planned in 2004. In March 2006, the State Secretary for Transport, Public Works and Water Management explicitly informed the regional water authorities and provincial authorities involved that the Ministry was prepared to pay only for the cost of improving the sea defences, and that the local authorities would themselves have to pay for the entire cost of any work undertaken in order to improve the quality of the spatial environment. Until then, it had not been clear to local authorities whether any improvements in the spatial environment would be eligible for financial support from the Ministry of Transport, Public Works and Water Management and, if so, which particular sub-projects would qualify.

It is vital that the State Secretary for Transport, Public Works and Water Management should make absolutely clear, from the very outset of a comprehensive, integrated programme such as the Weak Links in Coastal Defences Programme, how this type of key issue is to be dealt with. Providing clarity about



the distribution of funding can only help to speed up the execution of the programme.

4/8

*The additional cost of an integrated approach*

In order to achieve the desired improvements in the quality of the spatial environment in the vicinity of the coastal sites in question, the Ministry of Transport, Public Works and Water Management has frequently approved solutions that are costlier than more modest alternatives that would nonetheless have met the relevant safety standards. This applies particularly to the use of consolidation sand, the option frequently preferred by the Ministry. The practice of sand infill has two advantages: in addition to meeting the Ministry's need to protect public safety, it offers local authorities better opportunities than other options for improving the quality of the spatial environment. The use of consolidation sand for beach recharging generally costs more than it would to build or strengthen a dyke, two options which serve the single purpose of complying with safety standards.

The Ministry of Transport, Public Works and Water Management pays for the additional cost of these more expensive safety solutions. After consulting the Ministry, the Court of Audit has estimated this additional cost at approximately €107 million (reflecting the situation as at July 2009).

The adoption of an integrated approach to the improvement of the nation's sea defences, an approach which also leaves scope for improving the quality of the spatial environment, is the result of a political decision that we do not wish to contest. We do wish to make clear, however, that such an approach may result in a higher level of expenditure on coastal defences than is required merely to comply with the relevant safety criteria.

In our view, this type of approach needs to meet two basic requirements. First, if an integrated approach does indeed lead to a higher level of spending on the government's coastal defence policy, this should be made absolutely clear. The minister or state secretary concerned should properly inform the House of Representatives of all the cost implications, and also be able to demonstrate the social benefits the additional spending is expected to generate.

This brings us to the second point, which is that the additional cost should be reasonably proportionate to the additional benefits (in this particular case, in terms



of the degree of improvement in the quality of the spatial environment). We would not wish to set a target for this ratio; as we have already pointed out, this is basically a political decision. But we do feel that it should be possible to revert to less costly alternatives that seek only to comply with safety standards if a social cost-benefit analysis suggests that the social benefits of the preferred option (based on an integrated approach) are not in reasonable proportion to the extra cost.

5/8

#### *Cost control by the regional water authorities*

The regional water authorities are responsible for costing and executing the coastal defence projects undertaken as part of the Weak Links in Coastal Defences Programme. However, they are not being given enough incentives at present to perform this role in an efficient manner. The problem is that the Ministry of Transport, Public Works and Water Management refunds all construction and administrative costs. Under the applicable ministerial order, the regional water authorities are entitled to add a 15% mark-up to the construction costs to cover their own administrative expenses.<sup>2</sup> If the latter work out at a lower figure in practice, the Ministry has no means of recovering the difference.

In the first place, the current rules do not encourage the water boards to take a critical look at their own administrative expenses. Secondly, the rules are more of an incentive for the water boards to raise their construction costs than to contain them. We do welcome the fact, on the other hand, that the State Secretary for Transport, Public Works and Water Management has agreed with the water boards that the latter should charge a lower mark-up if this is feasible. The State Secretary could go one step further, for example by introducing a system under which the water boards were only entitled charge for administrative expenses they had actually incurred.

#### *Knowledge management by the Directorate-General for Public Works and Water Management*

Both the Directorate-General for Public Works and Water Management and the regional water authorities make considerable use of external consultants for the purpose of implementing the Weak Links in Coastal Defences Programme. For

---

<sup>2</sup> Order on Special Grants for Sea Defences and Water Management, 2 February 2006.



example, the Directorate-General for Public Works and Water Management has engaged consultant engineers to assess the cost estimates produced by the water boards. The same applies to the Construction Department at the Directorate-General for Public Works and Water Management, which has asked various firms of consultant engineers to devise standard pricing arrangements as part of the preparations for the Flood Risk Management Programme. In the light of the Delta Programme and other major civil engineering works planned for the future, the Ministry of Transport, Public Works and Water Management needs to build up an adequate stock of in-house expertise. This would also give the Directorate-General for Public Works and Water Management access to the expertise it needs in order to perform its role as a commissioning authority.

6/8

#### *Demand for and supply of consolidation sand*

Given that the price of consolidation sand is a major factor, the government needs to pursue a coherent and carefully thought-out purchasing strategy. Virtually all the solutions the government has designated as its preferred options for the Weak Links in Coastal Defences Programme are based on the principle of using consolidation sand to strengthen beaches and/or dunes. As a result, the price of consolidation sand has a big impact on the cost of the programme. At the same time, the price of sand is also liable to high fluctuation. When the programme was first launched, market prices were running at around €3 per m<sup>3</sup>. This proved to be an all-time low, however, and by the end of 2008 market prices were generally over €7 per m<sup>3</sup>. Given that tens of millions of cubic metres of sand are required to effectuate the government's preferred solutions, a rise in the price of sand brings with it a risk of a swingeing increase in costs as compared with previous estimates.

As an added complication, various Dutch government bodies will be inviting tenders for a number of big beach-recharging projects in the years ahead. These invitations will be going out at more or less the same time. For example, apart from for the Weak Links in Coastal Defences Programme, sand is also required for routine coastline strengthening and also for the construction of Maasvlakte 2 (an area of reclaimed land sea offshore of the Meuse estuary). As there are only a small number of sand suppliers in the Netherlands, a lack of coordination on the demand side could have the effect of pushing up prices unnecessarily, perhaps even much higher. Incidentally, this is not just a factor that needs to be taken into consideration in planning the Weak Links in Coastal Defences Programme. It will



also affect future water-related programmes later on in the 21st century as proposed by the Veerman Committee.

7/8

In short, the price of sand has such a huge impact that a coherent and carefully thought-out purchasing strategy is required.

In this light, it might be worth being rather more flexible about the 2015 deadline for the completion of the Weak Links in Coastal Defences Programme, safety considerations permitting. This would make it easier to make allowance for market factors when inviting suppliers to tender for contracts. Longer throughput times would also enable suppliers to spread the deployment of their equipment over a number of projects, thus potentially reducing costs.

*Response of the State Secretary for Transport, Public Works and Water Management*

On 3 November 2009, the State Secretary for Transport, Public Works and Water Management responded to the points we raised in our letter. Her response is summarised below.<sup>3</sup>

The State Secretary assured us that, in preparing for the Delta Programme, a proper mechanism for programme management was put in place. She said it was vitally important to ensure that there was clarity about the distribution of costs.

The State Secretary said she was aware that integrated approaches could result in higher spending on safety. She felt this was justified if such spending generated a clear added value in the long term. Having said this, the State Secretary pointed out that it was not always possible to quantify this type of added value, as it was hard to attach a value to the quality of the spatial environment, thus making it difficult to measure the economic impact of a given programme. The State Secretary undertook to inform the House of Representatives about both the additional cost of projects and the additional social benefits they were expected to generate. She agreed with us that it should be possible to revert to less costly alternatives if the social benefits of the preferred option proved less than initially projected.

---

<sup>3</sup> We have posted the full text of her letter on our website ([www.rekenkamer.nl](http://www.rekenkamer.nl), available in Dutch only).



The State Secretary said that she was planning to review the 15% mark-up fee charged by the regional water authorities before the start of the next Flood Risk Management Programme in 2012. In doing so, she said, she would also look into the possibility of adopting a system in which the Ministry paid only for the costs actually incurred.

8/8

The State Secretary also claimed that the Directorate-General for Public Works and Water Management was fully aware that, in order to be a competent commissioning authority, it needed to have adequate in-house expertise. Indeed, this was one of the reasons for the reorganisation undertaken by the Directorate-General in recent years.

Finally, the State Secretary said that the Directorate-General had for some time been aware of the high price of sand used for consolidation purposes, and was currently developing a purchasing strategy specifically for consolidation sand.

*Afterword of Court of Audit*

We note that the State Secretary accepts the points raised in our letter. We particularly welcome her assurance that, in making preparations for the Delta Programme, she intends to ensure that clear arrangements are made about the distribution of costs. We also welcome her pledge to inform the House of Representatives about both the additional cost of plans based on an integrated approach and the additional social benefits such plans are expected to generate. We look forward to reading the strategy document the Directorate-General for Public Works and Water Management is planning to publish about the supply of and demand for consolidation sand.

Netherlands Court of Audit

Saskia J. Stuiveling,  
President  
(signed)

Ellen M.A. van Schoten,  
Secretary-General  
(signed)