Dutch “water expertise” can be found all around the world. These were the opening lines of the current affairs television programme Nieuwsuur in May when it looked at the international success of Dutch engineering firms in the field of water management. The broadcast featured Henk Ovink of the Ministry of Infrastructure and the Environment, who has been posted to New York to advise on water management there in the aftermath of Hurricane Sandy. Another interviewee was the director of dredging company Van Oord, Pieter van Oord, who talked about the international success of his company. Dutch maritime pride was given an extra boost when the winners were announced of a contest organised in New York by Ovink to make the city better able to withstand hurricanes. Prizes were awarded to, among others, the Rotterdam firm of architects OMA (Office for Metropolitan Architecture) and Royal HaskoningDHV for their strategy to protect the town of Hoboken against floods using dams, water storage areas and pumps. Another winning team from the engineering firm Arcadis plans to construct a U-shaped flood defence around Lower Manhattan and an earth wall in Battery Park facing the Statue of Liberty. ‘Wherever there is flooding, the Dutch spring into action’, concluded presenter Twan Huys in his broadcast.

SERIOUS CONCERNS
However, that is only part of the story. Many water engineers are very concerned about the international competitiveness of the Dutch water construction sector. Arie Mol, director of engineering firm LiweneseCSO has a very strong opinion on this. ‘We think we’re very good, but actually we’re not,’ he told the Metro newspaper on 23 April. ‘When it comes to building harbours, breakwaters, quay walls or tunnels around the world, we are barely involved at all. [...] In terms of engineering, the Netherlands is losing out to others on all fronts.’ Tjitte Nauta, from the Deltares research institute, agrees with Arie Mol’s statements. According to him, one of the problems is that Asian engineering firms are able to secure loans on more favourable terms. ‘They are able to get state backing for their loans. And their way of working is fundamentally different. Asian engineering firms usually get to work straight away and they find out what works or doesn’t work through trial and error. We, on the other hand, do all kinds of studies before we start work on a major water project.’ ‘Our competitive position is getting more difficult. There was a good reason why the Dutch government launched the DRR Fund (Dutch Risk Reduction Team) recently,’ concludes Nauta.

GOVERNMENT SUPPORT
The DRR Fund, which contains six million euro, is meant to help Dutch companies to secure contracts. With the help of this support from the Dutch government, engineering firms can offer ‘free’ advice to foreign governments. When countries start to build flood defence systems, the hope is that they will award the contract to the Dutch engineering firms who have already been advising them. Last year a DRR project began in Myanmar. Tjitte Nauta and some of his colleagues from Deltares were involved in this project, as well as some Dutch engineering firms and TU Delft (indirectly) (see ‘Paradise for engineers’ in Delft Outlook 2). With the help of a government grant, the

Ditching the Dutch?
consortium is working on an advisory report on integrated water management in Myanmar. The DRR fund is part of the policy that began with the Global Water programme of the Ministries of Infrastructure and the Environment, Foreign Affairs, Economic Affairs, Agriculture and Innovation several years ago. The objective of that programme is to initiate long-term relationships with developing countries in delta regions in order to promote cooperation in the field of water management. The programme combines development aid and trading interests, in the form of the export of Dutch water expertise. That is the idea, in any case.

FREEBIES
According to Han Vrijling, Professor Emeritus of Hydraulic Engineering at TU Delft, this policy is still not bearing much fruit for the Netherlands. One of the countries where Dutch engineers have been working intensively for years as part of the Global Water programme is Vietnam. Vrijling says: ‘Dutch companies have created a blueprint plan for the Mekong Delta. But we still don’t know if the Vietnamese will sign contracts with Dutch companies. So far, these are freebies that the Netherlands is giving away.’ Vrijling takes a hard-headed approach. ‘The countries that this policy focuses on are poor countries. In addition, the World Bank demands that if they make money available for a project in one of those countries, the country itself should be involved in the construction work.’ ‘Dutch dredging companies are doing well internationally,’ Vrijling continues (see box, ‘The global water sector’). ‘They have good equipment. But selling engineering services, which
everyone has such high hopes for, is more difficult. Engineering firms are paid by the hour. Dutch hours are a lot more expensive than Vietnamese hours. So you need to be really excellent in order for them to hire you. These days they know about construction themselves.’

The Netherlands has lost out in the United States, too, according to the professor. ‘The Americans redesigned and rebuilt the whole system of coastal defences around New Orleans after Hurricane Katrina. I think we could have done it much better, but, well, that’s another story. The Americans came to look at our Delta Works and delegations from the Netherlands also went over there, including Mathijs van Ledden of TU Delft and Royal HaskoningDHV, but the Americans designed the new coastal defences themselves. The Netherlands contributed nothing, or almost nothing.’

NO MORE TRADEMARK PROJECTS

So what is going on? Because of rising sea levels, the world has a growing need for water defence projects, especially in river delta areas, where there are often rising levels of urbanisation too. But the Netherlands does not really seem to be making the most of this. According to Vrijling, there is more to it than the fact that the Netherlands is relatively expensive. We do not have any eye-catching projects any more, no distinctive trademarks. Our standing in the world seems to have suffered because of that. And because of this, water engineers in the Netherlands are not as well trained as they used to be either. ‘When we built the Eastern Scheldt storm surge barrier in the Netherlands, we also trained a whole raft of engineers (including himself – Ed.). Then came the Second Maasvlakte, the extension to the Port of Rotterdam in an area

NEW DELTA PLAN

According to Minister Schultz van Haegen (Infrastructure and the Environment), our struggle against water will never be over. This is why this year, on Prinsjesdag (the opening of the new session of parliament), the Cabinet presented a new delta plan. The plan provides an overview of what needs to be done to protect the Netherlands against flooding between now and 2050. The plan will cost approximately €20 billion. The decisions follow the recommendations on which Delta Commission member Wim Kuijken has been working since 2010. The programme sets out strategies relating to the areas of water security, fresh water supplies, spatial planning, the Rhine-Meuse delta and the IJsselmeer area. The Delta Plan includes different scenarios, which the ministry says will make it possible to continue to adapt to unexpected developments, new measurements and insights.
reclaimed from the sea, which was also pretty complex. But since then we have not built anything comparable.’

Tjitte Nauta of Deltares is less pessimistic. He thinks the Dutch water sector can reinvent itself. ‘While others concentrate solely on one specific aspect of water management, such as reservoirs or irrigation channels, we focus on integrated water management,’ he says. ‘Using integrated water management, we can develop an excellent new revenue model.’ Nauta hopes to demonstrate this approach for the first time in Myanmar.

Nauta does not share Vrijling’s opinion that the Netherlands no longer has any distinctive trademark projects at home. ‘That remark is often made. But the Netherlands has been well-protected against water for years now. In addition, we have interesting new projects, such as Room for the River and the Sand Motor - a large-scale sand replenishment scheme on the North Sea coast at Kijkduin. So we have a lot of techniques that we can sell.’

CENTRE STAGE
Piet Dircke, global mater management director at Arcadis, agrees that it is difficult to get a foothold abroad. Arcadis is involved in several projects organised by the Ministry of Infrastructure and the Environment, including projects in Vietnam (Mekong Delta), Myanmar, Bangladesh and Indonesia. ‘Making the step from knowledge to doing business - actually getting a return on your investment - is difficult,’ says Dircke about these projects. ‘Perhaps it would be more sensible to avoid these delta areas where the Ministry has taken the lead, and look to other areas instead.’

Harrie Laboyrie of Royal HaskoningDHV (who holds the position of Global Director for Rivers, Deltas & Coasts) also says that ‘it’s difficult to make these global water programmes pay.’ And he also sees that developing countries are increasingly keeping the construction of flood defences in their own hands. ‘But because we are doing consultation work in these areas, we are positioning ourselves for other customers, financiers and sectors.’

‘Climate change means many countries with river delta areas need to develop new growth scenarios. They are focusing on the Netherlands. We have developed our own effective strategy to deal with rising sea levels in the form of the Delta Plan, and that is famous around the world.’

‘After the Second Maasvlakte we have not built anything comparable’

Laboyrie points out that Royal HaskoningDHV also has projects underway in Africa and South America. ‘Some of these countries are funding these themselves nowadays. Other projects are paid for by donors such as the World Bank and the Asian Development Bank.’ He does not want to say which countries exactly. ‘That is confidential information.’

Laboyrie also believes that Dutch engineering firms are deliberately ignoring a section of the market. ‘That’s the part that is going to Chinese companies, for example. China is investing hundreds of millions in infrastructure (such as roads) in Africa. It is Chinese companies who then win the contracts there. That is their business model. The Dutch water engineering sector does not work that way. In addition, sustainability is a key concept for Dutch companies. We don’t get involved in projects if we think they will not contribute to the responsible development of a country and of the people who live there.’

THE GLOBAL WATER CONSTRUCTION SECTOR
How much money is involved in the water engineering sector worldwide, and what share of that is going to Dutch companies, is difficult to say. Even so, the Netherlands Water Partnership (NWP), an advocacy group for the Dutch water sector, has tried to give an estimate for this in its future vision for the Dutch water sector (Water 2020). The NWP states that each year €120 billion is converted into delta technology worldwide. That is based on figures from 2008. Delta technology includes things like the construction of flood defences, such as harbours and breakwaters, but also the management of water infrastructure in delta areas. With business worth €7.5 billion, Dutch firms take about 6 percent of the world market for delta technology. Of that €7.5 billion, €4 billion comes from projects abroad. The vast majority of that foreign turnover (80 percent) comes from the two major Dutch dredging companies: Van Oord and Boskalis.