

# The challenge of the Dutch Delta : connecting safety and quality

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# THE CHALLENGE OF THE DUTCH DELTA: CONNECTING SAFETY AND QUALITY

Jandirk Hoekstra

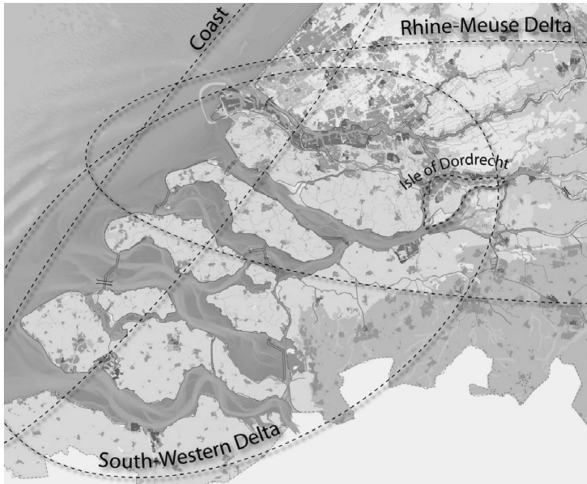


fig.1

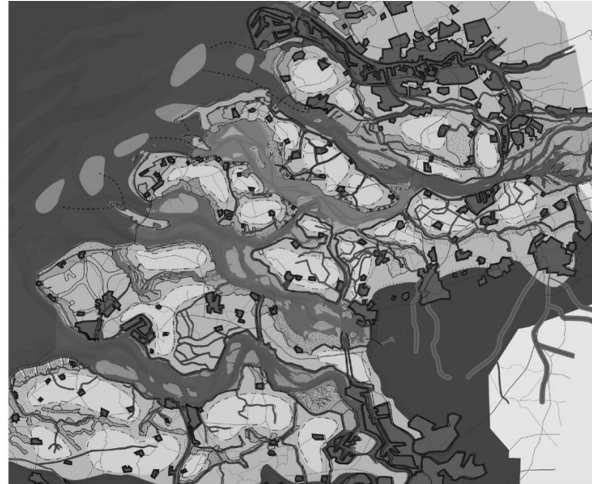


fig.2

Through a few of my personal observations, I'd like to share some discoveries and experiences gained in working on the Dutch Delta. Two years ago, I served as the head of the Workshop for the Southwestern Delta; directly after this period, the Studio for Coastal quality was started under my supervision, and recently H+N+S Landscape Architects have become involved in the development of a vision for the river system of the Rhine-Meuse Delta. In all of these projects, the long-term safety of the low-lying polders and riverbanks of the urbanized Delta – in light of the rise in sea level – was the main issue focused upon. This focus is a consequence of the ambition of the Dutch National Government to launch a National Memorandum on long-term safety and freshwater supply in 2014: the Delta Program.

## Creating an image for the Southwestern Delta

In the Workshop for the Southwestern Delta in 2010 we developed an image that could serve as a future perspective and that would be able

figure 1: The Dutch coast, the South Western Delta, the rivers Rhine and Meuse and the Isle of Dordrecht. Source: H+N+S Landscape architects  
figure 2: Perspective for the South-Western Delta 2100.  
Source: H+N+S Landscape architects

to bring together the long-term ambitions of the national and provincial governments, the local municipalities, the water boards, and private developers. This image represents a common perspective for all parties – each with his own interest – involved in the process of guaranteeing safety and raising the quality of the Dutch Delta. The image integrates solutions for present-day water problems (caused by the division of the continuity of the Delta estuary into different water bodies, due to the safety measures implemented in the so-called Dutch Deltaplan that was developed and realized in the aftermath of the disastrous floods of 1953) and the safety measures to be taken to cope with sea-level rise (and the further subsidence of the soil, caused by drainage) in the period to come. But the image also reveals new possibilities for the abundant areas throughout the Delta, where water and land meet in a slow dance. This opens up new possibilities for recreation, tourism, and agriculture. And in the end the image also tries to connect history (the common ground of all parties involved and the starting point for the discussion), the present-day identity of the Delta, and its future character. It aims to involve a cultural aspect in the design for the future.

The image was created by blending the results of studies on the water system and safety, a study of the economics involved, a socio-cultural essay, and a short survey on the historic development of the Delta. Each of the contributing studies was followed and influenced by an informal round-table of participants, specialists, and supporters. And, in the end, all the different parts were integrated into a meaningful whole which connected the solving of the problems of today with proposals for the long term. This has blended ambitions for better ecology, the economy, and experience.

The overall solution for the Southwestern Delta lies in the step-by-step restoration of the conditions for dynamics (tide, sediments, fresh and salt transitions) and continuity (instead of the subdivision into different water bodies) of the estuaries: a transition from fixing the Delta to floating on the dynamics of the Delta.

figure 3: Water quality in the South-Western Delta (2050/2075).

Source: H+N+S Landscape architects

figure 4: Guaranteed safety in the South-Western Delta (2050/2075). Source: H+N+S Landscape architects

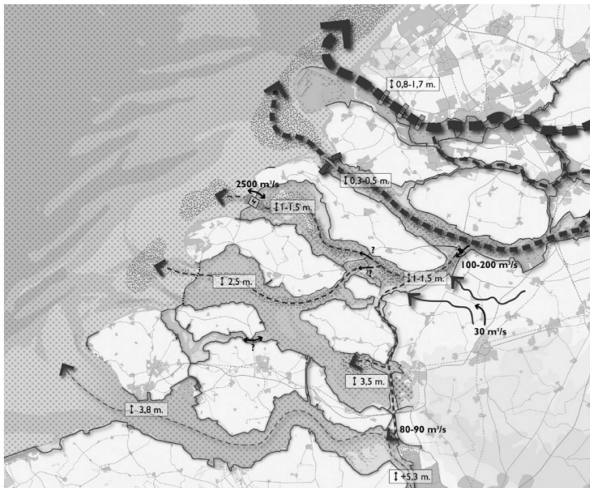


fig.3

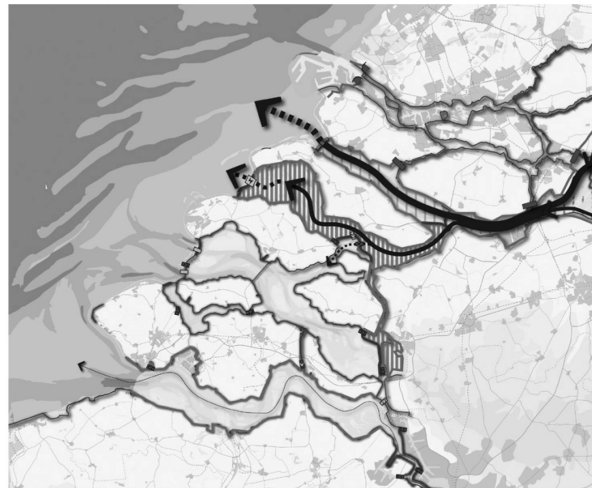


fig.4

### The Island of Dordrecht: a hinge between the river and the estuary

The Island of Dordrecht is situated on the eastern border of the Southwestern Delta, where the influence of the sea tides is still noticeable, at the pivotal point of the Delta, where the river broadens and extends into its distributaries, where nature and human activities have learned to live with the dynamics.

Climate change will result in remarkable changes in conditions, not only in terms of sea level but also in the river system. When we concentrate on the safety issue, we see that longer and heavier rainfall in the Rhine and Meuse basins will result in high peaks in river discharge. To cope with these risks along the already high river dikes that protect the polders behind them, the “room for the river” policy which began a few years ago will be pursued. Extra gullies will be dredged in the riverbanks in order to flatten the peaks in the river’s discharge; the riverbed will be made as open as possible. Dikes will be set back to allow more room for the river. Some polders along the river will be “opened” to the river in order to offer extra space to temporarily store the water. Some weirs and barriers will have to be widened or replaced in order to let the masses of water pass through.

In spite of all these measures, in the period between now and the year 2100 two locations will remain tricky and hard to handle in the way described above. One of them is the Island of Dordrecht. The dikes along the Upper Merwede are urbanized and can only be reinforced at high cost, let alone setting them back to broaden the riverbed. The waters along the Island of Dordrecht form a bottleneck in the river system. Plans to transform the dikes around the Island into submersible ones



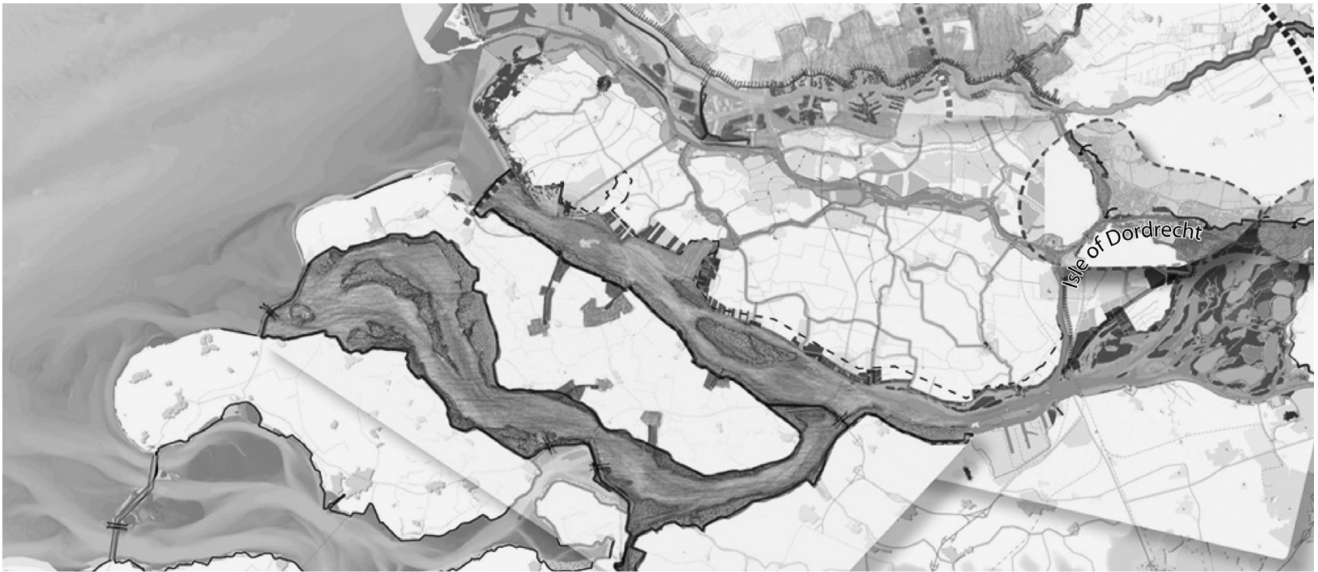


fig.5

have been developed together with creating space to temporarily store the water in compartments in the Island of Dordrecht. This seems to be the least risky strategy. Nevertheless, other – and even more drastic – measures will have to be taken. In the Rhine-Meuse Delta case study for the International Architecture Biennale Rotterdam 2012, these possible strategies were explored. In the Delta program for the Rijnmond-Drechtsteden area these strategies will now be investigated further and tested. In that context, the results of the ETH Zurich's regional design workshop have emerged at a very well chosen moment: the time is now ripe to develop fresh ideas, form different perspectives, and start discussing them with the people involved!

#### Urban and landscape design: practice and profession

In my opinion, acting as a guide for the process of blending and integrating the technical, ecological, economic, and spatial policies into integral perspectives is an important aspect of the profession and the practice of urban and landscape design on the regional scale in the present day. At a time when the interests of the different parties in planning processes have become more diverse, and the issues more and more complex and intertwined, there is a key role for designers to play in understanding and interpreting the workings of the different mechanisms

figure 5: Total image of the measures in the Rhine-Meuse river system until 2100. Source: H+N+S Landscape architects



involved. This also includes designing different multifaceted solutions, in which the perspective for one issue results in added value for the other.

Design becomes more and more the rational, sensitive scanning of solutions for the different themes and topics, and the translation of these into images that are comprehensible and recognizable by the people involved. Engagement in these planning processes requires curious and creative designers and an open mind in terms of what moves and inspires people. Designers also need to merge the various motives into images that go beyond individual interests. Working in this way, a commitment in planning processes can emerge.

In my opinion design quality and an expressive “handwriting” (style) for the plan can help. The process of adding personal “color” and “touch” can result in solutions that not only “fit,” but that can also generate energy. The depth of the design creates inspiration.

And as if the skills and competences of the designers were not complicated enough, there is yet another dimension that can be added. Regional design is a mix of top-down strategies (mostly in the public sphere) and bottom-up initiatives (in the sphere of the private and collective). People increasingly develop their own ways of expressing their relationship with the environment. Lots of initiatives are created by individuals or groups of people in the fields of living and building, harvesting, recreating, and enjoying nature. They maintain, explore, and exploit their environments. Plans and designs nowadays need to surf on these waves of small and medium-sized intentions and realizations and, where possible, stimulate and support them. Regional design stands

pivotal in the midst of the realization of public goals (in the fields of safety, water, economy, ecology, and equity), and the solutions and initiatives of individuals and groups of people who appropriate their environment. Top-down and bottom-up dimensions also need to be integrated into the shared programs.

The results of ETH Zurich's regional design workshop are of particular interest in terms of the process of coping with these dimensions of the design process. Some of them have recognized the various directions and movements, and some of them have succeeded in translating these into an image. The results of the regional design workshop of the ETH Zurich are interesting with respect to the process of coping with these dimensions of the design. Some of them recognized the different directions and movements and some of them succeeded in translating them into an image.

#### Staging design: the art of story-telling

The art of story-telling is an important part of the practice of regional designers, and a better understanding of rhetoric advances our profession. This observation is based on my own intuition and on experience on a number of occasions, in which I had the opportunity to be involved in staging the design.

The first step in the process of story-telling is the "set" (as in "stage set") used in the design. When we design, we try to attain quality; we do so by what we might call "playing," like playing or improvising on a musical instrument. Our best designs express something; in the case of regional design this is often the working of systems or the interaction of different themes translated into forms, structures, colors, and textures. There is then a second crucial step: the moment when we share our design with our commissioners or with the participants to the planning process. That's what I'd like to call "staging," since we shine a spotlight on the design, exactly the way it happens when a composition is performed.

To draw on this parallel with music: when Bach composed his scores, he was aware that an ascending chromatic line had the meaning of a way to the light, just as in a similar way a descending line referred to darkness, despair, and death. Composing by "playing" is the first step. And when the music was then performed, the audience understood the expression behind the musical lines and harmonies. In those days, the audience shared a common "antenna" for these elements of rhetoric, in-



herited from the music of previous periods. Our designs are also loaded with rhetoric. I believe these two phases exist in a comparable way in our work: 1) making or “playing” and 2) story-telling or staging.

These observations are not a plea for a performance of our plans in theaters, by the way. The idea is that we “playfully” express ourselves and our notions in design, and then we share them: in ateliers with the people involved, in discussions with colleagues, in exhibitions, and sometimes in manifestations. In all these situations we are telling the story. And that’s what my last point is about: well-made and joyfully staged design connects people. Good plans, well-performed, can persuade people to look beyond the horizons of their individual interests. Even a hesitantly drawn line on a piece of sketch paper can do this. In my opinion, this “connecting” aspect is the most interesting aspect of our work as regional designers.

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fig. 6/7



fig. 8

figure 6/7: Story telling. Photo: Loes de Jong

figure 8: Staging. Photo: Loes de Jong