



Sameness and difference in delta planning

Arjen Zegwaard^{a,*}, Margreet Zwarteveen^{b,a}, Gerardo van Halsema^c, Arthur Petersen^d

^a Amsterdam Institute for Social Science Research (AISSR), University of Amsterdam, The Netherlands

^b Water Governance group, UNESCO-IHE, Delft, the Netherlands

^c Environmental Sciences Group, Wageningen University, the Netherlands

^d Department of Science, Technology, Engineering and Public Policy (STeAPP), University College London, UK



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ABSTRACT

Triggered by an increased awareness of the possible effects of climate change, many deltaic regions around the world are undertaking planning initiatives to address the problems they expect to face in the future. Dutch delta planning knowledge and expertise figure prominently in some of these initiatives. We use this article to ask why this is so. What makes Dutch delta knowledge special, and how does it become generic enough to travel to other places? The pertinence of these questions stems from the realization that deltas do not pre-exist human interventions, but are as much the effect of different planning cultures, trajectories and objectives, as they are their cause. Through a discussion of some telling anecdotes of delta planning, our analysis shows that while the Dutchness of delta planning expertise is a powerful branding, this expertise can only travel through a conscious and simultaneous process of un-Dutching: by packaging and scientizing Dutch Delta planning to turn it into a more generic Adaptive Delta Management approach.

1. Introduction deltas as decentered objects

The Dutch Have Solutions to Rising Seas. The World Is Watching. This headline taken from the New York Times¹ is illustrative of a wave of Dutch experts traveling the world, among others to a number of South and Southeast Asian countries (Vietnam, Bangladesh, Myanmar). The justification of this involvement is the idea that other countries can learn from the Dutch Delta approach, an approach that is captured in a methodology called Adaptive Delta management. Distilled from experiences with delta planning activities in the Netherlands (see e.g. Zevenbergen et al., 2013), the methodology is explained and summarized in a brochure called “The Delta Approach”, published by the Dutch government. The brochure identifies “12 building blocks for a delta approach,” as “the ‘must-haves’ for sustainable delta management”. Through the methodology, Dutch experiences with their own delta thus come to serve as the basis for a generic model of delta planning more widely.

But what is so special about Dutch delta knowledge? What is it that makes this purportedly very Dutch knowledge generic enough to travel? Doubts about the existence of intrinsic and natural delta features that can serve as the anchor and justification for deltas to be compared and delta knowledges to travel form the background to these questions. By exploring the possible tension between the Dutch-ness of delta planning expertise on the one hand and its global mobility on the other, we use this paper to open up Dutch delta knowledges and their travels

for questioning. Doing this, we hope, provides inspiration for exchanges of experiences between delta countries and their experts that are more symmetrical in not relying on the assumed superiority of the Dutch and more modest in avoiding grand theorizations or generalizations.

1.1. Dancing deltas

Scholars from a variety of backgrounds have invoked terms such as “policy mobility” (Cook and Ward, 2012), “policy diffusion” (Radaelli, 2005), the travel of ideas (Mukhtarov, 2014) or knowledge transfer (Zevenbergen et al., 2013) to understand how policy ideas can move from one place to another. These terms have in common that they conceptualize policies and the forms of expertise that accompany or justify them as relatively stable entities, a stability that often is anchored in the sameness of their object(s) of planning, policy or knowledge. In this way, the exportability and mobility of policies and knowledges can be explained by the similarity of the objects that they relate to.

Doubts about the validity of this assumption of similarity form the starting point of this paper. We have reasons to question whether different deltas are similar enough to warrant or justify comparable delta knowledge or planning procedures. Our replacement of a conceptualization of deltas as ‘natural’ places can be objectively characterized with one that defines deltas as always intrinsically socio-natural informs this. Here, we take inspiration from Norgaard et al.

* Corresponding author.

E-mail address: arjen.zegwaard@wur.nl (A. Zegwaard).

¹ <https://www.nytimes.com/interactive/2017/06/15/world/europe/climate-change-rotterdam.html>, last visited 5/4/2018.

(2009). They mobilize the idea of co-evolution to characterize the California Delta as consisting of ever-changing, unruly and often inexplicable interactions between discourses (visions, policies, science), materials (lands and waters; infrastructures) and institutions. Their portrayal of historical changes in the Delta highlights “how Delta ecological processes change and how the way scientists at different times have bounded problems and focused on some interactions out of the immense complexity of the Delta, while ignoring others, is intertwined with governance objectives and past and intended transformations of the environment” (Norgaard et al., 2009: 645). Important here is that in a co-evolutionary understanding, science and governance are *part of* (or endogenous to) a processes of change. As the article concludes: “there is no environmental reality over time, or the possibility of one in the future, that is independent of how people both understand and affect the environment through governance, or its absence” (Norgaard et al., 2009: 651).

While the concept of co-evolution originates in evolutionary biology, much theorizing in anthropology and sociology that regards change as consisting of mutual interactions and continuous feed-back loops between various elements or systems can also be seen as subscribing to some principle of co-evolution. The idea of co-evolution is particularly well suited for understanding and dealing with complex and dynamic socioecological systems, such as deltas (also see Gerrits, 2008), characterized by high levels of uncertainty, a diversity of competing values and decision stakes and a multitude of interest groups who may have different world views and different frames for understanding the problem. It is telling in this respect that the environmental historian Biggs (2011), without explicitly referring to the term co-evolution, aptly characterized delta developments in the Mekong delta in Vietnam with the term *quagmire*, a term that refers both to “a soft boggy area of land that gives way underfoot” and to “an awkward, complex, or hazardous situation” (<https://en.oxforddictionaries.com/definition/quagmire>).

The implication of a co-evolutionary definition of a delta is that deltaic environments do not pre-exist human interventions, but come into being and are made through them. They are “concretely made, conjoined or transformed by the co-evolving relations of multiple agents; people, technologies, materials, spirits, ideas – or what you have” (Jensen and Morita, 2015, p. 82). The continuously in-the-making-ness of deltas is a process that can be grasped, following Pickering (2008), as a dance between humans and material agency. Deltas continuously change shape because of how people intervene in their mingling of lands and waters, and of how lands and waters in turn respond to such interventions, sometimes in surprising and contingent ways, to again provoke reactions from people. Past institutional arrangements, built landscapes and technologies importantly co-shape the options available to make changes or plan new interventions (see Biggs et al., 2009; Gerrits, 2008; Norgaard et al., 2009).

In the rest of the paper, we present selected episodes of Dutch delta planning in the Netherlands and elsewhere (Vietnam and Bangladesh) to show that it makes sense to define and characterize deltas in co-evolutionary terms, as ever-changing and always-in-the-making processes that are importantly shaped by history. In particular, we use descriptions of how Dutch delta planning activities have transformed since the 1950s to illustrate that any characterization or definition of a delta (or the Dutch delta) is situated and relational; these characterizations and definitions are endogenous to the processes of change and intervention of which they formed part. If one accepts that a delta and its knowledge are dynamic as well as interdependent, the question of the transferability of Dutch delta planning knowledge to other countries poses itself. What is it that the Dutch hope to transfer to other countries? We examine delta planning processes taking place in the Mekong delta in Vietnam and the Ganges-Brahmaputra-Meghna Delta in Bangladesh to try answering this question. We use our findings to conclude with an interrogation of the notions of deltaic sameness and Dutchness that underpin and justify delta planning processes in the Netherlands, Bangladesh and Vietnam.

1.2. Methodology

Our analysis draws on auto-ethnographic and participatory observations carried out since the 2008 publication of the second Dutch Delta committee (Delta Commissie, 2008). This material has been supplemented by five in-depth interviews and an analysis of the written material produced by the Delta plan initiatives in the Netherlands, Vietnam, Bangladesh and Myanmar. The first author's (AZ) observations trace the courses of action following the publication of the second Delta committee, particularly the establishment of a national Delta Programme (Zegwaard et al., 2015). In the Netherlands, we carried out observations during visits to annual conferences organized by the Dutch Delta programme and during one of their so-called “knowledge-conferences”. After having done its work in the Netherlands, the Veerman committee traveled to Vietnam where it participated in the formulation of the Mekong Delta plan. AZ attended one of the Mekong delta plan workshops in April 2013. This was one among many occasions in which members of the Dutch delegation met with their Vietnamese counterparts to discuss a draft version of the plan. Aside from this material, the chapter is also informed by the observations and experiences of GvH, who was one of the Dutch experts involved in formulating the Mekong Delta Plan.

Our analysis also draws on a workshop that we organized in June 2018 to test and discuss some of our initial findings with several actors who are involved in delta planning processes and their travels. In this workshop we facilitated a dialog between Dutch delta planning experts, government representatives and invited speakers from places ‘affected’ by Dutch masterplans in various places in the world. In this workshop we coined the central question “What is it that Dutch Delta and Masterplans do? What are intended and unintended outcomes?”²

2. From seas to rivers

In the Netherlands, national-level delta planning began in earnest in the 1950s. Of course, the Dutch had already been actively making and protecting their land for centuries. Yet, it was only in 1953, after the Netherlands was hit by a large-scale flooding disaster that a concerted effort at the national level was made to deal more effectively with flood risks. This happened through the establishment of the first Delta Committee. The committee was assigned the task of determining “which hydraulic engineering works should be undertaken in relation to those areas ravaged by the storm surge, (and) also to consider whether closure of the sea inlets should form one of these works” (Delta Committee 1, 1961: 15, translation from Delta Committee 2, 2008). The resulting plan proposed full closure of almost all open river connections to the sea, as well as the heightening of existing sea protection infrastructures (e.g. dikes) to what became known as the ‘Delta Height’. Although the plans were subsequently modified (Bijker, 2002), these constructions radically altered the outline of the Dutch coast.

High-water levels in the rivers Rhine and Meuse (in 1993 and 1995) reminded the Dutch that flood dangers do not just come from the sea, and prompted the central government to initiate a “delta plan for large rivers”. In contrast to the delta in the first delta plan, which is one that consists of the lands that are at risk from being flooded from the sea, in this Delta Plan the delta has become the lands that might be flooded by rivers.

Ten years later yet a third delta made its appearance through the establishment of the second delta committee. This time, the reason for having the committee was not a (near) flooding event in the country. Rather, the committee was a response to a growing awareness of climate change in conjunction with a flood that happened elsewhere: the New Orleans flooding in 2005 (Shrum, 2007). The task of the 2008 committee was to find an answer the question of how to “ensure that future generations will continue to find our country an attractive place

² See <https://flows.hypotheses.org/1483> and <https://flows.hypotheses.org/1511>.

Table 1
Delta planning episodes in the Netherlands and their objectives.

| Year | Plan/process | Goal/objective |
|-----------|-----------------|--|
| 1961 | Delta Committee | To assess “which hydraulic engineering works should be undertaken in relation to those areas ravaged by the storm surge, (and) also to consider whether closure of the sea inlets should form one of these works” (Delta Committee, 1961, p. 15) |
| 2008 | Delta Committee | “How can we ensure that future generations will continue to find our country an attractive place in which to live and work, to invest and take their leisure?” (Delta Committee, 2008, p. 7) |
| 2009–2015 | Delta Programme | “to protect the Netherlands from flooding and to secure a sufficient supply of freshwater for the generations ahead.” |

in which to live and work, to invest in and take their leisure?” (Delta Committee 2, 2008: 7).

Table 1 illustrates the differences between the objectives of the first and second Dutch Delta committees. As compared to the first, which focused narrowly on civil engineering, the second Committee's emphasis on *future generations* and an *attractive place to live* sounds almost esoteric. To operationalize this grand vision, the second committee evolved into a nation-wide Delta Programme, concerned with flooding and the safety of the Netherlands (Boezeman et al., 2013; Verduijn et al., 2012). Its objectives were:

to ensure sustainable and robust flood risk management and freshwater supplies in 2050, which will allow our country to withstand the (greater) climatic extremes in a resilient manner. In this way, the considerably increased economic values and the higher number of people are well protected. We will ensure that the Netherlands is prepared for various scenarios. We will choose strategies and measures that can give us flexibility in the way we respond to new measurements and insights, by stepping up our efforts if necessary or changing strategy. Everything is at hand. (Deltaprogramma, 2014: 6)

Whereas the resulting planning process was not very different from that proposed by the 1960s delta committee, what did change was the spatial definition of the Dutch delta. For the first Delta committee, the delta consisted of the southwest of the Netherlands, the provinces of Zeeland and Zuid-Holland, the areas that had been affected by the storm surge. In the 2000s plans, however, the delta had expanded to cover the entire country.

2.1. Translating historical events into norms

Conventionally in the Netherlands, the case for the urgency of delta problems, and the corresponding need for specific techno-scientific expertise, is made through statistical analyses of past events. Largely hidden in the everyday practices of the Dutch water management community sits a sophisticated, historically evolved system for assessing, mapping and quantifying delta ‘nature’ in order to make it legible to managers and policymakers. Testifying to the existence of this system, an interviewee explained how the high water levels that almost flooded large parts of the Netherlands in 1993 and 1995 changed the norms of protection along the river Rhine. “Nature started to mess with the statistics,” a point that the interviewee illustrated by drawing a figure. In a mini lecture on Dutch dike engineering, he explained that the river Rhine and Meuse each have their *own* statistical graphs. These graphs are used for deriving probabilities of water levels and are then used for determining the heights of dikes. After the 1993 and 1995 events, the linear line was moved up thereby changing the water level norms. The reasons for this change were institutional and practical. If the government had stuck to the statistical approach used to establish safe water levels until 1995, a significant heightening of the dikes would have been required. It would have been very difficult, if not impossible, to mobilize the enormous investments needed to do this. Instead of heightening the dikes, the responsible committee thus changed the equation that connected the plotted events.

The incident dented the dike engineer's trust in science-based rational decision making. Apparently, the scientific methods defined by the first delta committee for determining the layout and height of dikes were not

as fixed as generally portrayed³ or perhaps as Rijkswaterstaat would like the general audience to believe. These methods come about through negotiations and tinkering, and are influenced by political choices.

2.2. From protecting land to creating nature

Not just the mathematics behind dikes changed, but also the very idea of what a dike is or should be changed over time. This importantly happened through the depoldering ‘movements’ that emerged in the period between the first and second delta committee. Depoldering is an exponent of the so-called ‘eco-turn’ in Dutch water management (see Disco, 2002).

The first delta committee was put in place to protect the lands that were damaged by the 1953 storm surge. Most of these lands were poldered areas. A polder, one of the icons of Dutch water management, “is a level area which was originally subject to a high water-level, either permanently or seasonally and due to either ground- water or surface water. It becomes a polder when it is separated from the surrounding hydrological regime so that its water-level can be controlled independently of the surrounding regime” (Segeren, 1983, p. 51). Poldering thus turns low lying swampy wetlands into dry lands that are suitable for humans to live in. The main philosophy guiding the first delta committee was a polder philosophy: it proposed the creation of separations between hydrological regimes through the construction of hydraulic engineering works: heightened dikes and closure dams.

Ecologists and environmentalists started questioning the wisdom of the polder philosophy toward the end of the 20th century, among others because closing off portions of land from surrounding hydrological (tidal) regimes caused sometimes irreversible changes in ecosystems, also destroying biodiversity. One (in)famous example of resulting proposals to bring back nature in was the plan to de-polder the Hertogin Hedwiges polder, located on the border between the Netherlands and Belgium, on the shores of the Western Scheldt estuary. In 1995, the Netherlands and Belgium had agreed to turn this agricultural polder land into an intertidal nature area. This allowance for ‘nature’ – in the form of tidal flows – to again take its course through the removal of dikes was a political gesture to compensate for the damage done by the deepening of the Western Scheldt, to enable large container ships to enter the harbor of Antwerp in Belgium (Drenthen, 2013). The depoldering of the Dutch part of the polder was strongly opposed by people living in the south western parts of the Netherlands.

Similar depoldering interventions happened in other polders in the country – most notably along the major rivers Rhine and Meuse – with agricultural lands having to make way for watery nature. These initiatives mark a distinct change in Dutch diking strategies, with the conventional impulse to achieve flood protection by a gradual heightening of the dikes being replaced by plans to allow rivers to occasionally flood.

2.3. Future making and delta planning: apocalypse now?

Another significant difference between the first and the second delta committee lies in their approach to possible futures. As described, the

³ Or to translate this into the painters introduced by Pickering (2008) to illustrate two different ontological stances, the methods behind the construction of the dikes are not as Mondrianesque as they appear.

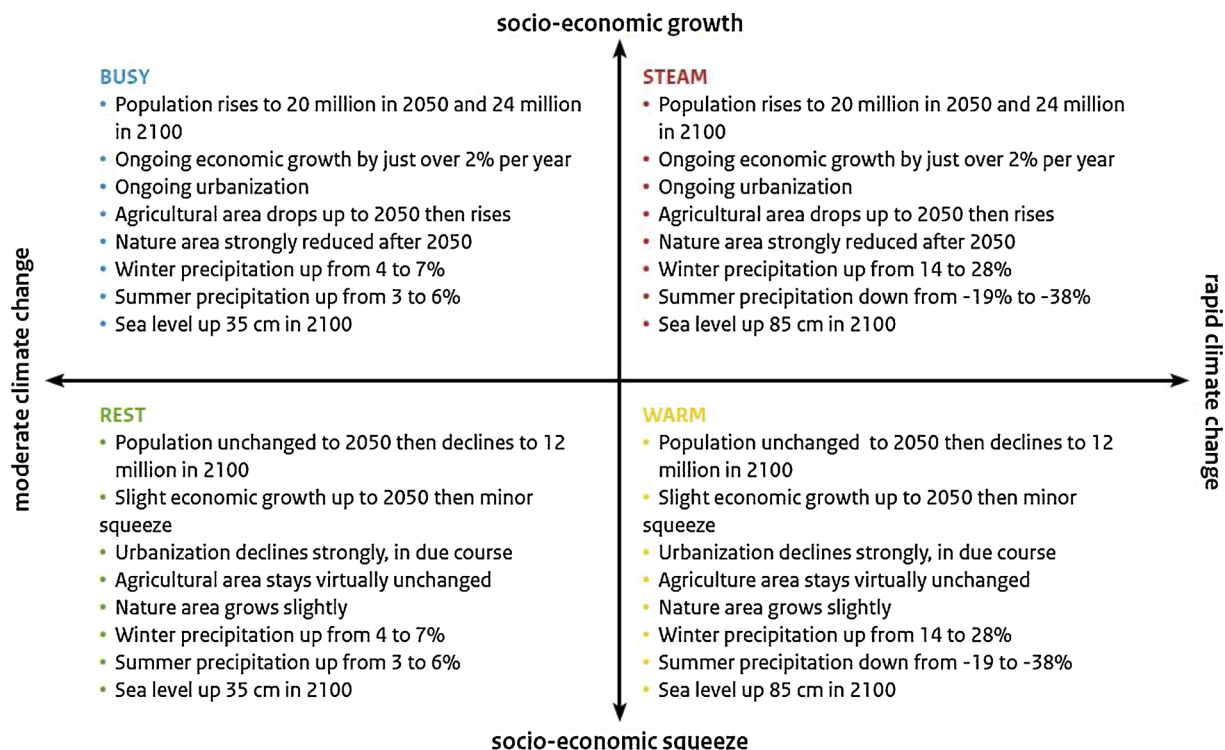


Fig. 1. Delta scenarios as developed and used by the delta programma (see e.g. [Deltaprogramma, 2012](#)).

first delta committee predicted the probability of future events on the basis of an extrapolation of what had happened in the past. The second committee supplemented this probability thinking with scenario-thinking.

Through scenario thinking, the second Delta Committee introduced a new future generating practice. This practice has become known under the label of Adaptive Delta Management. In the Delta Programme's version of adaptive delta management, "adaptation tracks" play a crucial role. These are strategies (e.g. policies or infrastructural changes) that are formulated on the basis of delta scenarios. The Delta Programme distinguishes four delta scenarios, using different combinations of climate change and socio-economic development as their axes of differentiation (see Fig. 1) for formulating adaptation tracks.

2.4. The Dutch delta

In this section, we have examined how deltas came into being in the Netherlands through a form of co-evolution between delta science, Dutch delta planning and lands and waters. We focused on some of the practices that the delta consists of, and the methods used to establish it as an uncertain object in need of development or protection. Our comparison of different delta episodes revealed that through changing planning and intervention practices, the delta itself also changed and evolved. The stretching of the Dutch delta that occurred between the first and second delta committees is therefore more than a spatial expansion. It also is a shift in emphasis from just floods caused by the sea to also considering river floods, and refers to changing water level norms. The stretch of the delta furthermore embodies a different flood protection philosophy, manifested in changing ideas about what dikes and polders are or should be. Where the engineering works proposed by the first delta committee had the objective of firmly separating the poldered lands from unwanted water to protect people and farmlands, the second delta committee adopted a more amphibious philosophy in allowing for and even stimulating interactions between water and land, or between polder and non-polder areas. This is an ecological turn, but also reflects an emerging acknowledgment that floods are difficult to fully comprehend and control: it is in this sense an

acceptance of the limits of science and engineering's capacities. The new delta approach involves managed interactions between poldered and non poldered areas, the coordinates of which are provided by adaptation tracks that are in turn informed by future scenarios. These future scenarios, through which global 'phenomena' like climate change enter the Netherlands, make room for and indeed help bring into being a delta that covers the entire Netherlands. The comparison of different delta planning episodes thus reveals that though in all episodes planners were concerned with a seemingly similar set of flooding problems, the contours and coordinates of these problems changed considerably as a consequence of past interventions and because of new insights – as did the delta. How then is it possible to talk of a Dutch Delta planning approach?

In the following section, we explore what happened when the Dutch delta planning approach began traveling to some Asian countries, countries with quite different physical, cultural and political settings. Here we are particularly interested in exploring how 'sameness' (similar deltas and delta planning approaches) co-existed with 'difference' (Dutchness, or other contextualizations).

3. Dutch delta planning elsewhere

As noted in the introduction, brochures like "The Delta Approach" suggest the existence of a sophisticated delta planning package that evolved through systematic and gradual learning in the Netherlands. The natural or ecological sameness of deltas is what feeds the belief that this advanced planning approach is usable in and useful for other deltas across the world. When we asked a Dutch project leader of an Asian delta planning project what exactly was being exported from the Netherlands, the answer was less straightforward: "I always think the content of this export is paper-thin. [...] This includes mainly *thinking toward the future*, about how these might contain various sorts of futures; and *talk to lots and lots of different stakeholders*" (Interview G, 18 march 2015). By comparing what is done and understood as the delta approach in different places in the world, it becomes apparent that there are different manifestations or versions of it (see [Table 2](#), see also [Seijger et al., 2016](#)).

Table 2
Deltas planning and studies in other deltas and their objectives.

| | | | |
|---------|---------------------------------------|----------------------|--|
| 2013 | Mekong, Vietnam | Delta Plan | “to contribute to realising and maintaining a prosperous delta, both economically and socially, in which its population can thrive in a vigorous and dynamic economy that is founded on sustainable use of its natural resources, and well adapted to changes in water resources and climate” |
| 2014 | Ayeyarwady, Myanmar | IWRM strategic study | “This study is at a strategic level; it presents an overview of the most important challenges and anticipated changes in water resources management, what measures could be taken and the expected impact of these measures as well as their economic and financial aspects.” |
| Ongoing | Ganges-Brahmaputra-Meghna, Bangladesh | Delta Plan | “The Delta Plan will integrate planning from delta-related sectors and from all across the country to come to a holistic plan for the Bangladesh Delta. The Delta Plan will be grounded in a long-term vision of the Delta's future. This long-term vision, combined with the use of scenarios, allows planning to be adaptive and dynamic by constantly taking into account uncertainties in future developments.” (http://www.bandudeltas.org/about/bangladesh-delta-plan-2100-bdp2100/ , visited 14-4-2015) |

Referring to these different processes as being part of the ‘Dutch Delta Approach’ is therefore above all a way to facilitate the export of Dutch water expertise to other countries:

the Delta Programme approach has already become an export product itself: the ‘Dutch Delta Approach’ is drawing considerable attention around the globe. Various countries have called in the assistance of the Dutch government and business community to apply the Delta Programme approach to their own tasking (Deltaprogramma, 2014: 8).

The head of the second Delta Committee, who is keen to emphasize such exportability explained in an interview:

Let us say that in terms of process, we have invented something. How to organize such a process. In that sense a Delta plan is an export product. We are asked to come and do the same thing in Bangladesh. Bangladesh is a democracy, this is quite something different [from Vietnam], a lot more poverty, a different governance culture. Completely different. The art is, like we did in the Netherlands, to create a structure, to de-politicize the problem. It doesn't matter whether you are left or right wing, you'll drown if you don't take measures. It's about urgency and modality, but eventually a governor will have to face this problem. In that sense it's an export product, a unique approach (Interview C, 25 January 2013).

In this explanation, making the delta into an object of planning thus means establishing a decision-making sphere that is screened off from normal political procedures and structures.

3.1. Presence and absence in sketching alternative futures

As one interviewee insisted, *thinking toward the future* forms a crucial element of current delta planning exercises, which all importantly consist of attempts to bring a number of key actors together to jointly determine the delta agenda: the topics or themes that need to be dealt with in these deltas. Some kind of delta-specificity needs to be present to justify specific delta planning expertise. In this section, we unravel what this specificity is by having a closer look at this process of formulating futures, zooming in on how preferred futures favor certain developments – ways of dealing with the interactions between land and water – while expunging others, or by marking certain developments as “autonomous” and others as “in need of intervention.” What do the deltas that emerge in these futures look like?

On the face of it, the various delta planning initiatives in the Netherlands, Vietnam and Bangladesh appear like ‘package-deals’, consisting of a combination of specific delta planning methodologies. In the case of the Dutch Delta, the directions to be taken and the languages used to characterize futures were strongly determined by the assignment given by the minister. One member of the 2008 Delta Committee explained how this assignment set the boundaries of the planning object – the delta – and relates how they were able to stretch these boundaries: “our original assignment was to focus on the layout of our coast, in relation to climate change. That was our assignment. When we came

together for the first time, already after say two hours it became clear that we had to look at the water system as a whole” (Interview E, 19 February 2015). With the object now expanded to “the entire water system,” a deliberate choice was made to look at a ‘maximum scenario’, because: “if a government wants to protect its citizens, it at least needs to know the worst case scenario” (Interview C, 25 January 2013). This maximum scenario included estimates of the magnitude of future sea level rise and changes in river discharge.

The worst-case scenario was designed “to see if we can at all maintain living in the Netherlands, which is the crucial question” (Interview E, 19 February 2015). Afterwards, climate scientists were asked to: “put something in [to your models] that is unfavorable, but that you still think of as realistic” (Interview E, 19 February 2015). Science thus served political function, with climate scientists judging whether projections were sufficiently ‘realistic.’ The Delta Programme attempted to somehow contain future uncertainties (Zegwaard et al., 2015) by developing a systematic set of tools and concepts that became the methodology referred to as “Adaptive Delta management.”

In the Dutch case, this methodology emerged more or less contingently on the basis of societal and scientific insights, political preferences and alliances of those who happened to be involved in developing it. To turn it into a program that could be exported to other deltas, most notably the Bangladesh Delta plan, this process had to somehow be ‘fixed’ to make it seem more ‘scientific,’ systematic and objective. One manifestation of this attempt at fixation is an Adaptive Delta Management brochure, published by the Dutch firm Deltares. This brochure⁴ introduces Adaptive Delta Management, and explains why it is different and better than conventional ‘policy analysis’ approaches. Interestingly, the text makes no references to a Dutch context. Another manifestation of a fixing attempt is a study that was published around the same time by the Delta Alliance, a Dutch initiated global delta knowledge sharing network. This study tries to provide Adaptive Delta Management with a scientific grounding,⁵ which is a proven tactic of making it (seem) generic and universally applicable.

The application of this delta planning methodology in Bangladesh was explained by one of the experts involved:

“Eventually, this was unclear for a long time, but they now really want to apply an *Adaptive Delta Management* format [in Bangladesh]. Which means, the classic – well, there is not really a classic.... It means a setup with a bunch of scenarios, a so called delta vision, an assessment framework, some strategies, which lead to adaptation tipping points, adaptation pathways, and from there a robust and flexible plan. A strategy for the long term for the entire water management.” (Interview F, 5 March 2015)

⁴ Deltares (2014) Adaptive Delta Management, see <https://www.deltares.nl/app/uploads/2014/11/Brochure-Adaptive-Delta-Management.pdf>.

⁵ Merchand and Ludwig (2014) Towards a Comprehensive Framework for Adaptive Delta Management, Delta Alliance, see <http://www.delta-alliance.org/media/default.aspx/emma/org/10848051/Towards+a+Comprehensive+Framework+for+Adaptive+Delta+Management.pdf>.

By referring to the Dutch approach as Adaptive Delta Management the approach was stripped from its origin. It is the perceived export potential that turned Dutch dealings with its delta into an Adaptive Delta Management ‘package.’ The interviewee involved in the Bangladesh delta plan explained this in the following way:

F: “well, it has been used here [in the Netherlands], partially, for the Delta plan, but not fully, like it is being done now [in Bangladesh] in a, well, scientific way. It originates originally from the UK. [...] they wanted to do something with it in Vietnam, but in the end that turned more into something under the label of *adaptive*, or *flexible*. Not much more than that. And now we try to do it rather seriously” (Interview F, 5 March 2015).

It was thus through its export to Bangladesh that an apparently more stringent and systematic methodology was invented – a packaging – to characterize the Dutch approach, in the process also universalizing it. This does not mean that the resulting adaptation pathways, or related delta scenarios, were produced in isolation. Rather, the scenarios for the Bangladesh Delta plan were produced in workshops, in which Dutch experts facilitated discussions among Bengali experts to identify relevant external drivers.

In Bangladesh, the development of delta scenarios in workshops happened differently than in the Netherlands and Vietnam, where the delta scenarios formed an input for the delta planning process. In the case of Vietnam, the establishment of the future was significantly shaped by the evaluative capacities of the (Dutch) experts that happened to be around the table in a hotel garden, in the early stages of the process. In the case of Bangladesh, the process of creating buy-in and enthusiasm for the delta planning process followed a specific workshop tradition:

In Bangladesh you need to send out invitations hierarchically. The team leader needs to send a card to the deputy project leader, from the Bangladeshi side, thus the government of Bangladesh, who then send invitations. When this person has signed, everybody will come. When of course a proper DSA (Daily Subsistence Allowance, financial compensation) is provided. [...] And a lunch. These are seemingly banal boundary conditions that [in the BGD context] are in fact crucial for attracting people (Interview F, 5 March 2015).

Thus to create support for the Dutch Delta planning process, it had to be made to fit with Bangladeshi bureaucratic (or perhaps development cooperation and technical assistance) culture. The purpose of the workshops importantly consisted of the Bangladeshis becoming acquainted with and convinced of the need for the Dutch way of doing deltas.

Such work of mobilizing support for Dutch delta expertise also happened in the Vietnamese context. Institutionally, the Mekong Delta plan initiative was linked to the Vietnamese Ministry of Environment (MONRE), a historical spin-off of the much larger and powerful Ministry of Agriculture (MARD).

MARD deals with land use, MARD deals with water, MONRE makes choices about climate scenario a, b, or c. [laughs] [...] you need to find your support where the most needs to change [...] The people involved in the early stages of the Mekong Delta plan process were too much oriented to the Netherlands (Interview G, 18 March 2015.)

This quote suggests that deltas, and delta planning processes, are not simply packaged to travel from Netherlands to elsewhere, but happen or come about through the skillful maneuvers of traveling delta planners who need to create demand for a product – Dutch Delta Planning – that is partly invented in the process. The deltas that are planned for look similar, but are also very different. In Bangladesh and the Netherlands, the planning process emphasized deltas as water systems, whereas in the Vietnamese Mekong delta planning process the delta became defined as the interplay between economic development and the water system.

3.2. Enacting a delta through its futures

One important way in which delta planning processes differently

enact deltas is in how they approach the question of futures. Where the Netherlands and Bangladesh labeled the developments they took into consideration as *autonomous*, the Vietnamese plan deliberately focused on futures that could be influenced by policy. The term autonomous development here refers to those changes that are expected to occur, or are likely to happen, almost irrespective of country policies. These are, in other words, changes that come from ‘outside’ the delta that the delta needs to somehow deal with or accommodate. Examples include rising sea levels and upstream dam development.

Comparing the process in the Netherlands to the process in Vietnam, a senior engineer involved in both the Dutch and Vietnamese delta planning processes observed:

What I do see, is that it has grown in a certain direction. In Vietnam, the Mekong Delta, there is a much larger gradient of developments to come. The point where the Mekong delta is at the moment, compared to the Netherlands, in terms of spatial organization, is very different. In our case [the Netherlands] the spatial layout is the consequence of maybe a 1000 years of dealing with the system. And there [Vietnam] it [...] is much shorter. For that reason I think we have paid much more attention [in Vietnam] to the exploration of what directions it might go. In our case many choices have been made, and have led to infrastructures that have influence the development of the land use (Interview E, 19 February 2015).

Futures are about times yet to come, however, they are also informed by narratives about the deltas’ socio-environmental histories. As the travel of delta expertise demands some comparability of deltas, the suggestion that deltas follow similar evolutions or development pathways is a useful device to bring different delta ‘times’ in sync with each other.

Here, “scenario thinking” became instrumental. Indeed, a key moment in the Mekong Delta process was the translation of the idea of scenarios to the circles of Vietnamese experts. The Dutch specialist articulated the point as follows:

If you ask me, when did the penny drop in Vietnam? This was when we had a good meeting in Vietnam, with people that understood what scenario thinking meant. They could also explain to the Vietnamese agricultural sector and Vietnamese civil engineers: this is real! If we continue like this we will end up in rice-poverty (Interview G, 18 March 2015).

The emphasis on scenarios was confirmed by another Dutch member of the Mekong Delta plan project, who explained that the level of ‘strategic thinking’ was not understood by the Vietnamese counterparts who assumed that the plan would become a master plan:

“From the start I’ve said that if we call it a plan, the Vietnamese will have a complete different interpretation of it. [...] they expect a railroad timetable like plan. They looked at us like: Plan? What plan? Man, you’re talking in vague terms. What are the deliverables? And when do we have to deliver? And well, we just don’t know. It took us over a year to adjust our ideas and their expectations of the plan.” (Interview C, 25 January 2013)

As was shown in Table 2, each planning process developed its own specific objectives – and its own specific delta. Combined with the differences in socio-environmental histories, knowledge frameworks, and engineering and organizational cultures, in each country this led to altogether different delta planning trajectories and plans: Adaptive Delta Management in Bangladesh and the Netherlands and provocative and agenda setting delta planning in Vietnam. One of the members of the Mekong Delta plan team compared the Mekong and Dutch planning processes, emphasizing the strength of the former:

What I really liked [about the Mekong DP process] is that we analyzed how the economy works, what does it do? What are the elements that influence each other? And how can we change that in a positive way?, [...] but also, what does this mean for my water

situation? [...] I find that one of the major weaknesses of the Dutch Delta Programme, that does not include a vision on how the Netherlands will develop the coming 40 years. (Interview G, 18 March 2015)

As these differences suggest, deltas are as much the effect of different planning cultures, trajectories and objectives, as they are their cause. Aiming to “contribute to realizing and maintaining a prosperous delta, both economically and socially [...] and well adapted to changes in water resources and climate” (see Table 1), the Vietnamese plan deliberately delimited its delta as an object within the reach of intervention of policies. On the other hand, by aiming to “integrate planning from delta-related sectors and from all across the country to come to a holistic plan for the Bangladesh Delta,” the Bangladeshi plan enacts the delta as an object that should be able to accommodate or deal with drivers from ‘the external world.’

Where Dutch experts were involved in facilitating the Bangladesh and Vietnam delta planning processes, paving the way for future sales of Dutch knowledge clearly also played a role in their considerations. During the *Workshop of the Mekong Delta Plan*, the Dutch wanted to discuss one of the first preliminary draft versions of the plan with the Vietnamese counterparts. It was around this time that the agro-economic scenario had come to be the ‘preferred’ scenario. This preferred scenario was selected because the Vietnamese counterparts demanded it. From the perspective of the Delta planning methodology this was a surprising inconsistency. Whereas, in deltas elsewhere, future scenarios were used to assess the robustness of measures, in Vietnam a particular scenario was translated as the politically preferred direction of development. When the agribusiness development scenario was chosen as the preferred option for the development of the Mekong delta, this caused some of the Dutch team members to speculate over lunch about the potential for Dutch agri-business knowledge to be exported to Vietnam. This is illustrative for the Vietnamese process, where compared to the others, decisions were not so much based on methodological concerns, but on pragmatic considerations.

In Bangladesh, in contrast, the methodology of the delta planning process itself became the primary “export product”:

We hope to bring the Delta-plan further as a product. Of course we also hope that the Delta plan will yield work for our [Dutch] dredgers, or adaptive constructions, or building dikes (Interview F, 5 March 2015).

However, interviewees suggested that in Bangladesh, too, there were less visible, or hidden, agendas: “I think there are all sorts of motives [for the Bangladeshi parties] to use the Delta plan for short or longer term goals. That’s inevitable. You need to be aware of that.” (Interview F, 5 March 2015)

In all cases, the way the deltas and their futures were defined was the joint product of international relations, the accommodation of local requirements and to a lesser extent trade agendas with a complicated dynamic of its own (Jensen and Winthereik, 2013). The Vietnamese and Bangladeshi cases show ad hoc and rather opportunistic considerations with regard to the identifying trade opportunities for specific sectors. Delta planning processes, thus, involve changes of methodology and particular choices of specific futures, shaped by local demands or opportunities.

4. Un-Dutching

In a co-evolutionary process, deltas change over time and over place. This makes it difficult to unequivocally justify one generic delta planning procedure, one that is anchored in a natural ‘sameness’ of deltas. In this article we have used this difficulty as the starting point for questioning the rationale and workings of the travels of Dutch delta expertise to other countries.

Our analysis shows that using the term “Dutch” for qualifying a Delta Planning Approach is above all a smart branding technique. This branding partly took place in retrospect. “Dutch,” after all, brings to mind the well-known and oft-repeated stories about the Dutch

conquering their waters, which have become part of the standard repertoire of Dutch export and tourist pitches. Hence, Dutchness serves to mark delta expertise as rooted in a long tradition of ever more sophisticated efforts to deal and live with floods. It also vaguely signals superiority in terms of an implied evolutionary ladder of civilization, in which other deltas can learn from the Dutch as the Dutch supposedly have reached a more advanced and superior form of delta-ness – thanks to its specific planning and engineering expertise.

When held against the evidence of Dutch delta planning episodes in the 20th century, such associations crumble. For one, it proves difficult to precisely pin-point the Dutchness – or a natural deltaic foundation, for that matter – of delta planning approaches. The review shows that in the Netherlands, consecutive Delta Committees and plans each defined and thus brought into being a different delta, and thus a different Dutch-ness: in a little over 50 years, the delta not just spatially stretched from just the South-Western part of the Netherlands to the entire country, but also the very flood protection philosophy changed – altering water level norms as well as the function and definition of dikes and polders. From efforts to keep water out, delta planning moved to efforts to bring water in – re-creating water-based natures in the process. Particular socio material arrangements built around ideas of control, evolved over time (the eoturn) into a controlled letting go (of control). This reflects a broadening of disciplines involved in the Dutch dealings with their delta, and simultaneously signifies a broadening of the boundaries of the delta.

How to make such a fluid, ever-changing delta – or delta planning process – travel? How to make it generic enough for export? Next to using the already mentioned powerful brand of Dutchness to mark water knowledge as superior, this also paradoxically happened through a conscious and simultaneous process of un-Dutching: by packaging and scientizing the Dutch delta planning approach and turning it into a generic Adaptive Delta Management approach. Characteristic of this approach is the active invention, introduction and use of a specific way of relating to the future: the formulation of future scenarios.

Our interviews, analysis and workshop show that the combination of the labels of Dutch and Adaptive Delta Management is attractive enough to create a space for experienced Dutch experts together with knowledgeable partners in other deltas (Vietnam or Bangladesh) to have useful interactions and dialogs about opportunities for the joint development of plans and private-public interventions to protect deltas from floods. In this sense, the labels are doing a lot of positive work in mobilizing creativity as well as intellectual energies and funds. At the same time, the labels are misleading in implying and reproducing the idea that it is the sameness of deltas and the (economic, institutional or technological) advancement of the Dutch that makes Dutch delta knowledge useful elsewhere. Our examples of Dutch delta planning episodes and manifestations in various times and spaces suggest, first of all, that deltaic sameness is as much the outcome as the cause of interventions or planning processes. Second, maintaining a belief that Dutch delta planning knowledge is somehow better or more advanced than delta planning knowledges that have evolved in other countries dangerously portrays the travel or transfer of delta planning knowledges as one-way learning process, one in which the Dutch always figure as the teachers or experts. Opportunities for Dutch to learn from others thus become difficult to identify and recognize, something that becomes particularly hard to defend when one accepts that sustainable development requires different and new forms of knowing and dealing with nature. A co-evolutionary definition of deltaic processes provides a potentially more symmetrical basis for understanding the exchange of experiences between delta countries and their experts, because it produces explanations that do not rely on the assumed superiority of the Dutch and that are more modest in avoiding grand theorizations or generalizations.

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