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From flood safety to risk management

The rise and demise of engineers in the Netherlands and the United States?

Bergsma, E.J.

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3. The political genealogy of the Zuiderzee Works: The establishment of a safety discourse*

Abstract

This chapter analyzes the relationship between experts and policymakers in the policymaking process of the Dutch Zuiderzee Works (the construction of the Afsluitdijk and related land reclamations in the former Zuiderzee) that took place from 1888-1932. In this process, key elements of the Dutch safety approach to floods were formed. The aim of this chapter is to showcase the role of experts in this process, to then use as grounds for comparison in later analyses of the turn to spatial planning measures in this thesis. This chapter reconstructs the policymaking process on the Zuiderzee Works to investigate which experts were involved in this process, how these experts influenced the policy discourse on floods through their interaction with policymakers, and how this influenced distributive decision-making in this process. It finds that the interaction between experts and policymakers in the policymaking process of the Zuiderzee Works led to the formulation of a “strong” policy frame on floods. However, rather than toning down the attention for distributive aspects, this policy frame actually invited counter-interpretations and facilitated the recognition of distributive impacts of policy choices.

3.1 Introduction

Delta’s—areas where rivers mouth into seas—belong to the world’s most densely populated areas (Van Urk et al. 1999). They are located conveniently for sea trade and their floodplains provide highly fertile plots of land. However, deltas are also

* This chapter is co-authored by Meindert Fennema

very vulnerable to flood risks. Events such as hurricane Katrina in the US in 2005, the 2011 floods in the Vietnamese Mekong Delta, and the recent Philippine floods demonstrate this vulnerability. Growing awareness of climate change leads delta-countries to look across their own borders for finding ways to better adapt to the flood risks they face.

The Netherlands deserve particular attention in this respect. The Dutch are famous for their Afsluitdijk—a 32 km long dam that closes off an inner sea (the Zuiderzee) and protects the area behind it. And there are the impressive Delta Works, a system of dykes that protects the south-western part of the Netherlands. Such large-scale protection works are not only difficult to implement technologically but also politically. Devised by experts to ward off the risk of flooding, their implementation often has negative implications for other groups in society and can therefore conflict with other interests like those of trade, fishery, and the environment. These interests have to be weighed against the goal of providing protection against uncertain future flood risks. Policymakers rely heavily on expert-knowledge in making such trade-offs. The risk prognoses made by these experts reduce some of the uncertainty surrounding future risk of flooding and as such help policymakers act in indeterminate circumstances. However, this reliance on expert-knowledge has raised concerns about the “political” trade-offs made in risk governance; the fear generally is that value conflicts and conflicts of interest are insufficiently recognized under their “technical” or “operational” understanding of risks (Beck 1992, Habermas 1996, Rosanvallon 2008, Vogel 2008, Rayner 2012).

In order to learn from Dutch experiences, this chapter reconstructs the policymaking process of the Zuiderzee Works, a process that roughly covers the period 1880-1932. This period marks an important moment in the formation of the Dutch safety approach to floods. This chapter analyzes the role of experts in this formative process by adopting an interactional framing perspective. How

have experts, through their discursive interaction with policymakers, influenced the policy discourse on floods and, through this, the distributive aspects of the Zuiderzee Works policy?

The chapter is organized as follows. Section 3.2 sketches the political context in which a new group of experts emerged who grew devoted to the plan to close off the Zuiderzee. Section 3.3 analyzes how two key concerns that were raised against the Zuiderzee Works were addressed in the policymaking process. Section 3.4 shortly reflects on the implementation of the Zuiderzee Works over the years. Section 3.5 reflects on the role of experts in the formation of the Dutch safety approach and discusses its implications for distributive decision-making under this approach.

3.2 From plan to policy

3.2.1 The rise of a progressive-liberal elite

Both the emergence of the plan to close off the Zuiderzee in the second half of the 19th century and its rising political salience in the 20th century can best be explained in the particular political context of the Netherlands in this period. This context created a window of opportunity for a new intellectual elite that was firmly committed to the realization of the Zuiderzee Works.

In 1848, a hallmark year in Dutch constitutional development, a major constitutional reform was passed under the leadership of liberal politician Rudolf Thorbecke. The new constitution was based on a liberal doctrine that advocated minimal state influence to reduce the abuse of power by the state (Drentje 2011). However, over the years, the agriculture-based economy of the Netherlands started to lag behind neighboring countries that benefitted from new industrial technologies (Ter Veen 1935). Against the backdrop of aggravating social problems, a new intellectual elite emerged that challenged the conservative-liberal state doctrine.

The attitude of this elite has been described by Banerjee (2011: 106) as “synthetic technocratic”: They rejected specialization, short-term materialism, and narrow individual or corporate interests in favor of the technocratic ideal of politics. Sharing an urge for meritocratic leadership, this elite was in favor of a government of manufacturers, traders, and bankers who had successfully demonstrated their productive capacities, as well as of the influence of scientists, planners, and civil engineers who were able to translate social-technocratic ideals into questions of rational state planning (Den Hoed and Keizer 2007: 72). Van der Vleuten (2004) traces this intellectual movement back to the 18th and early 19th century, when thinkers like Turgot, Condorcet, Saint-Simon, Bentham, James, and John Stuart Mill stressed the importance of improved access to and circulation of rational knowledge and technology for commerce and industry. Like its modern counterparts, the elite held an organic vision on society; the state as the “body politic” should create the right conditions to maximize the productive potential of society. A key instrument at its disposal was the implementation of large-scale infrastructural projects, such as railroads and waterways. Internationally, such ideas found their application for example in the construction of the Suez-Canal (1859-1869).

In the Netherlands, central banker H.P.G. Quack (1834-1917) disseminated the ideas of Henri de Saint-Simon (Quack 1915). Inspired by his writings, members of the upper middle class and aristocracy, including (urban) planners, engineers, bankers, landed gentry, and politicians, who sympathized with the technocratic ideology organized themselves in private associations to challenge the liberal state doctrine. Through these associations, they initiated privately funded research into specific social problems, such as health care, schooling, or transportation, to draft plans for governmental action. Engineers, whose profession “socialized” during the second half of the 19th century, played a leading role in these developments (Lintsen 1980). Armed with research reports, these engineer-led associations sought to influence public opinion by writing

articles in national newspapers and journals, publishing brochures, and organizing public debates so as to pressure those in government to take action (Van den Brink and Molema 2008). Examples of such associations are the Association for the General Wellbeing¹, the Central Bureau for Social Advice², and the Association of Democratic Engineers and Architects³.

By the end of the 19th century, the dominant Liberal Party split into a conservative and a progressive branch. Conservatives remained attached to a laissez fair policy and rejected general suffrage. Progressive liberals, like Tak van Poortvliet, Cornelis Lely, Hendrikus Colijn, and later Hans Max Hirschfeld (see also Fennema and Rhijnsburger 2007), advocated extensions of the census and were in favor of expanding the role of the state, particularly in the national infrastructure. This significantly contributed to the influence of the new liberal-progressive elite in the Netherlands.

The ideology that became pervasive under the new elite was based on a close harmony of business and state. Progressive liberals in parliament fostered intimate relationships between Dutch state institutions and the private research associations formed by members of the new elite. Under these circumstances, the Dutch state became increasingly involved in the establishment of provisions to improve the national infrastructure, such as railroad construction, electricity supply, and water management. The plan to reclaim the Zuiderzee was one of these Saint-Simonian projects, comparable with the Suez Canal (1869) and the Panama Canal (1914).

¹ Maatschappij tot Nut van 't Algemeen

² Centraal Bureau voor Sociale Adviezen

³ Sociaal-Technische Vereeniging van Democratische Ingenieurs en Architecten.

3.2.2 The engagement of progressive elites in Zuiderzee reclamations

The Zuiderzee has always been an important area for the Netherlands. It formed a sea trade passage that contributed to the economic prosperity of the Netherlands in the 16th and 17th centuries, it has been an important building block of Dutch military defense works⁴, and it provided rich fishing grounds. However, it also posed a threat to the people living and working near its shores; the Zuiderzee has been known for its devastating storm surges, flooding whole islands and villages and killing thousands of people (Braat 1932).

The first plan to reclaim the Zuiderzee dates back to 1667, when the son of the renowned mathematician and engineer Simon Stevin, Hendrik Stevin, pondered about closing off and reclaiming the Zuiderzee. No one really took his ideas seriously at that time; reclaiming a whole sea was considered technically impossible. However, the successful reclamation of the large lake De Haarlemmermeer in 1852 prompted a renewed interest in Zuiderzee reclamation. The reclamation of the Zuiderzee dovetailed well with the utopian visions like that of Robert Owen and Charles Fourier, as it foresaw the setting up of farmers' communities in a new and empty land. As such, it attracted members of the newly emerging liberal-progressive elite, many of who also saw possibilities for communal experiments in the colonies.

Two other factors contributed to the interest of the progressive elite in Zuiderzee reclamation. First, Dutch coastal water management was still in its infancy. While a central water management authority (Rijkswaterstaat) had been established by the French administration in 1798, the work of this organization focused mainly on the inland water system. Coastal water management always lagged behind, also because there was not much expertise in this area. Up to the 18th century, the sea had been primarily studied by cartography for optimizing trading routes

⁴ It was part of the "Stelling van Amsterdam".

(Toussaint 2009). However, the work of the French mathematician Laplace on ocean tides had inspired a new science on the dynamics behind tidal flows, which also increased opportunities for control in this area. The new elite, among whom were many hydraulic engineers, thus saw in Zuiderzee reclamation an opportunity to put their expertise to use in this until then under-researched policy domain of flood safety.

Second, up to the 19th century, land reclamation activity was largely an unplanned endeavor (Danner 1992); reclamation was a business activity, where the Dutch government used private capital to drain fruitful areas, which were then leased to investors who hoped to return their investments with the profits gained by cultivating the area. This business often left farmers on the newly recovered lands deprived of social and physical provisions like road networks, schools, and churches (Ter Veen 1925). When in 1866 the private Land Banking Corporation⁵ requested a concession to reclaim parts of the Zuiderzee, the progressive-liberal elite raised its voice and argued that such an activity, which so clearly involved matters of common interest, should be undertaken and financed by the state.

3.2.3 The Zuiderzee Society and its achievements

Between 1848 and 1875, several plans to reclaim the Zuiderzee had been circulated⁶. The first plan that was adopted by parliament was developed by engineer W.F. Leemans in 1875. While his plan was never implemented, it did draw the attention of Age Buma (1820-1893, see Textbox 1), a deputy from Friesland. In 1884, Buma received a letter from his friend in London who had written about a group of investors in the United Kingdom that was willing to

⁵ Maatschappij voor Grondkrediet.

⁶ An overview of these plans can be found in Jansma (1954).

invest in Zuiderzee reclamations.⁷ Buma, however, was skeptical about the influence of private capital in reclamation activities without a government overseeing the whole enterprise. Together with P.J.G. van Diggelen (1837-1907), the son of an engineer who had proposed to empolder the Zuiderzee as early as 1849, Buma established the Zuiderzee Society in 1886 to instigate a technical and financial study into the possibilities of closing off and later gradually reclaiming the Zuiderzee.

Textbox 1. Age Buma.



Age Buma (1820-1893). With a background in agriculture, Buma was elected representative of the Sneek district (Friesland) in the Lower House from 1882 until 1888 as part of the liberal progressive union that supported Tak van Poortvliet in his efforts to extend the census. Buma was a member of the North-Holland Friesland railway committee and a board member of the Association for Civil Education, but in parliament he acted as a spokesman on water management, in particular on Zuiderzee reclamation plans. From 1886 until his death in 1893, Buma was chairman of the Zuiderzee Society.

Source: http://www.parlement.com/id/vg09lkyz2axz/a_buma.

Buma and Van Diggelen managed to collect the necessary funds to commission a renowned hydraulic engineer, J. van der Toorn, to conduct the research. Van der Toorn employed a young engineer, Cornelis Lely (1854-1929), with whom he had collaborated at Rijkswaterstaat (Jansma 1954). When Van der Toorn left

⁷ This letter was written by De Jongh van Arkel, who informed Buma about “een Agent van een groep kapitalisten alhier (is), die niet ongenegen zouden zijn dit groote en wetenschappelijke werk te ondernemen, indien de onderneming, naar Uw gevoelen, de gewenschte voordeelen aan de ondernemers zoude kunnen afwerpen, en de Concessie daarvoor van het Nederlandsche Gouvernement zou kunnen worden verkregen”. (Cleintuar, 1982: 41).

prematurely because of a financial conflict in 1887, it was Lely who took over Van der Toorn's position and developed a plan to close off and reclaim large parts of the Zuiderzee (see Textbox 2).

Textbox 2. Cornelis Lely.



Cornelis Lely (1854 – 1929). Already in high school Lely was noted for his mathematical skills. He successfully completed the prestigious Polytechnic academy in Delft. While not very successful in his career as a hydraulic engineer, he worked his way up in politics, occupying the post of Minister of Water Management three times. Lely's "enlightened stewardship" vision is reflected in his contribution to several social (i.e., on education and healthcare) and economic (i.e., on state mining) laws (Cleintuar 1990: 25).

Source: <http://www.biografischportaal.nl/persoon/05123326>.

Lely carefully presented his plan in eight technical notes (Zuiderzeevereniging 1892). He wanted to recover a maximum amount of hectares (approximately 200.000) of the sea's most fertile grounds in four separate empolderings while also making sure that the surface of the remaining lake would be large enough to absorb rising water levels caused by storms. He calculated the optimum depth of the lake so that its water levels would be high enough to maintain inland waterway transport but still low enough to allow the country's major rivers (especially the IJssel) to discharge into the lake. Besides the advantage of new land to cultivate, Lely emphasized the additional gains that would result from closing off the Zuiderzee with an enclosure dyke (the Afsluitdijk). He argued that not only the chance of flooding would be reduced, but the maintenance costs of polder dykes would also be significantly lower. Agricultural production in the provinces situated around the Zuiderzee that suffered from salinization would benefit from the creation of a large freshwater lake. Lely stressed that these benefits could only be reaped if the project was led by an organization with a

focus on the long-term interest of the nation, that is, the Dutch state. He estimated that the government would have to invest 192 million guilders.

When Lely's notes were made public in 1888, Lely and his Zuiderzee Society had to overcome resistance to their plans. Concerns were expressed about the financial attainability of the project and the consequences for the Zuiderzee fishing industry. How did they manage to overcome these concerns and generate the necessary public and political support for the adoption of the Zuiderzee Act in 1918? To answer this question, the next section analyzes the political efforts of Cornelis Lely and the Zuiderzee Society in relation to the key concerns mentioned above.

3.3 The political efforts of the Zuiderzee Society

3.3.1 Dealing with arguments of a technical and financial nature.

From the start, the Zuiderzee Society maintained close ties with liberal-progressive politicians. Not only was the association set up by a progressively minded politician (Buma), but its efforts were also supported by key politicians such as J.P.R. Tak van Poortvliet (1839-1904), who in 1877 became Minister of Transportation and Commerce and in 1891 Minister of Home Affairs. Descendant from the landed gentry in Zeeland, Tak's progressive ideals were fueled by his friend H.P.G. Quack⁸. While Tak is primarily known for his efforts to extend the census, he was an expert on water management and took a special interest in the Zuiderzee Society⁹.

⁸ For whom Tak traveled through Germany and Switzerland to look for writings of old revolutionary thinkers in antiquarian bookshops.

http://www.parlement.com/id/vg09lla1e0x6/j_p_r_tak_van_poortvliet

⁹ Molhuysen and Blok (1918: 1296) write: "It may be so that nobody contributed more to the improvement of existing (water)ways than Tak."

Before his last note on the Zuiderzee Works was published, Lely had been appointed Minister of Water Management in the progressive-liberal government of Tak van Poortvliet/Van Tienhoven (1891-1894). In 1892, the Zuiderzee Society circulated Lely's eight technical notes among the members of Dutch parliament. While in principle well-received by most of his progressively minded colleagues, Lely's plan drew out criticism from conservatives who were worried about the impact on the national treasury as well as from the state's civil engineers at Rijkswaterstaat who doubted the technical feasibility of the plan. These two types of criticisms often went hand in hand; the budgetary calculations underlying Lely's plan were called into question because it was thought that the works would be much more complex and would take much longer than Lely anticipated. Lely, as Minister of Water Management, now faced the difficult task of deciding on his own plans.

Well aware of his delicate position, Lely installed an independent state commission of experts to study his plans. Although a small minority felt that the project was too costly, the majority accepted Lely's conclusion that his plan concurred with the general interest and should be executed by the state (Staatscommissie 1894). However, when the state commission published its advice in 1894, the Tak van Poortvliet government made a proposal to modernize the suffrage system, which led to its fall (Van der Ham 2007, Jansma 1954). The conservative-liberal government that was subsequently formed was hesitant to spend large amounts of money on such a high-risk project.

When a progressive government (the Pierson government) formed again in 1897, Lely was reinstalled as Minister of Water Management. It was left to Lely to convince his fellow engineers, many of who worked within the ranks of the central water managed authority Rijkswaterstaat. These Rijkswaterstaat engineers were critical toward Lely's plans, resulting from a broader conflict of visions on the role of engineers in society between "military" Rijkswaterstaat

engineers for whom the engineering profession was a pure technical vocation and “civil” engineers active in private research associations who pursued an extended role of engineers in social affairs (Lintsen 1980: 243-299). When Lely presented his notes, Rijkswaterstaat engineers deemed the Zuiderzee project a too-risky business for the state to undertake. Lely visited Rijkswaterstaat many times to convince its members of the technical and financial attainability of his plans.

Textbox 3. Hendrik Christiaan van der Houven van Oordt.



Hendrik Christiaan van der Houven van Oordt (1837-1901) was an industrialist and landed property owner, a status he owed mostly to his accomplishments on the private land auction market. In 1877, he bought a small lake (Horstermeer), which he reclaimed for cultivation. Besides a member of the Provincial States of Gelderland, he held the position of dike warden. Until his death in 1901, he acted as the secretary of the Zuiderzee Society. His most influential work, “The Economic Benefits of the Zuiderzee Works”, which was printed in 1898 by his brother (publisher Brill in Leiden) and sent to all municipal councils, sold 1,600 copies in local bookstores in one year.

Source: http://www.biografischwoordenboekgelderland.nl/bio/3_Hendrik_Christiaan-van_der_Houven_van_Oordt.

The Zuiderzee Society started campaigning for Lely’s plans in broader political circles. In 1898, the association published a report on the economic benefits of the Zuiderzee Works, written by the association’s secretary, Van der Houven van Oordt (see Textbox 3), together with a young economist, G. Vissering. The report addressed the benefits of new land for cultivation, better flood protection, and an improved inland water system. For the first time, population growth, which increased relatively fast in the period between 1890 and 1900 (NIDI 2003: 13), was incorporated as an argument; new jobs would be needed to support the growing population, and these jobs could be provided by the Zuiderzee Works.

The authors stressed that the financial impacts of the Zuiderzee Works, both positive and negative, would not be felt immediately but would be spread over a considerable period of time (Van der Houven van Oordt and Vissering 1898: 39).

When Lely encountered resistance from the Minister of Finance, he drafted a bill that only included the construction of the two cheapest polders of the four originally included in his plan. Accompanied by a revised report on the economic benefits of the works edited by Vissering (Van der Houven van Oordt and Vissering 1901, see Textbox 4), this bill was passed in 1901.

Textbox 4. Gerard Vissering.



Gerard Vissering (1865-1937) has been one of the most devoted supporters of the Zuiderzee Works. As the son of one of the nation's leading economist who became minister of Finance and chief editor of *De Gids*, he quickly made a career in (international) finance. He was director of the Bank of Amsterdam (1900-1906), president of the Java Bank (1906-1912), and president of the Dutch Central Bank (1912-1931), occupations that he combined with his services for the Zuiderzee Society, first as secretary (1901-1906) and later as chairman (1919-1937). Being a prolific and rhetorically strong writer, he published many reports and newspaper articles on the Zuiderzee Works. He was a sailor and a skater and invented a new type of skate: the Vissering-Ruiter model.

Source: <http://www.nieuwlanderfgoed.nl/archief/waterschrijvers/v>.

The Pierson government did not serve its full term and Lely was replaced by the conservative-liberal De Marez Oyens, who asked two inspector-generals of Rijkswaterstaat to reevaluate Lely's plans. The inspector-generals judged Lely's plans technically feasible but financially unattainable. Lely, however, found a helping hand in the vice president of the Zuiderzee Society, W.F. Leemans, who

was also director at Rijkswaterstaat. In an accompanying letter to the report of his subordinates, Leemans argued that “every nation, from time to time, has to initiate great work without fixating on the costs”¹⁰ (Zuiderzeevereniging 1905b: 109).

The Zuiderzee Society increasingly targeted the general public (e.g., through public brochures, the national media). Some of its opponents started using similar strategies. Derk Roelof Mansholt, a landed farmer from the northern province of Groningen, had presented calculations that ran counter to those of the Zuiderzee Society (Krips-Van der Laan 1999). In several newspaper articles and popular brochures, he repeatedly described the plans of the Zuiderzee Society as a costly project aimed to reclaim a “worthless swamp”, while the abundant and much cheaper opportunities to improve existing wastelands for cultivation were disregarded (Ter Laan 1949: 13).

When the progressive-liberals assumed power again in 1905, the new prime minister decided not to reinstall Lely as Water Management because the Zuiderzee Works, strongly linked to Lely in person, had become a contentious political issue (Jansma 1954: 138). Instead, J. Kraus was appointed, who was enthusiastic about Lely’s plans but as a newcomer hesitated to make major decisions on such a controversial topic. Kraus therefore sent a new bill to parliament in 1907 that aimed at the construction of only one small “test polder” (Wieringenmeer). This bill caused heated debates in parliament, which forced Kraus to commission a series of new studies on different aspects of the plan (Van Blom 1917: 132-133). With the promise that these studies would be awaited before the minister would start constructing the test polder, the bill was passed in 1909.

¹⁰ Original Dutch citation: “een volk moet van tijd tot tijd een groot werk aanvatten en daarbij niet zien op de kosten”.

Kraus's bill was not well received by members of the Zuiderzee Society. However, as two of its most energetic members were abroad—Vissering had been appointed president of the Javasche Bank in Batavia in 1906 and Lely left Holland to become governor of Suriname in 1902—it was now left to men like Harm Smeenge, member of the Lower House, the young engineer Auguste Plate (see Textbox 5), and social geographer Anton Beekman to defend Lely's original plans. They failed to change Kraus's bill.

Textbox 5. Auguste Plate.



Auguste Plate (1881-1953) was the son of Antoine Plate, who founded the Holland America Line and who was a great admirer of Ferdinand de Lesseps, who designed and constructed the Suez Canal. He was a member of the Association of Democratic Engineers and Architects (STV). Just before he moved to Indonesia to work for the Nederlandsch-Indische Spoorwegmaatschappij, Plate conducted a study on the effects of the Zuiderzee Works on national unemployment in 1914. After his return in 1917, he became a central figure in urban development in Rotterdam, where he advocated decent housing for the working class and because of his socialist leanings was nicknamed Pink Plate.

Source: <http://resources.huygens.knaw.nl/bwn1880-2000/lemmata/bwn1/platea>.

It was only when Vissering returned to the Netherlands in 1912 that progress was made again. In 1913, Lely was installed as Minister of Water Management for the third time and Queen Wilhelmina addressed the importance of the Zuiderzee Works in her speech to the yearly Assembly of the two Houses. On return to his ministerial post, Lely withdrew Kraus's 1909 bill. Delayed by World War I, Lely did not submit a new Zuiderzee bill to parliament until 1916.

This time circumstances were favorable. The bill was presented just after the Zuiderzee region had been hit by severe floods that killed 20 people and caused huge damages. The floods underlined the importance of the Afsluitdijk for national safety while World War I demonstrated the need for self-sufficiency in agricultural production. Because the international reputation of the Dutch had been dented by its neutral position in the war, people welcomed a project like the Zuiderzee Works that would boost the national confidence by demonstrating the Dutch employed a peaceful land annexation strategy (Van der Geest et al. 2008, Beyen 2008).

The Society launched a final attack on its opponents. It was especially the Mansholt family who required a response. While Derk Roelof Mansholt increasingly used national media to condemn Lely's plans, his son, Lambertus Helbrig, deputy of Groningen, openly worried about Lely's promises to increase the height of coastal dykes in the provinces of Noord-Holland and Friesland to counter rising water levels caused by the construction of the Afsluitdijk while no such provisions were made for Groningen. In their rejoinder, the Zuiderzee Society played the nationalist card: "[F]ortunately our country does not consist of many such prophets of doom; for we wouldn't have been where we are right now"¹¹ (Zuiderzeevereniging 1916: 83).

From March 7 to June 21, 1918, Lely's Zuiderzee bill was discussed in parliament (Zuiderzeevereniging 1920). Lely found an important ally in Zuiderzee Society's vice president Smeenge (see Textbox 6). It was especially when Lely's personal involvement was held against him that Smeenge came to Lely's rescue with long interventions on the hard work and many accomplishments of Lely and the Zuiderzee Society. Lely himself primarily dealt with technical concerns and questions.

¹¹ Original Dutch quotation: "Gelukkig dat ons land niet uit velen zoo angstvallige ongeluksprofeten bestaat; het zou dan nimmer geworden zijn wat het nu is."

Textbox 6. Harm Smeenge.



Harm Smeenge (1852-1935) took part in Lely's 1892 state commission, after which he joined the Zuiderzee Society's executive committee in 1897. In 1906 he was appointed vice president, which he combined with his presidency of an association for the inland shipping sector. He occupied a seat in the Lower House from 1888-1919 and a seat in the Upper House from 1920 onward. Until his death in 1935, he passionately voiced the ideas and concerns of the Zuiderzee Society in parliament.

Source: <https://www.geni.com/people/Harm-Smeenge/6000000031430738009>.

The Mansholt family name was often mentioned in the parliamentary debates when questions were raised as to whether the Afsluitdijk and polder-dikes could indeed be as low as Lely assumed. Lely and Smeenge treated the concerns of Mansholt with some disdain; for them the focus should be on the common good, not on the partisan interests of Groningen. An example of this can be found in the reaction of Lely to raised concerns about flood safety in Groningen: "As I said, the key point of the bill is twofold, it comprises land annexation and improvement of water conditions, both purely matters of the common good, a common good that does not relate to one specific province but to our country at large"¹² (Kamerstukken II 1917/1918: 1975). However, Lely did make a pledge to install a state commission to investigate the altitude of the Afsluitdijk. This commission was headed by the Nobel Prize winner Prof. H.A. Lorentz (1853-1928), who in 1926, after years of research, advised to elevate the Afsluitdijk at several places (Fuchs and Simons 1972).

¹² Original Dutch quotation: "De hoofdgedachte van het wetsontwerp is, zoals ik reeds zeide, tweeledig, namelijk landaanwinning en verbetering van de waterstaatkundigen toestand, beide zaken van zuiver algemeen belang en in deze wel van een algemeen belang, dat betrekking heeft niet op een enkele provincie, maar op een overgroot deel van ons land."

Rijkswaterstaat employees had questioned the assumed storage capacity of the IJssel Lake, as members of the Zuiderzee Society had started to call the empoldered Zuiderzee, and similar questions were raised in parliament. Lely countered these arguments with all sorts of technical details, but he did not downplay the remaining uncertainties. Although he emphasized the long-time path of the Works, which allowed for continuous learning and adjustment, he argued that all great works require risk-taking in order to advance social progress.

Apart from these technical and financial concerns, the general attitude in parliament was positive, and this was a major breakthrough compared to earlier parliamentary debates on Zuiderzee bills. In general, the significance of the Works for the nation was acknowledged and Lely's relentless efforts were applauded. The concerns of the Minister of War—who objected to a fast execution of the Works, as they would destroy the nation's most important water defense unit (the Stelling van Amsterdam)—were dismissed. At times, the mood even turned somewhat euphoric. Carried away by their imagination, deputies discussed the shape of the parcels (of which the bill made no reference at all) on the recovered lands; appalled by the previous speaker who liked straight plots better than curved ones, one deputy exclaimed: "But one does not turn a province into a checkerboard!"¹³ (Kamerstukken II 1917/1918: 1888).

Later authors have explained the sudden change in attitude toward the Zuiderzee Works from favorable circumstances like the 1916 floods and the First World War (e.g. Beyen 2008, Fuchs and Simons 1972). However, Lely and the Zuiderzee Society definitely contributed to making these circumstances favorable to their cause. Beekman, for example, writes that “while the flood risk is not the only and definitely not the most important driving force behind the Zuiderzee Works, it speaks more forcefully to the masses than the clearest statements about their

¹³ Original Dutch quotation: “Maar men maakt van eene provincie toch geen dambord!”

economic and social benefits”¹⁴ (Zuiderzeevereniging 1916: 53). The Zuiderzee Society organized a public exhibition on the 1916 floods, demonstrating how the Zuiderzee Works could help to prevent such disasters in the future. In a national newspaper, *Vissering* (1916: 5) argued that the floods taught the Dutch a hard and painful lesson and expressed his hope that the people and their representatives would now finally be willing to seriously consider Zuiderzee plans. Smeenge, in one of his parliamentary speeches, noted that adopting the Zuiderzee bill would lead people in other countries to admit that the Dutch are “a small people, that dares to take risks in fearful times” (Zuiderzeevereniging 1920: 334). In doing so, they convinced the larger public as well as politicians of the benefits of the project. The bill was ratified on March 21, 1918, in the Lower House and on June 13 in the Senate, with which the Zuiderzee Act was adopted.

For the implementation of the Zuiderzee Works, Lely established a new organization (Dienst der Zuiderzeewerken) instead of handing this task to Rijkswaterstaat. Lely also created a Zuiderzee Council that would oversee the implementation of the project, in which Lely himself took seat as its president and Vissering and H. Colijn were appointed as its vice presidents. Other members of the Zuiderzee Society, among whom were Smeenge and Beekman, took seats in this council as well. The implementation was not without hurdles. The economic recession that followed the war put an extra burden on the advocates of the Zuiderzee Works to re-legitimize the expenditures in these circumstances. When agricultural engineer and former director of the *Heidemaatschappij* H.J. Lovink (1866-1938) published the report of his state commission that was asked to reevaluate the costs and benefits of the Zuiderzee Works, this came at a convenient time for Colijn, who had just been installed as Minister of Finance and

¹⁴ Original Dutch quotation: “Al is het Zuiderzeegevaar niet de eenige en zeker niet de voornaamste beweegreden voor de afsluiting en gedeeltelijke drooglegging van de Zuiderzee, het spreekt krachtiger tot de menigte dan de helderste betoogen omtrent economische en sociale voordeelen.”

was faced with huge budget cuts on the Zuiderzee Works. Supported by Lovink's conclusions that the Works would require about 380 million but that the benefits would be larger than anticipated (Lovink 1924), Colijn drafted a bill that accelerated the implementation of the Zuiderzee Works by allowing the government to take out a loan, which was adopted in 1926.

3.3.2 Resistance from the Zuiderzee fisheries industry

The Zuiderzee Works would have a huge impact on the fishing industry. The issue was, however, not as contentious as technical-financial concerns and initially did not stir up much unrest in the policymaking process on the Zuiderzee Works.

In his fifth technical note, Lely mentioned that the construction of the Afsluitdijk would terminate the Zuiderzee fishing industry. For the members of the Zuiderzee Society, this sacrificing of the Zuiderzee fishing industry was outweighed by the benefits created by the Zuiderzee Works. As Lely argued in his notes, "the fishing grounds will be replaced by new land with rich clay soil, of which the yearly profits will surpass that of the fishing industry many times"¹⁵ (Zuiderzeevereniging 1892: 21). The 1892 state commission was, however, of the opinion that the issue had not been appropriately addressed in Lely's notes. In its recommendations, the committee therefore included different proposals to help Zuiderzee fishermen cope with the negative impacts of the Zuiderzee Works (Staatscommissie 1894). The commission suggested life-long retirement pensions for fishermen above the age of 55. Younger fishermen should be supported in relocating their activities to the North Sea; they should be provided with new boats and exempted from the obligation to pay North Sea port fees. The costs of these measures were estimated at 4.5 million guilders.

¹⁵ Original Dutch quotation: "dan wordt het vischgebied vervangen door eene nieuwe provincie vruchtbare kleigronden, waarvan de jaarlijksche bruto-opbrengst vele malen die der visscherij zal overtreffen".

Minister Lely, in his 1901 bill, accepted the state commission's proposals and created a budget of 4.5 million for compensation measures. Even so, Lely's bill stirred some unrest in fishing communities. A schoolteacher in Volendam, B. Demmer, set up a "General Committee of Zuiderzee fisheries" to conduct a counter-research based on data collected from the fisheries industry itself (Zuiderzeevereniging 1905a). The Demmer commission concluded that instead of the proposed 4.5 million, 14 million would be more appropriate to compensate the losses of the industry. This collective initiative was, however, an exemption. Further collective efforts were troubled by an old conflict that deeply divided Zuiderzee fishermen.

As early as 1500, fishermen from the affluent western province of North-Holland, forced by salinization of their western fishing spots, expanded their sailing grounds to the eastern part of the Zuiderzee. Their superior towed-fyke trawlers contrasted sharply with the traditional practices of eastern fishermen, who worked with off-shore fishing nets in fishing spots allocated by their guilds (Dorleijn 1982).¹⁶ Western fishermen neglected this system and freely sailed across the allocated eastern fishing spots (Ypma 1962). When the Amsterdam-Rijnkanaal—which directly connected Amsterdam to the North Sea—was constructed and North Sea competition increased, western fishermen retreated to the Zuiderzee and the east-west conflict was reinforced. The two sides became organized into different lobby groups, with eastern groups advocating a ban on towed fyke nets to prevent over-exploitation of fish stocks while western groups tried to prevent such a ban (Bossaers 1987).

¹⁶ Fyke nets are triangle-shaped fishing nets. They can be "fixed" in between poles in fishing waters, like the eastern fishermen used to do, to be hauled in every couple of days. Western fishermen used lightweight fyke nets that they attached to their ships while sailing.

This strife shaped fishermen's reactions to Zuiderzee plans. For example, when C. Redeke (1907), expert advisor on the committee for sea-fisheries (College voor Zeevisscherijen) who was asked to look at the issue of compensation to fishermen, published his report in which he concluded that the Zuiderzee fishing industry was not in decay, his findings were rebutted by eastern fishermen who experienced declining catches as a result of an increase in the use of fyke-trawlers. Another example is the in 1911-established Zuiderzee Fisheries Council that represented different local fishing associations. This council was criticized heavily both by western and by eastern fishermen for over-representing the other side. While Demmer had successfully organized a collective reaction with his inventory and report in 1901, 12 years later, when he called for a collective protest after the 1913 queen's speech addressed the Zuiderzee Works, no reaction followed. Even Lely's 1918 bill did not give rise to joint efforts on behalf of fishermen.

The Zuiderzee Society did not take a clear stand on the issue of compensation. On the one hand, they believed Zuiderzee fishermen would benefit from the Zuiderzee Works, as new job opportunities would open up in construction activities and later on the reclaimed lands. On the other hand, they felt responsible for helping fishermen make the transfer. In reaction to the 1901 Demmer report, the association commissioned two studies into the matter. The Neeb-Committee established in 1905 sketched a gloomy picture; not only did Zuiderzee fishermen live in deprived conditions, but the small-scale industry was destined to be swallowed by up-scaling processes anyway (Zuiderzeevereniging 1905a). Rather than providing them with financial compensation, the commission advised to create "new circular routes to make sure the places where other businesses are being conducted are easily accessible and to open up

opportunities to accumulate knowledge”¹⁷ (idem: 246). Only for the elder generation and for widows, it argued that compensation was justified. In 1906, the Society published the results of another study, undertaken by the agricultural development company “Heidemaatschappij”¹⁸, which concluded that a freshwater fish stock could emerge in the IJssel Lake if the waters were managed properly. Based on both studies, the Zuiderzee Society argued that “one should admit that closing off and reclaiming parts of the Zuiderzee will not terminate a thriving business; on the contrary, the fishing grounds could be exploited in a new and more rational manner”¹⁹ (Zuiderzeevereniging 1906: 6). After 1906, the association paid little attention to the issue of fishermen anymore.

Lely’s 1918 bill only included the general promise that 4.5 million guilders would be reserved for compensation to fishermen through measures that would be devised by an expert commission. In the parliamentary debates, the fisheries issue surfaced only a couple of times. The bill was criticized for being vague with respect to who would receive compensation and how much (Zuiderzeevereniging 1920: 432-437), but a rather clumsy debate followed on what the preferences and needs of fishermen actually were; do they prefer compensation over new job opportunities, or do they want to continue fishing? The only decision taken on

¹⁷ Original Dutch quotation: “De commissie ziet veel meer in het creëren van nieuwe verbindingswegen om gemakkelijk de plaatsen te kunnen bereiken waar andere bedrijven worden uitgeoefend, en de opening van de gelegenheid om de kennis te vermeerderen” (246).

¹⁸ This engineering and development company focused on cultivating land in harsh environments. The company changed its name into “Acradis” in 1997 and has developed into an internationally known advisory and construction company in civil, but still mainly hydraulic, engineering. The company was, for example, involved in the levee reconstruction activities after hurricane Katrina in New Orleans.

¹⁹ Original Dutch quotation: “Wanneer men dit alles nagaat, zal men moeten toegeven dat het argument, als zoude door de afsluiting en gedeeltelijke drooglegging der Zuiderzee de visscherij als een bloeiende tak van bedrijf te gronde worden gericht, onhoudbaar is; integendeel zou juist die tak van visscherij op eene geheel nieuwe en dan meer rationele wijze kunnen worden uitgeoefend.”

the issue was to require parliament to approve of future compensation rules in order to keep a check on their implementation.

After the adoption of Lely's bill, fishermen started to have trouble attracting loans for new materials, as their suppliers were not sure anymore the fishermen could repay their debts under uncertain future circumstances (Ritter 1932). In reaction to complaints about this problem, the expert commission on compensation rules set up by Lely, which was headed by Vissering, arranged to erect a credit agency to come to the aid of fishermen.

This expert commission also worked on a bill for compensation to fishermen. Vissering found that there was no legal right for compensation, as the Zuiderzee was not private property and therefore fishermen were formally not expropriated (Ter Veen 1935). For reasons of compassion, he proposed to supplement fishermen's wages up to their mean income level over 1915-1917 and to grant elderly fishermen a pension. Other measures included a right to free education for fishermen and their children, preferential hiring, loans to start new businesses, and licenses to fish on the new IJssel Lake. When the bill was sent to parliament in 1923, the first signs of the economic depression of the 1930s just started to be felt. The incumbent Minister of Water Management restricted the duration of financial allowances to three years for people in between the ages of 18 and 25 and to five years for people between 25 and 35 to reduce the budget (Kamerstukken II 1924/1925: 30). Parliament adopted this Zuiderzee Support Act in 1925.

Fishermen were hugely disappointed about the amount of financial support they received through this bill. They felt let down by Lely, who had promised them compensation for their losses while in reality it turned out to be very difficult to apply for income supplements. Likewise, the pensions for the elderly were based on the Poverty Act and were therefore very low (Bossaers 1987, Dorleijn 1985). It was in reaction to this collective disillusionment of the Zuiderzee fisheries

industry that schoolteacher Demmer's 1901 General Committee was revived. In 1928, it organized a protest meeting in which over 600 fishermen from eastern as well as western provinces participated. Again, the issue of compensation was discussed in parliament (Kamerstukken II 1927/1928). In 1930, Demmer organized yet another demonstration in which over 1,400 people participated, including fishermen from all over the Zuiderzee region, representatives of fisheries-related companies, members of local governments, and even some members of parliament. Demmer's arguments with respect to the expectations created by Lely and the Zuiderzee Society were given widespread attention in the newspapers (cf. *Algemeen Handelsblad* 1930). These concerted efforts led to an amendment of the Zuiderzee Support Act, adopted by a large majority in parliament (Kamerstukken II 1930/1931: 7). The executive agency dealing with compensation was replaced by a new state agency to establish more fair and transparent procedures, which ultimately improved support for fishermen.

3.4 The implementation of the Zuiderzee Works

It took the Zuiderzee Society a long time to gain support for their Zuiderzee plans in politics. Its implementation proved another sweeping procedure. The process was not only held back by technical disputes and social concerns described in this chapter, but the economic crisis in the 1930s, financial shortages in the post-Second World War period, and ecological protests in the 1970s had further delayed the reclamation of the polders. In fact, the fourth Zuiderzee polder was so often postponed that in 2003, the Dutch government decided to abandon the plan to empolder this area altogether (VROM 2004). Despite all these struggles, the Afsluitdijk stood the test of time; it protected the northern part of the country against the devastating storm surge of 1953 that caused a flooding disaster in the southern part of the country, and over the years the Dutch have benefitted greatly from the added value created by the cultivation of their new self-made province (Van der Geest et al. 2008: 27). Some may therefore argue that the

policymaking process took much longer than needed, as forward-looking experts were held back by “partisan” conflicts of interests.

At the same time, this chapter also demonstrates that the experts involved in the Zuiderzee Society were very influential and that they not only determined the technical, but to an important extent also the social and distributive aspects of the Zuiderzee Act that was adopted in 1918. In hindsight, project expenditures far exceeded the costs calculated by these experts (Thijsse 1972). Instead of the 190 million guilders budgeted in Lely’s technical notes, recent estimates are that the Dutch government has spent a total amount of three billion guilders on the project (Van der Geest et al. 2008: 26). Also, the fishermen’s issue was not adequately addressed by the Zuiderzee Society—which did its best to portray the Zuiderzee fisheries as an industry in decay—and it took subsequent parliamentary actions to correct this problem. Based on these insights, it could be argued that expert-influence reached too far into the “political” domain of decision-making in the case of the Afsluitdijk.

Taking into consideration that the Zuiderzee case allows for these multiple interpretations of the role of experts in the policymaking process, it first and foremost calls for a careful analysis of expert-influence. What factors constituted the influence of experts in this process, and what did this imply for the way in which the distributive aspects of the Zuiderzee Works policy were dealt with?

3.5 Conclusion

This chapter aimed to describe the role of experts in the formation of the safety approach in Dutch flood governance, in order to then analyze how expert-influence was constituted under this approach and how it impacted the way in which the distributive aspects of this approach were dealt with in the policymaking process. Based on the empirical analysis laid out in this chapter, this conclusion first reflects on the constitution of expert-influence in this formative

period in Dutch flood governance and then discusses the implications this form of influence on distributive decision-making.

The reconstruction of the policymaking process underlying the Zuiderzee Works provided in this chapter on the one hand demonstrates the importance of the self-organizing capacity of experts. Organized into the Zuiderzee Society, the experts involved in the policymaking process were part of a rising Dutch elite that actively endeavored for a greater role of experts in public affairs. Nearly all of them were either bankers with a profound interest in water management or civil engineers with political ambitions. Most of them had served in the colonial administration. What knitted them together was an ideology in which democracy and meritocracy collided. They favored a leading role of scientists in public policymaking, and many were in favor of general suffrage. They therefore believed that the projects experts proposed needed support, not only from policymakers but also from the public at large. To generate this approval, experts carefully outlined not only the costs involved with their projects but more importantly also the (economic and social) benefits that would be created by their plans. It was through these efforts that the Zuiderzee Society managed to generate public and political support for the construction of the Afsluitdijk.

On the other hand, this chapter described how the political context of the Netherlands at the beginning of the 20th century also provided the experts of the Zuiderzee Society with the room to develop their expertise in the political and public domain. Economic and social deprivation undermined the liberal state doctrine at the end of the 19th century and created receptivity for the ideas of this new elite who presented an alternative to dominant laissez-faire principles. Most members of the Zuiderzee Society belonged to dissident religious denominations. Mennonites (Doopsgezinden) and Remonstrants were in the majority. As religious outsiders, they did not fall prey to traditional religious divides.

This chapter thus concludes that it was a combination of expert organization and contextual circumstances through which the Zuiderzee Society gained the nearly unchallenged status of “expert-group” in the policymaking process of the Zuiderzee Works. This “embedded” character of expert-influence meant that strong interactions were created between experts and policymakers in Dutch flood governance. As a result of these interactions, the lines between “politics” and “science” blurred, which was most vividly demonstrated by Lely’s threefold occupancy of a ministerial post in Dutch government. Because of the close relationship between the Zuiderzee Society and policymakers, these experts gained structural access to the policymaking process.

The interaction between the experts of the Zuiderzee Society and policymakers produced a clear understanding of the problem of floods, in which floods were constructed as an external risk that posed a threat to a socially and economically vibrant Dutch society. The central state was appointed as the appropriate actor to deal with this threat. In the social-technocratic ideology of the experts involved in the Zuiderzee Society, dealing with the local-level impacts of a plan that so clearly served the public interest was seen as a “political” issue that belonged to the domain of ad hoc democratic decision-making. Thus, through their expert status in Dutch flood governance, the Zuiderzee Society strongly influenced not only the technical but also the social and distributive aspects of the Zuiderzee Works policy.

Considering these strong bonds between policymakers and experts, and the coherent policy discourse that was developed through their interaction, it may be expected that alternative viewpoints and interests were blocked from the policymaking process. However, this chapter shows otherwise. It demonstrates that the problem definition offered by the Zuiderzee Society could be challenged in the policymaking process. As soon as the Zuiderzee Society published Lely’s technical notes, civil engineers at Rijkswaterstaat, for example, openly disagreed

with the financial and technical assumptions underlying the calculation of national costs and benefits balance in Lely's notes. Bearing in mind that the protagonists of the Afsluitdijk strongly resented the inclusion of partisan interest in public governance, it is even more striking that claims on behalf of Groningen about increased flood risks for this northern province and concerns about Zuiderzee fishermen about losing their jobs also emerged in the policymaking process.

The counter positions that were formulated in the policymaking process of the Zuiderzee Works were also taken on board in the policymaking process. Arguments that challenged the technical or financial aspects of the Zuiderzee Works were usually dealt with by the experts themselves by commencing further research and adjusting the plan in accordance to new findings. Based on the concerns voiced by Rijkswaterstaat engineers, Lely adjusted the technical assumptions behind his plans. He also pledged additional research into the effects of the construction of the Afsluitdijk for flood risks in Groningen. And when the Zuiderzee fisheries industry managed to overcome its internal divisions and started to organize their occupational interest more collectively – a development that cannot be disconnected from the extensions of general suffrage in that period – a commission was installed to see to the needs of Zuiderzee fishermen.