

NINE CENTURIES OF WATERBOARDS IN THE NETHERLANDS  
From Autonomy to Interdependence

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## **1. Introduction<sup>1</sup>**

What happens when a common pool resource that has enjoyed considerable autonomy for centuries suddenly becomes intertwined with public administration at large? From their beginning up to some twenty years ago, Dutch waterboards operated successfully and almost independently from general purpose (municipal, provincial and national) government. But within less than two decades, the intergovernmental relations between waterboards and general purpose governments has intensified enormously. In this paper we analyze the organizational changes in Dutch waterboards within the framework presented by E. Ostrom (1990). Some of the recent changes in waterboards will be illustrated with examples from waterboards in the province of Zeeland, since they were the first to anticipate and act upon them. In order to understand the magnitude of these 'recent' changes, we first describe the changes in the geographical environment and the development of Dutch waterboards from their origins up to the early 1970's (sections 2 to 4). The changes in the period 1970-1990 are then discussed in more detail in section 5. After a short theoretical interlude (section 6), we discuss two cases regarding the province of Zeeland (sections 7 and 8). In the concluding section, we suggest a tentative response to the central question of this paper.

## **2. Water as Friend and Foe**

During the 10th and 11th centuries, the people living in the Low Countries, presently known as the Netherlands, experienced a major change in their physical and geographical environment. Up to then, they had inhabited a mainly dry land, evolved during the last ice age (Pleistocene: diluvial grounds) and the following warmer period (Holocene: alluvial grounds).<sup>2</sup> At several instances during the Holocene this territory was penetrated by the sea, a phenomenon geologists define as transgression and followed by a period of regression. The low countries were usually well protected by an array of dunes along the coast, but this natural defense was not always enough to protect the country from flooding at a time of rapid and permanent rises in sea-level. This is what happened during the period 900-1100 A.D. A large delta came into existence in the southwest (nowadays the province Zeeland). In the west and northwest (known as Holland) numerous larger and smaller lakes developed in the landscape. The effect of the rise in sea-level was heightened through peat-digging and compacting of the ground since the 1100's (Wes-

tenberg 1974) . The land pattern looked very much like the lake-pattern in Finland, except for the fact that several of the larger lakes were connected to the sea. The land was continually affected by tidal movements, springtide and extensive flooding (Gottschalk 1971).

As can be expected, inhabitants of the Holland and Zeeland areas became acutely aware of the fact that they could not protect themselves on the basis of an individual, independent effort, and the protection of the land became a common interest.

### 3. Theories on the Origin of the Dutch Waterboard and earliest development

Several theories exist concerning the origin of waterboards (in Dutch: waterschappen<sup>3</sup>) in the Netherlands. We discuss these in relation to theories about the origin of municipalities since initially no formal distinction existed between general and specific purpose governments (Raadschelders 1990). We can distinguish so called 'bottom-up' and 'top-down' theories (figure 1).

Figure 1 **Theories about the Origin of Local Government in the Netherlands (Raadschelders 1992)**

	Bottom-Up	Top-Down
Municipalities	1. German 'Markgenossenschaft'	2. 'Kerspels' 3. Judicial Municipality
Waterboards	4. Local Waterboards 5. Regional Waterboards (joint provision)	6. 'High' Waterboards

According to some, the municipality originated in the German *markgenossenschaften*. The term 'mark' can refer to common property and use of land, or it can refer to an association of persons that possess a common property. This had been largely the case in the eastern part of the Netherlands. Others stated that the municipality sprang from the parish (kerspel), a territorial creation by the bishop. The parish predeceased the judicial municipality. A third

theory is known as the judicial municipality theory, which states that municipalities were created by the authority of the sovereign (count, prince). All three theories are plausible, since they acknowledge the regional variety in the lowlands.

The same can be said for the waterboards. Some waterboards were created through the effort of citizens in a village, and these 'local waterboards' also performed tasks of a general purpose government. This is why it is said that in some cases 'municipalities' originated in 'waterboards' while in other cases the 'waterboard' was created within the body of general purpose government. Between the 10th and 14th centuries the number of dykes increased rapidly. The dykes protected the land of many farmers, and each farmer was responsible for the upkeep of the dykes that adjoined his property. Regular inspections were held by a delegation of inspectors chosen from among the participants to ensure that every farmer fulfilled his duties. In addition to protecting the land, dykes also had several economic functions. Roads were built on top of them so that they became the most important thoroughfare on land. Dykes were part of an irrigation system by which the water level in each part of the waterboard could be regulated according to need.<sup>4</sup> The exploitation of waste lands and the interlocking of the local dykesystems into regional dykesystems led to the creation of regional waterboards based on a joint provision among representatives of the participating villages. Thus, watermanagement was exempted from general purpose government and became a specific purpose government. These regional waterboards are the oldest examples in the Netherlands of joint provisions among public bodies. Lastly, it could happen that the sovereign brought existing, local waterboards together in a regional body. For these we reserve the term 'high waterboards'. Moreover, most regional waterboards of a bottom-up origin received from the sovereign new 'constitutions' in the early 16th century, henceforth also known as high waterboards. The original local waterboards came to be known as so-called 'interior waterboards'.

#### **4. Developments 1560-1970: a Bird's Eye View**

In the rural parts of the country, general and specific purpose government were literally intertwined. In the urban areas in the west, they became interdependent again during the period of 1560-1640 which is the first era of massive land-reclamation. Before 1600, mostly smaller lakes were turned into fertile land while after 1600 many of the great lakes in

North Holland were impoldered. Chartered towns and members of the gentry were prime investors in these ventures. This is an early example of public-private partnership. Through investment they gained control of water management. They were given votes in the election of the dyke-reeve (in Dutch: 'dijkgraaf', chairman of the executive) as well as in the election of his fellow members in the daily board ('heemraden', 'hoogheemraden'). The dyke-reeve and his colleagues acted as the executive, comparable to mayor and alderman in municipalities. They organized meetings of landowners. In case of high waterboards, the landowners would choose representatives from among them to the Council of Inlands ('hoofdingelanden'). By and large, this structure remains today.

Notwithstanding the influence some municipalities exerted over some waterboards during the time of the Republic of the Seven United Provinces (1588-1795), one can say that waterboards could function almost autonomously. The administrative structure remained unaltered by the municipalities.

A major change occurred during the period of the French Occupation (1795-1813) when central-local relations were tightened through new legislation and organizational changes. Legislation regarding municipalities have had a lasting effect on the Dutch governmental system. In the - area of water-management, however, most legislation did not pass beyond the stage of a bill (an act/law in concept). In terms of organization the French influence was more lasting. In 1798 an Agency for Internal Police and Water management was created. It was one of the eight Agencies that are regarded as the origin of government departments in the Netherlands. Also a National Water Institute came into being, with the task of controlling major waterworks. From then on a distinction was made between 'main system' (sea-bordering areas, dunes, main waterways/large rivers), 'regional system' (smaller rivers, larger inland dykes) and 'local system' (the polderboards)<sup>5</sup>. At each level, specific tasks were performed, although a well-coordinated structure was not yet established (Raadschelders 1989b).

Disregarding a short period in which water management was organized in a separate department (1830-1831), during a large part of the 19th century it remained one of the sections within the Department of Home Affairs. This lasted until 1877. In the 1860's and 1870's the second period of land-reclamation began. The enormous 'Haarlemmermeer' (Haarlem Lake) was turned

into a large polder in the middle of the 19th century (Schiphol national airport was built there). The 'Wijkermeer' and the 'IJ' were impoldered between 1866-1876. The connections of the Rotterdam and Amsterdam harbours with the Northsea were improved with the construction the 'New Waterway' and 'Northsea Canal' respectively. Considering the increased government intervention with the 'main system' a separate Department of Watermanagement,- Trade and Crafts was created in 1877. Several large waterworks were completed during the 20th century (separation of the 'Zuiderzee' from the Northsea; Noordoostpolder; Deltaworks).

Government intervention did not stop at the national level. In order to systematize the functioning of the local and regional waterboards, an Ordinance Act (1895) and Water Management Act (1900) were passed in Parliament. These acts were the first to bring structure in the various local and regional ordinances regarding the governance of waterboards, hence, they brought about changes in the constitutional rule structure. The collective rules were not really altered. Decision-making remained with the farmers and the aristocracy (rural gentry) so the waterboards could still operate virtually autonomously. This is why they have often been referred to as 'farmers-republics'. Indeed, when looking at the various 'waterboard constitutions', great differences still existed in the areas of election and composition of its boards. Also, waterboards were not yet mentioned in the Dutch Constitution, and thus not formally recognized as bodies of public administration.

Government intervention up to the 1970's mainly concerned the general framework of governance. There was hardly any interference with the traditional tasks of the waterboards (dykes, quantity-control, and road-maintenance).

##### 5. The great change 1970-1990: legal framework, intra- and intergovernmental relations

The two oldest tasks of waterboards were flood water control (water-deterrence) and water-supply (quantity). Less important was the control and maintenance of roads on top of the dykes. Water quality-control and management is a relatively new development. Although many of the larger municipalities realized the importance of clean waterways within their jurisdiction since the 1860's (in order to contain cholera- and typhoid epidemics), this did not result in much more but filling up of local canals, the installation of running-water systems, and sewer systems. Hence attention for water -

management related problems was primarily translated into local and regional measures. Due to intensive pressure and lobbying by environmental interest groups in the 1960's, quality/purity of air, land, and water became a nation-wide issue. Public demand for improvement of the environment resulted in a great number of legal, organizational, and planning changes throughout the entire Dutch government. We will limit ourselves to the developments in the structure and functioning of water management and waterboards. First we will discuss the changes in the legal framework of the waterboards. With this foundation we can examine the developments in intra- and intergovernmental relations with regard to water management.

### **5.1 The legal framework**

The legal framework within which waterboards have to operate has changed considerably during the past twenty years. These changes are a consequence of task-differentiation and enlargement. In addition to the traditional tasks, the waterboards became involved in water quality- and water purification management.. Several acts dealing with a particular aspect of water quality and purification have passed Parliament since 1969: Act on the Pollution of Surface Waters (APSW, 1969), General Regulations Environmental Management Act (GREMA, 1980), Groundwater Act (GA, 1981), Act on Water Management (AWM, 1989). Under preparation are a draft Act on Waterdeterrence (regarding dykes, weirs, dams) and a draft Waterboards Act.

This draft Waterboards Act heralds a new era that started with an important change in the Dutch Constitution in 1983. It is the first time in Dutch history that waterboards are recognized in the Constitution as public bodies. When this happens an 'Organic Act' is prescribed. Based on and prescribed by the Constitution of 1848 provinces and municipalities have a Provincial Act and Municipal Act since 1849 and 1851 respectively. Hence, it took almost 150 years before waterboards received the same status within the Dutch state system as provinces and municipalities. From a legal point of view, the waterboards are now firmly embedded within the Dutch state system. Naturally all this legal activity has had certain consequences for the relationships between waterboards and between waterboards and other bodies of government.

### **5.2 Intra- and intergovernmental relations**

Changes in the development of intra- and intergovernmental

relations can best be presented in a chronological order (Raadschelders 1991).

Some two centuries ago the Dutch territory was divided over ± 4000 waterboards. Of this number only 2500 remained in 1953 and this amalgamation process has continued up to the present day. At the moment there are only 127 waterboards left. In the province of Zeeland alone the number of waterboards declined from ± 500 to 7 in 1982. The amalgamation of waterboards was partially an answer to increased responsibilities for dyke management (after the disastrous floods of 1916 and 1953; i.e. Deltaworks). Recently, amalgamations have been inspired by the awareness that only larger units have adequate resources to deal with waterquality and purification tasks. Through mergers, the administrative strength of waterboards is adapted to the scale of their activities.

After Parliament passed the APSW provinces and waterboards faced the task of structuring quality- and purification management. This led to a second phase of changes. In several cases these tasks were brought within the organization of the existing High Waterboards. In other cases, provinces and waterboards decided that these tasks could best be organized in a new waterboard, separate of the existing ones. This new type of waterboard came to be known as Water Waste Treatment Authority (WWTA: for instance in the province of Limburg). Three provinces decided that these tasks could well be taken up within the provincial organization (Utrecht, Friesland, Groningen). Finally, a fourth solution was that independent waterboards could decide to organize this task under a Joint Provision Act (as happened in the province of Zeeland). Thus, several options were available to structure quality- and purification management. It is interesting to note that insofar as waterboards decided to organize these tasks outside their bodies, that that was for the first time in Dutch history that functional divisions occurred in local and regional water management.

The third phase started in the late seventies and concerned changes in the composition and election of the daily board and general council of a waterboard. Since ancient times, farmers had the right to vote for members of waterboards. Those who had direct interest in water management had to pay for it, and had the right of representation. The triad 'interest, taxation, influence/representation' is up to this day the most important criterion to decide about who is involved in decision-making in the waterboards. Farmers and landowners (or: landholders, 'unbuilt territory') used to be the only



interest group (or: 'category' in the language of the law) for a long time. They paid the water taxes based on how much land each owned. During the sixties of the 20th century, a new category was defined: the 'built-upon area'. The idea was that the built-upon area (i.e.: real estate owners both in industry and family housing) profited from the work of the waterboards and should pay part of the water taxes as well. However, after the APSW new interest categories were defined, such as 'industrial -' and 'household polluters'. The adage 'Polluters must Pay' implies that they too have the right to be represented. Indeed, pollution-tax is by now the largest source of income for the waterboards. That would mean that industries and households should hold a majority in the number of seats to be divided. The development toward a functional representation-democracy, however, is still developing (see further section 8).

The fourth phase occurred in the eighties. A series of Acts and ministerial/managerial decisions resulted in horizontal and vertical coordination structures that is unsurpassed in the Netherlands. Within the legal framework already mentioned, national government has developed a Water Management-plan to be implemented in a span of four years, evaluated yearly, and followed by a new four-year plan. This National Water Management Plan is the basis for the more detailed Provincial Water Management Plans that also span a period of four years. In turn, these (will have to) result in operational water management plans to be devised by the respective waterboards. The same type of vertical planningstructures exists in the Netherlands for spatial planning and environmental planning. With a view on the intricate relationships between the policy-sectors of environment, spatial structure, and water, each of the planning-structures provides for horizontal coordination. In addition to the legal framework, it is these planning structures that have resulted in formal and moral interdependencies between different bodies of government. The influence of these interdependencies on decision-making will be analyzed in the rest of this paper.

## **6. Analytical framework**

Water management has become a complex governmental activity. Two types of processes can be distinguished. First, policy-development in which considerations regarding norms for societal action are emphasized. Second, decision-making which is the series of choices before actual adoption of a policy. Policy-development and decision-making are two sides of a

coin. The amount of literature on these processes is vast and will be characterized in broad generalizations only.

One group of researchers concentrates primarily on 'phases of the policy-process' (preparation, decision, implementation, evaluation, and redefinition). They interpret policy as an attempt to solve certain societal (i.e. public) problems through targeted action. The policy process does not proceed without problems, and barriers have to be 'conquered'. The policy-process is often illustrated with concrete case-studies. The second group of researchers emphasizes the process of political will formation seen against the background of a particular policy. They focus on the phenomenon of policy networks and stress the influence of goals of individual actors. They explain stagnation of policy-formation through characteristics of a network: the degree of interdependence, the durability of the interaction, the formal and informal nature of relations between actors, the open versus closed nature of agenda-building etc.

The strength of both approaches lies in the knowledge they generated on development of policy-content and behavior of actors in interorganizational networks. Both approaches are rooted in one or more of the social sciences, but their strength is also their weakness. It does not appear fashionable to recognize that policy development and decision-making in the public sector take place in a more or less formalized rule-structure. In other words, the legalistic orientation has become obsolete. This element is, nevertheless, one of the characteristics of 'public choice theory'. Indeed, the framework as presented by E. Ostrom (1990) explicitly acknowledges the importance of rules, whether formal or informal. This means that the focus of inquiry is not limited to the legal framework within which governmental systems operate (i.e. law, institutional structure, center-periphery relations). Any worthwhile analysis of institutional development involves attention to a variety of governmental units involved, actions of officials, patterns of interaction etc. These topics have been identified and emphasized in the Intergovernmental Relations and Intergovernmental Management approach (IGR & IGM: Agranoff 1990:27; Wright 1990:172) but are just as much an element in the model as developed by E. Ostrom.

Rules do not exist 'ins Blauen hinein'. Together they constitute a series of statements that provide the framework within which policyformation and decision-making in a certain sector will have to take place. Rules can be categorized in

various ways and the most important one for our purpose is the distinction between constitutional, collective, and operational rules in relation to each level of choice, decision-making. Changes in the Dutch system of water management have occurred at each of these levels. Choices made are the result of a more or less thorough appraisal of cost and benefits of proposed changes. For detailed description of the model we refer to E. Ostrom (1990:50-55, ch.6). Given the variables that make up this model it surpasses the approaches in policy analysis literature. The starting point for the 'institutional choice model' is rule-structure. These can be operationalized in terms of 1) design principles, and 2) institutional choice variables. The design principles as identified by E. Ostrom (1990:88-102, 180) are very useful for characterizing an institution as a whole. The institutional choice variables include cost, benefit, and internal norms and alternatives. These are useful when analyzing individual choices within (a network of) institutions. We will use both design principles and institutional variables in a tentative way, thus guaranteeing that policy-content and network are included in the focus. We have to be tentative at this point since the material needed to examine the empirical usefulness of the Ostrom-approach will be collected in the next three to four years.

For the moment we state that Dutch waterboards are an institution that manages water (the common pool resource) for various purposes, and its functioning is crucial to society. The institutional arrangements that structured this functioning, however, have changed over time. Even though the formal structure of watermanagement in the Netherlands nowadays belongs exclusively to the public realm, the actual functioning is still very much that of a privately managed resource. The 'rule-structure approach' makes comparison between private and public institutions attractive and more reliable.

## **7. Waterquality- and purificationmanagement in Zeeland**

As we saw earlier, water management could be organized in or among different bodies of government. The decision as to which existing or yet to be created bodies for water quality- and water purification management is delegated depends upon a cost-benefit analysis (in terms of the Ostrom model) of three groups of water management tasks. Water management includes quantity, quality and purification management. Quantity management regard the in- and outflow of water in a particular

jurisdiction (i.e. waterboard). Quality management is concerned with cleaning the surface-waters (for ecological and recreational purposes). Purification management is necessary for the upkeep of water quality in the running water systems. Each of these tasks call for different technologies and different (decision-making) infrastructures. The question then arises whether these tasks can best be organized into one body, or dispersed over different bodies? In essence, what is the best combination to maximize in terms of economic efficiency and democratic accountability. It took the province of Zeeland almost 20 years to decide on this matter (Raadschelders 1991).

Very soon after the APSW had passed Parliament the province of Zeeland organized a study-meeting to assess the technical and administrative consequences of that act (1971). At the time, the Zeeland waterboards together maintained a Technological Service under direction of the dyke-reeves. During the discussion various options were reviewed (see section 5.2). Since the study-meeting pretended nothing but a brainstorm session, it had no immediate policy consequences. For the time being, water quality management was officially delegated to the waterboards (1973).

Some years later the province instituted a working-group composed of representatives of the province and the waterboards. Their task was to investigate possibilities of administrative (re)organization of waterquality management. In their concluding report, the working group indicated that under the existing situation quality-management was too dispersed and deemed further amalgamation of waterboards a necessity, which happened in 1982. The matter of reorganization, though, did not disappear from the agenda since the province considered further amalgamation into two or three waterboards a viable solution.

Three years after the amalgamation that resulted in 7 waterboards, a new working-group (with rerepresentatives from both province and waterboards) sent a memo to the Provincial Council in which they advocated that water management ought to remain solely a task of the waterboards since they were now well-equipped. They argued that separation of tasks over different units would jeopardize an efficient production of each of the respective tasks and would create unnecessary administrative desintegration. There was also a more procedural argument. Further amalgamation of waterboards or separation of tasks would lead to extensive loss of personnel (overcomplete personnel) and a far-reaching regrouping of

tasks of the remaining personnel. Did this imply a consensus between province and waterboards about the future organizational structure of watermanagement? The Provincial Waterquality Plan of 1986 indeed seemed to be affirmative.

It turned out to be a short-lived consensus because in less than two years, the province presented a proposal in which they opted for amalgamation into two waterboards and a joint facility for waterquality- and purification-management. Both geographically and administratively this was the best solution they argued. As to be expected this met with great resistance on the part of the waterboards. In their response they favored the status quo (7 waterboards) that would maintain a quality- and purification-facility under a joint provision act. This is the situation that exists today.

We cannot yet present 'hard' conclusions based on an extensive analysis of the archival records. Some tentative conclusions with regard to decision-making about structural reforms can be drawn. This case indicates how difficult it is to adapt the existing collective and operational rule-structures when the scale of activity that calls for administrative reform surpasses the scale at which the participants function. To a greater or lesser extent, all the indicators as given in the Ostrom-model seem to hold explanatory significance as to why changes in the status quo were minor.

First, we can look to the design principles. The Dutch waterboards can be characterized as 'robust' since all design principles are operative for centuries (clear boundaries & membership, congruent rules, collective choice arena, monitoring, graduated sanctions, conflict-resolution mechanisms, recognized right to organize). It was also a nested unit in the sense that there were at least two levels: inlying and high waterboards. In the last two centuries it has become more and more intertwined with provincial and central governments in various ways.

Second, we can look at the three variables mentioned earlier: cost, benefit, and internal norms and alternatives.

A) The expected benefits of the rule structure that was proposed in 1987 did not outweigh the costs. To be sure, financial costs and benefits were part of the considerations, but the 'democratic' costs and benefits were considered far more important. Farmers, waterboard-administrators and interest-groups (inter alia a fishingclub and an environmental organization) were very active in resistance. After the 1982-amalgamations each of the waterboards was considered large

enough to handle jointly the quality and purification tasks. The most important arguments brought forward against a separate agency for quality and purification management were not so much based on catchment-area and economic considerations as on the ideas that 1) further amalgamation would lead to an even greater 'distance' between those who govern (the waterboards) and the governed (i.e. the farmers mostly) and 2) further amalgamation and/or the creation of a separate agency for quality- and purification management would lead to far-reaching changes in the existing personnel and financial structure.

B) This brings us to the topic of costs. The *ex ante* costs of changing the status quo were considered too high. The number of decision-makers was considerable but it boiled down to two: province versus waterboards. The same holds true for the heterogeneity of interests. The waterboards had certain differences of opinion with regard to further amalgamation and a separate agency, but closed ranks when confronted with a strong provincial lobby. It is here that the strength of the 'farmer-republics' was put to the test and they passed with flying colors. This can be explained by their negotiating skills and their knowledge of the actual tasks involved. More importantly, despite changes in the overall rule-structure - the legal framework - they still enjoy a fair amount of autonomy when it comes to changes in status quo rules. The existing rule-structure regarding changes in the collective and operational rules do not (yet) include unilaterally imposed measures. This is the case for instance with amalgamations of municipalities that can be imposed by central government in spite of resistance of municipalities. Such a unilateral rule is included in the new draft Waterboards Act. Hence why under the current rule-structure, decisions can only be taken after lengthy deliberations and on a basis of consensus. Pressure from external authorities (province, central government) is therefore of limited meaning. With regard to the *ex post* costs one could say that the existing arrangements (technological as well as rules, personnel and finances) were considered satisfactory.

C) With regard to internal norms and alternatives it suffices when saying that at institutional level (the waterboard) there were no fundamental differences of opinion on what choice was necessary. Alternatives as presented by the province could not be realized due to effective resistance by the waterboards.

It has proven difficult to collect data on the rationale of

individual choices. It would require interviews with those involved in a particular policy- and decision making process since written documents only reveal 'institutional decisions'. The initial motivation of individuals' choices may get lost in the mist of time. Reconstruction on the basis of written documents is only partially satisfactory. The conclusions drawn here are therefore relevant as far as the institutional level is concerned.

This is a case about decision-making on a particular task and thus regards collective and operational rules. The first conclusion is that the age of an institution determines the degree to which it can successfully act independently. Changes in the constitutional rule-structure (the legal framework) do not have to lead to major changes in the collective and operational rules. That is, those rules may change but they do so within the range of changes that the waterboards want to allow. The next case concerns the rules of the decision-making process.

#### **8. Seats under siege: the issue of representation**

Tasks, finances, and administrative organization of waterboards have had the attention of national politics since the sixties. The reason was very pragmatic (De Goede c.s. 1982:7-9). On behalf of its members, the Union of Waterboards voiced the idea that the costs for water management as apportioned to each landholder ('ingeland') was higher than justified considering the societal importance of watermanagement. In reply to some proposals by the Dutch Cabinet, the Union of Waterboards published a report on the future of waterboards. The most important remark in that report was that next to the old category of representatives in the boards (landholders), other categories such as polluters should be included. The consequences for the division of seats would be enormous. The Cabinet reply was conservative: the organization and governance of waterboards was mainly determined by quantity- and deterence-management (i.e. dykes), and water quality management was less important. The Union issued a new report in which they proposed that a) the triad 'interest, tax, representation' should henceforth be interpreted in a less orthodox way and b) a distinction should be made between 'specific' (i.e. landholders') and 'general' (the public at large: industrial and household polluters') interests. This is the background against which the developments in Zeeland must be evaluated.

Zeeland was the first province where the category of

'household polluters' could directly elect their representatives in the 'General Boards' through a system of open candidacy. In comparison to other waterboards, the turnout for the elections was quite high, about 20% (Sneep 1980: 58, 69, 81-82, 92-93). This was the first step on the way to formal changes in the composition of the General Boards. The second step was introduced by the Merkx-committee of the Union of Waterboards that published a report on composition and election of general and daily boards (1982). In response, the Provincial Estates of Zeeland instituted a committee (1983), who recently published a report on the same issue (1990), proudly referred to as the "...first report published at this level (i.e. the provincial level, JR) about this issue."

Two issues are on the agenda: who is represented to what extent, and how are representatives in the general and daily boards to be elected? It is important to note that the Provincial Estates took to heart the recommendations by the Merkx-committee as that the number of seats in the daily boards should be diminished. In Zeeland this meant a decline from 62 to 43 seats. It is also important to realize that the draft Waterboards Act contains provisions concerning proportional representation in the boards. It is, however, left to the Provincial Estates to decide to what extent every 'interest' will be represented in the boards. The draft Act upholds the old principle of 'interest, tax, representation'.

That both the principles of the triad and 'proportional representation' should guide decisions about decision-making rules creates tension. In this situation, a purely proportional representation is not possible, while 'interest' is only used subjectively. If 'representation' is objectively related to allocation of costs it would mean that the category of 'citizens' (household polluters) + 'industry' will hold a majority in the general boards. After all, in 1988 the pollution-tax amounted to 60% of the total tax-returns (also 60% in 1990). The other 40% is the regular waterboard tax on land. And waterboard taxes constituted 88% of the income of waterboards in 1988. A large majority for industrial and household polluters would be unacceptable for the waterboards. The provincial report therefore advocates a system with a two-layer structure. The first layer is defined by a 'basic interest' with an equal number of seats per category. The second layer is defined by 'specific interest' (landholders and real estate owners) with a number of seats per category. This would result in the following changes in the percentage of seats per category:



Table 1: Percentage of seats in the General Waterboards Councils in the Province of Zeeland per category at present and in the future

	present	future
unbuilt (landholders)	55	30
built-upon	21	18
industry	24	16
citizens (households)	--	35

It is interesting to see how large the majority of the 'unbuilt,' and 'built-upon' categories was (76%: and still is untill the next elections) in relation to the amount of taxes they pay (40%). After elections the two 'polluter' categories will hold a slight majority.

The second proposal in the provincial report dealt with the method of election: direct (in anticipation of the draft Waterboards Act) or indirect (members of municipal councils voting on behalf of the citizens). The province proposed direct elections (as had been the case since 1977 but had not yet been formalized) to be held at the same time as the elections for either the Provincial or the Municipal Councils.

The seven waterboards agreed with the first proposal. That could have been expected since almost half of the seats would still be held by the categories 'unbuilt' and 'built-upon'. They also supported the idea of direct elections but declared that elections should be held separate from Provincial and Municipal elections. If held together, they argued, it would be detrimental to the individual identity of the waterboards and could generate politization of the waterboards which would not fit with its specific-purpose nature. Besides, they argued, waterboards always organized the elections themselves, why change that. In march 1991, the Provincial Estates accepted the proposed division of seats as well as direct elections together with the Municipal Council elections.

There is not much more that can be said about this topic. Although it had been on the agenda since 1975, decision-making has only recently gained momentum. It is striking to see that the preparation of proposals took quite some time (1983-1990), while the decision-making about them was only a matter of months (October 1990 - march 1991) and met with almost no fundamental resistance from the waterboards. Decisions about decision-making rules concern the level of constitutional and collective rules and are therefore expected to take a long

*5.2.2.2.2.1*

time. That it did not can be explained by the fact that the traditional categories (landholders and real estate owners) still hold an important number of seats and have thus ensured their influence. It will be interesting to investigate after a few years what real influence the new categories of industrial and household polluters have in the general boards of the waterboards. A hypothesis that should then be tested is: the impact of changes in constitutional and collective rules are greater when traditional interests ensure adequate influence in the new rule-structure.

## **9. Concluding remarks**

It is clear that the rule-structure of water management in the Netherlands has changed considerably. The number of actors involved has increased both in terms of the actual production of tasks as well as in terms of those represented in the general and daily boards of the waterboards. As a result of the changes in the legal framework and the development of planning structures, the influence of province and national government has increased; but it is important to note that waterboards still have the power to successfully defend their specific interest. This is illustrated by the fact that it is they who decide how quality and purification management is organized. It is also apparent in the fact that it is they who anticipate necessary changes in the composition and election of their boards by formulating proposals and implementing them instead of waiting until they are imposed from above. In terms of constitutional rules, the changes are great indeed; but given the fact that the whole framework (legal rules, planning rules) leaves room for a variety of organizational solutions, the constitutional changes have not led to proportional changes in the collective and operational rules. Even though, formally, the waterboards are a body under public law, they are still to an important extent ruled by private interests. Therefore the sudden interdependence of the waterboards with other bodies of government and new categories of interest-groups only partially influenced the autonomy with which the waterboards conduct their tasks and make decisions.

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2. The high-lying, diluvial land is characterized by sandy soil and peat-moors. The low-lying lands have mainly clay soil and peat-bogs.

3. The Dutch word 'waterschappen' is synonymous with the German 'Wasserschaften'. Lacking a better expression in English we will use the word 'waterboards'.

4. High groundwaterlevels in the part of the country that is below sea-level have always posed farmers for problems. Depending on the type of crop the groundwaterlevel "may differ. Par exemple: a difference of two centimeters (less than an inch) above or below median level can be enough to drown or dehydrate tulip bulb production.

5. The word 'polder' is used for water-control systems below sea-level.