

# Wise Use of the Wadden Sea? A Study of Policy-oriented Learning

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This article discusses policy-oriented learning regarding the Dutch Wadden Sea. Specific attention is paid to the extent in which policy changes are the result of new knowledge and insights. Also, attention is paid to conditions for policy-oriented learning regarding natural resource systems. Although the policy process regarding the Dutch Wadden Sea can be characterized as a process of policy-oriented learning, this concept cannot explain the policy process completely. Policy changes are - to a large extent - influenced by economic developments.

## Introduction

The topic of this article is policy-oriented learning regarding the Dutch Wadden Sea (Verbeeten, 1999). The policy process will be analyzed for three fields of policy: sand extraction, shellfish fisheries and gas drilling. The main questions are:

- a) what is policy-oriented learning?
- b) to what extent can the policy process regarding the Dutch Wadden Sea be seen as a process of policy-oriented learning?
- c) what are the lessons to policy makers and other stakeholders?

## A Definition of Policy-oriented Learning

According to literature, policy-oriented learning implies policy change as well as policy improvement. New knowledge and insights lead to new, better, policy. A change in policy can be measured relatively easily, but how do we measure policy improvement? Stakeholders have their own goals and interests. Therefore, the meaning of improvement will differ between them. The following definition is used: policy-oriented learning is the interactive process by which an increase in knowledge and insights leads to changes in the definition of a policy issue, the policy objectives and/or the policy instruments; the new policy is supported at least as much as before by stakeholders.

A distinction can be made between fundamental learning, which involves a change in both the definition of a policy issue and the policy objectives, and instrumental learning, which involves a change in policy instruments.

On the basis of literature, five conditions for policy-oriented learning are distinguished:

1. experiencing mutual dependence (stakeholders need to acknowledge that they need each other to realize their objectives);
2. a constructive attitude (stakeholders need to be willing to listen to each other);
3. bound conflict (conflicts should not escalate);
4. a structured provision of information (information should be available to all stakeholders);
5. involvement of all relevant parties (all stakeholders should be able to participate in the policy process).

## Policy-oriented Learning Regarding the Dutch Wadden Sea

The Dutch Wadden Sea policy can be characterized as a process of policy-oriented learning. Over the years, an increase in knowledge and insights has resulted in policy changes. Furthermore, the new policy is supported by all stakeholders.

In the 1960s, Dutch government plans included reclamation of (parts of) the Wadden Sea. The reclamation plans encountered a lot of resistance and in 1965, concerned citizens established the National Association for Preservation of the Wadden Sea. In 1970, the Dutch government decided to set up a commission to study the advantages and disadvantages of reclamation of the Wadden Sea. This commission, the Mazure Commission, in 1974 concluded that the Wadden Sea was 'a unique and valuable nature area that should be preserved'. The government adopted this recommendation, as can be seen in the first draft of the Wadden Sea Memorandum that was published in 1976. In 1980, the Wadden Sea Memorandum was adopted by the Dutch Parliament. The objective of the Wadden Sea Memorandum was 'to protect, conserve and, where necessary, restore the Wadden Sea as a nature area'. In 1993, when the Wadden Sea Memorandum was revised, this objective was changed into 'the sustainable protection and development of the Wadden Sea as a nature area'.

When we look at the policy process regarding specific activities, in particular sand extraction, shellfish fisheries and gas drilling, we can see that sev-

eral policy changes are the result of policy-oriented learning. New knowledge and insights have led to a change in policies.

In the policy process regarding sand extraction, six major policy changes can be distinguished. Some of these changes were the result of fundamental learning, which implies a change in policy objectives. For example:

- Until 1974, sand extraction was not restricted to certain amounts. In 1974, the Minister of Transport, Public Works and Water Management introduced a quota system. This implied that no more sand could be extracted than the amount of sand that was laid down in the quota. The quota system was introduced because of the expected increase in the demand of sand from the Wadden Sea, and the fear of disturbance of the morphological situation.
- In 1990, the Minister decided that sand extraction for sand suppletion would be terminated. The reason was that sand extraction reinforces coastal erosion.

Other policy changes were the result of instrumental learning, which implies a change in policy instruments while the policy objectives remain unchanged. For example:

- As the quota were often exceeded, in 1979, the Minister introduced a so-called supplementary regulation. Private companies that were engaged in sand extraction, had to supply the part that exceeded the quotas with sand from the North Sea.
- In 1984, the permit regulations were tightened: sand extraction was restricted to locations where there was less ecological harm. The change in policy instruments was caused by research that had indicated that sand extraction did have several adverse ecological effects. However, the amounts of sand that could be extracted were not further limited.

During the policy process, all five conditions for policy-oriented learning were fulfilled: stakeholders experienced mutual dependence, they showed a constructive attitude, conflicts were limited, there was a structured provision of information, and all stakeholders were involved.

In the policy process regarding the shellfish fisheries, two major policy changes have occurred. The first policy change was the result of instrumental learning. A new policy instrument (a system of permits) was introduced, but the policy objectives re-

mained unchanged. In 1970, a system of permits was introduced for the mussel fisheries. In 1974, a similar system of permits was introduced for the (mechanical) cockle fisheries. At the same time, the number of granted permits for the cockle fisheries was frozen at 36. Although it looks like the system of permits restricted the shellfish fisheries, this was not the case. The systems of permits had to reduce competition. The amounts of shellfish that could be caught were not reduced. Fishermen could still enlarge their catches, which indeed happened.

The second policy change was the result of fundamental learning, which implies a change in policy objectives. Whereas in the period before 1993 the amounts of shellfish that could be caught were not restricted, this became the case after 1993. An area of 26% of the Dutch Wadden Sea would be closed to the shellfish fisheries. Furthermore, in years with a food shortage for birds, 60 percent of the average food demand would be reserved for the birds. If less than 60 percent of the average food requirement for birds was available, the Dutch Wadden Sea would be closed to the shellfish fisheries. The policy change was induced by a crisis situation. In 1990, shellfish stocks were very low. In combination with fishing activities, this resulted in the death of many birds.

In the period before 1993, not all conditions for policy-oriented learning were fulfilled. A few stakeholders were not involved. In 1993, all five conditions were fulfilled.

Regarding gas drilling, three major policy changes have occurred. The first one was the result of policy-oriented learning. New knowledge and insights into the effect of gas drilling in 1984 led to the so-called 'moratorium'. This implied that during a period of 10 years the mining companies would not engage in new oil and gas exploration and exploitation activities in the Dutch Wadden Sea. All stakeholders supported the new policy. Since the moratorium involved a change in policy objectives, the policy change can be characterized as a result of fundamental learning.

The second policy change took place in 1993. After the mining companies had announced that they did not want to prolong the moratorium, the Dutch government agreed to six exploratory drilling sites in the Wadden Sea. Since this plan encountered a great deal of resistance (i.e. from nature conservation organizations), the policy change cannot be seen as the result of policy-oriented learning.

The third policy change occurred in 1999. As

nature conservation organizations went to court and won several cases, still none of the exploratory drillings had taken place. In parliament, the resistance against exploratory drillings in the Dutch Wadden Sea had grown. In the autumn of 1999, the government decided that, for the time being, no gas drillings would take place, because of uncertainty about irrecoverable damage to the ecosystem.

In 1984, most of the conditions for policy-oriented learning were fulfilled. One condition was not fulfilled: a few stakeholders were not involved (e.g. nature conservation organizations). However, all stakeholders supported the moratorium.

In 1993 and 1999, most of the conditions for policy-oriented learning were not fulfilled. Stakeholders did not realize that they needed each other to realize their objectives and they did not show a constructive attitude.

## Conclusions and Lessons

In all three cases, we can see that over the years more conditions have been created for the protection and conservation of the Wadden Sea as a nature area. Sand extraction has been abolished. Parts of the Wadden Sea are closed to the shellfish fisheries, and in years that there is a food shortage for birds, fishing of shellfish is limited. In the near future, gas exploration in the Wadden Sea will be prohibited.

Beside the five conditions that are derived from literature, also four other factors appear to have played a role. Firstly, this is the organization of what can be called 'contra-power': Groups of persons that have an affinity for a specific interest which until that moment did not receive much attention in policies, join together to promote this specific interest. Regarding the Wadden Sea, the National Association for Preservation of the Wadden Sea has played this role. A second complementary factor concerns network relations. The size of the policy network, the composition and the formation of coalitions have all influenced the policy process. The third factor is possibilities to link interests. Possibilities to link interests, or in other words, possibilities to create so-called 'win-win' situations, have stimulated policy-oriented learning. The fourth complementary factor is time. Gaining more knowledge and insight takes time.

From this study three lessons can be drawn concerning the organization of a policy process as a learning process:

a. one has to adopt a 'break-in' strategy: ecologi-

cal interests have to be placed on the public and political agenda;

- b. structured interactions between all parties involved should be ensured;
- c. by exchanging interests and/or compensation, consensus on the policy regarding a natural resource system can be established.

Although policy-oriented learning frequently has taken place in the Dutch Wadden Sea policy, the three cases cannot be understood completely from the perspective of policy-oriented learning. Policy changes are - to a large extent - influenced by economic developments. Sand extraction was abolished in January 2000, but in 1981 research already indicated adverse morphological effects. At that moment, however, the government still needed large amounts of sand for strengthening the dikes in the northern part of the Netherlands.

The system of permits for the shellfish fisheries was introduced mainly for economic reasons. Competition had to be limited. Although nature conservation organizations believe that the mechanical cockle fishery is incompatible with the goal of nature conservation, ending this type of fisheries is still not an issue. The government fears for loss of employment and income.

The moratorium was acceptable to the mining companies because they had gained permission to exploit gas on the island of Ameland and in the Zuidwal area. In 1993, the revenue of gas exploitation was highly valued, so the government agreed to six exploration drillings. In 1999, the revenue of gas exploitation was less highly valued, because of economic prosperity. This made it easier to prohibit exploration drillings for the next few years.

Although one could conclude that policy-oriented learning and economic developments are alternative explanations, this is not the case. Rather they are complementary explanations. Interactions between stakeholders are influenced by economic developments.

## Reference

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