



**Wadden Sea Forum**

**12<sup>th</sup> Meeting**

**Husum, 5-6 June 2008**

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**Agenda Item:** 10  
**Subject:** Reports Dutch Advisory Board  
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Attached are English summaries of three advices prepared by the Dutch Wadden Sea Advisory Board. It concerns

- Natural fisheries
- Wind turbines
- Fresh-salt water transitions

**PROPOSAL:** The meeting is invited to take note of the information

## 'NATURAL FISHING IN THE WADDEN SEA'

### advice of the Wadden Sea Council

(advice number 2007/04, 5 December 2007)

#### SUMMARY

##### Why this advice?

The Wadden Sea key planning decision (Third Wadden Sea Memorandum) and the Policy Decision on Shellfish Fishery 2005-2020 (*Ruimte voor een zilte oogst*) ['Space for a Briny Harvest'] sets out the government policy on fishery in Wadden Sea. The purpose of the policy is to bring about an ecological and economic development in the Dutch fishing industry aimed at bringing about sustainable activity in the Wadden Region. It also addresses the extent to which sustainable and economically viable fishing in the Wadden Sea is feasible within the set terms and within the parameters laid down in the policy. For that reason the Minister of Agriculture, Nature and Food Quality has asked the Wadden Sea Council to advise on whether sustainable fishery in the Wadden Sea - in the perspective of the policy being pursued – can be achieved in good time and which improvements will have to be made in that regard.

##### What does it cover?

The Wadden Sea is a location for various fishery activities, each of which in their own way has (potential) effects on the region's natural values. A distinction is made between:

- seabed disturbance (seed mussel fishery, manual cockle fishery and shrimp fishery)
- effects on the food chain (the removal of food for shellfish-eating birds that forage in the region)
- effects on the ecosystem (because shellfish temporarily hold onto floating matter)
- by-catches and discards
- and disruption.

Finally, reference is made to the possible impact of not fishing in the region: the (further) spread of the Japanese oyster in the Wadden Sea, which will have a negative (forcing out other species, but does not serve as food for birds) and a positive (formation of new banks) impact.

##### What is the current government policy?

The policy previously focused mainly on the protection of fish stocks. Since the nineteen-eighties more and more parameters have been set on the basis of other policy areas (mainly nature policy).

The Structure Document on marine and Inshore Fisheries (1992), which covers all forms of shellfish fishing, sets out to achieve spatial interweaving of the fishery and nature functions. In the most extreme case (if the desired effect is not achieved through other measures) areas can be closed off (as was done for the eastern Wadden Sea). The policy document holds the national government responsible for the policy framework and the sector for implementation. The required food reserve for birds and the fishing quota are set by carrying out annual stock inspections. The fishers then draw up fishing plans. Since 1998 those plans have been tested annually against the Dutch Nature Conservation Act. Since recently the plans have also been

assessed in the light of the "Maintenance Objectives" as a result of the Wadden Sea being designated as a Natura 2000 area.

The policy decisions '*Ruimte voor een zilte oogst*' for shellfish fishery in the coastal waters and Northern Sea Coastal Zone and '*Vast en Zeker*' ('Without a Doubt') for fishing with fixed fishing gear (such as traps and upright nets) in the Wadden Sea and the Zeeuw coastal waters were adopted in 2004. The policy set out in this documents is aimed at improving the sustainability of both sectors. Mechanical cockle fishing was discontinued in response to the first policy document, and that also brought the food reserve policy to an end. The mussel sector is expected to meet the sustainability targets by 2020, possibly by means of seed mussel collection systems (MZIs) and the optimisation of cultivation plots. The document makes reference to the possibility of harvesting Japanese oysters manually. Finally, mainly as a result of the agreements made with Germany and Denmark, what are known as 'ecoplots' have been set up with which a clearer image can be gained of the effects of shrimp fishing. The policy is reflected in the Third Wadden Sea Memorandum. Additionally, most forms of fishing are now forbidden in the Wadden shallows.

### **What is the government doing?**

As well as formulating policy the government initiates studies into the ecological effects of fishing activities, sets firm parameters and promotes innovations (through fish innovation platforms, for instance) aimed at sustainability. By way of example, a study is currently being conducted in the mussel sector into the optimisation of cultivation plots and experiments with MZIs, and research is being carried out into the natural values of sublittoral mussel banks.

A specific ecoplot has been set up for shrimp fishery. This ecoplot will (in due course) make it possible to mutually compare fished and unfished parts of the Wadden Sea in terms of the impact of shrimp fishing on the seabed and benthic life. Also, more information is needed about by-catches, the survival of by-catches in the processing equipment and the survival of discards after being returned to the sea. This study is also important for the certification under the terms of the Marine Stewardship Council (MSC) of shrimp fishery and is expected to be integrated in the certification procedure.

For the fixed-gear-fishery, research is being performed into the by-catches in fishery using traps and upright nets. The results of this study will eventually be the determining factor as to whether fishing using upright nets on the tidal flats can continue.

Finally, a pilot project on the subject of integrated fishery is due to commence in 2008. The experiment with manually fishing for Japanese oysters has not yet begun.

### **What is the sector itself doing?**

Groups of entrepreneurs in the Wadden Sea fishery sector and social organisations have in recent years launched various initiatives aimed at securing a sustainable future and/or more social and economic security for the branch of industry.

United in the ODUS Foundation, the Dutch shellfish sector presented its vision in 2004 in the policy documents '*Uit de Schulp*' ('out of the shell' and '*Het roer moet om*' ('time to change course')). The primary objective of the vision is to achieve ecologically responsible shellfish fishery with broad social acceptance. For the mussel fishing sector, the ODUS vision addresses:

- seed mussel collection systems (MZIs)
- hatcheries/nurseries
- plot optimisation and optimising the use of seed mussels
- fishery plans.

Developing alternative sources for seed mussels makes the sector less dependent on natural conditions and could serve to reduce the pressure on the Wadden ecosystem. Working in partnership with the North Sea Foundation and the Wadden Sea Council, the shrimp fishery sector has collectively decided to enter the MSC certification procedure. The first assessment results are expected at the end of 2008. The most important points of attention are the spread of fishery, fish by-catches and possible effects of the shrimp trawling on seabed fauna and flora.

In partnership with the regional product hallmark *Waddengoud* a group of Wadden Sea fishers is placing fish on the market with a sustainability label. The main product of this initiative up to now is the smoked grey mullet sold in shops for biological products and at markets for farmhouse products.

#### **Council: More action is needed...**

The Council does not believe that the current fishery policy and how it is being implemented will lead to the policy objectives being met in 2020. Its arguments are as follows:

- innovations aimed at sustainability arise from acute and current issues; there is no set final objective for the innovations as a whole.
- the sustainability projects concentrate only on one or a few parts of the overall operation rather than all parts that have to be adapted to meet the policy objective;
- a number of fishery sectors – which have not yet been established as being sustainable – are not addressing the sustainability issue at all.

These arguments underline the fact that the fishery policy lacks a guiding definition of sustainable fishery. Moreover, the policy lacks a general vision of the measures needed for that purpose.

#### **From reactive to proactive**

The Council concludes in its advice that the existing policy must be supplemented with a concrete future perspective (with a target image in which the final objectives of the policy are formulated). A future perspective is needed to improve the management of the innovation process. The Minister of Agriculture, Nature and Food Safety needs to take the initiative for the development of a future perspective that in all cases:

- presents options for socially—economically sustainable fishery activities within a safe usage area (with opportunities for a 'Rijke Zee', in particular the conservation-, restoration and development objectives for the Wadden Sea;
- sets the direction for innovations needed to achieve ecologically sustainable fishery activities;
- contains instruments for close integration with the regional, economic and social functions;
- encourages the fishery sector to work on achieving greater social acceptance and new forms of entrepreneurship.

An integrated research plan, including long-term experiments and monitoring, must be part of this future perspective.

In chapter 4 of its advice the Council gives an onset for the future perspective that meets the criteria set out above.

**A future perspective calls for a coordinated and structured change process**

Achieving an economically and ecologically sustainable Wadden fishery sector will call for drastic changes in several policy areas. That can only be achieved through a coordinated and structured transition process. The national, regional and local authorities and the principal lobby groups must be involved in the implementation of the transition process.

The Council makes a number of concrete recommendations in its advice, which must be covered in the transition process.

First of all the Council recommends placing Wadden Sea fishery under the regional policy. The Council believes that that is the best way to facilitate good integration and coordination within the integral Wadden Sea Policy.

The Council also recommends the creation of fishery boundaries for the Wadden Sea fishery sector (preferably in a trilateral context) with a view to the management and development of the Wadden ecosystem. That implies that both the ecologically and the economically sustainable nature of the Wadden Sea fishery sector will to a significant extent have to be based on measures argued from the perspective of the Nature Conservation Act and, more specifically, on the maintenance, restoration and development objectives for the Wadden Sea.

The Council also takes the view that the current system of marketable licences and fishing rights with limited availability is frustrating the ability to introduce more flexibility. For that reason research will have to be conducted into other ways of managing and issuing licences and fishing rights. The research will at least have to cover the legal and financial implications of buying up and reissuing (parts of) licences and fishing rights; the latter being necessary to offer prospects for low-scale mixed coastal fishery in the Wadden Sea.

The Council also advocates the adoption of a programme-based approach to innovative entrepreneurship in the fishery sectors operating in the Wadden Sea.

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## **'Harvesting wind with eyecatchers?'**

advice of the Wadden Sea Council on the placing of wind turbines in the Wadden Region (**advice number 2008/01, 23 January 2008**)

### **summary**

The Minister for Spatial Planning and the Environment, Mrs Dr J. Cramer, has asked the Wadden Sea Council to advise on the placing of wind turbines in the Wadden Region. The Minister would like to know how much scope current national policy, in particular the key planning decision Third Wadden Sea Memorandum offers for the placing of wind turbines in the Wadden Region, and the impact of wind turbines on how the region is perceived. The background to this question is the government's recent decision to work towards placing an extra 2000 megawatts of wind turbines nationally, in addition to the 1500 megawatts already placed in the Netherlands.

In view of the trend towards increasingly larger wind turbines, with shaft heights reaching as much as 80 to 120 metres, resulting in the turbines being visible over tens of kilometres, the Council judges that the national government should adopt a directing role, in cooperation with the provinces. The national government should also develop a national policy for the placing of wind turbines and of wind turbine parks. In its advice the Council subsequently provides an assessment of the permissibility of placing wind turbines in the light of the key planning decision Third Wadden Sea Memorandum. Up until now the planning permission policy has first and foremost been a matter for the municipal and provincial authorities.

The key planning decision only allows new highrise buildings on four locations along the Wadden coast, provided that they fit in the skyline. The key planning decision holds a separate case-by-case approach for wind turbines. The Council is of the opinion that wind turbines are high-rise buildings and that therefore the same policy should apply to wind turbines as to other buildings. The possible placing of the new generation of wind turbines must therefore be limited to Den Helder, Harlingen, Delfzijl and Eemshaven.

Large wind turbines can lead to bird fatalities in low numbers and disrupt bird migration routes. For that reason, the impact on birds must be taken into account when seeking suitable locations for wind turbines.

The Council then addresses the relationship between the placing of wind turbines and how the landscape is perceived. In that context the Council also makes reference to the opportunities offered by forms of sustainable energy other than wind energy. Furthermore, the perception of the Wadden landscape must be established by means of a perception survey, also establishing how an optimum social return can be achieved, taking account of both the economic return and the experience value.

The Council does not confine itself to recommending a study, but also itself provides some pointers regarding the policy to be pursued. The Council advocates the clustering of wind turbines so that they can form a landmark in the landscape. For that reason the number of small out-of-date wind turbines present in the landscape must be cleared. Wind turbines form an industrial activity and fit in best in an industrial landscape, which must be subject to safety conditions. Furthermore, the wind turbines do not need to be permitted perpetually but for a limited period of time corresponding to the economic or technical life span of the turbines.

Finally, the Council would like to see the formulation of design criteria intended to integrate the wind turbine parks as closely as possible in the landscape and possibly to combine them with other spatial functions.

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## **Fresh-Salt . Opportunities for restoration of fresh-salt water transitions in the Wadden region**

### **ADVICE OF THE WADDEN SEA COUNCIL TO THE MINISTRY OF AGRICULTURE, NATURE AND FOOD QUALITY (ADVICE NUMBER 2008/02, 5 MARCH 2008)**

#### **SUMMARY**

##### **Why this advice?**

Governmental policy has for decades focused on restoring the links between fresh and salt water systems. A number of projects have been carried out in the Wadden region, and there are plans and ideas for various locations at a more or less advanced stage of preparation. It is desirable in the context of water and nature policy to turn those words into actions. The Key Planning Decision 'Third Wadden Sea Memorandum' provides a means to evaluate the various plans not only on their own merits, but also in the light of their significance to the ecological functioning of the Wadden region as a whole. The Ministry of Agriculture, Nature and Food Quality (LNV) has asked the Wadden Sea Council to issue this advice on the fresh-salt water transitions in the Wadden region.

##### **Value of fresh-salt transitions**

The presence of fresh-salt transitions in the Wadden region is indispensable to the completeness of the nature reserve and to strengthening the area's ecological values. Restoring the fresh-salt transitions will increase biodiversity and increase the number of characteristic flora and fauna types and habitats. Restoring the fresh-salt transitions will contribute to meeting the targets of Natura 2000 and the Water Framework Directive at all of the designated locations. Meeting the policy targets for the mainland salt marshes and the Wadden islands strongly depends on the restoration of natural processes and dynamics.

##### **Focus on functions**

Various types of fresh-salt transitions are found in the Wadden region. There are large-scale dynamic types with open connections to the sea (estuaries, lagoons) and small-scale land based transitions where the fresh-salt gradient in some cases forms only a small element of a large-scale, dynamic system (salt marshes, islands). Each transition type fulfils certain functions with its own value to the Wadden Sea, the hinterland and the transition itself, but not every transition type naturally fulfils all the functions. For that reason it is only possible to restore all types of functions by creating several fresh-salt transitions. The Council recommends to let the 'decision of material importance' of the Key Planning Decision 'Third Wadden Sea Memorandum, stipulating that 'the policy focuses on the optimally natural development of the ecosystem' prevail over the 'decision of material importance', in which is striven 'to realise only one natural fresh-salt transition' for each drainage area, in addition to the existing transitions.

For the final choice of potentially suitable locations, it is important to establish which functions can contribute at which locations to the functioning of the Wadden ecosystem. The Council advises basing the restoration task primarily on the functions of the fresh-salt transitions rather than focusing exclusively on the *naturalness* of the fresh-salt transition.

The options for restoring a fresh-salt transition with a high level of naturalness are very limited for the mainland. Because of the drop of the level of the land inside the dikes, it will only be possible to *artificially* restore the link between the fresh water inside the dikes to the salt outer water. The locations where the restoration of transitions most closely approximates the natural situation are the outer dike areas on the Wadden islands.

#### **Potentials at each location**

The decision on restoration measures is based on ecological potentials, physical constraints and feasibility in the social context (including the decision-making process) at the envisaged locations.

Eems-Dollard: The Council advises the Minister to urge the German authorities to make improvements to the lower reaches of the Eems, in combination with improvements in the Dollard by joint effort of the Netherlands and Germany, to improve and restore the ecological functioning of the Eems-Dollard estuary. Since the options and potentials for the Westervoldse Aa are limited, the Council advises to focus especially on the Eems-Dollard estuary for the restoration of an estuarine transition in the drainage area of the Eems.

Lauwersmeer: The Council considers restoration of an estuarine fresh-salt transition with a permanent brackish water zone in the Lauwersmeer not feasible. The feasible scenarios will at best lead to fresh-salt gradients that function to a limited extent. The inlet of seawater may contribute to the natural value of the region itself, and in particular to meeting the conservation objectives for the Birds Directive area Lauwersmeer. Expectations are that ongoing forest development can be counteracted by periodic inlets of seawater or by higher fresh-water levels over a longer period of time. Possible negative effects of periodic inlet of seawater on the aquatic community needs further investigation. The latter measure leads to mean higher seepage intensity in the surrounding area than the first measure. Further investigation is needed to show the effects of both measures on seepage intensity and to get information about possibly required additional management measures. There are good potentials in the north-eastern part of the Lauwersmeer (Marnewaard) for the creation of a permanent inner dike fresh-salt gradient.

IJsselmeer: The direct link between the IJssel and the Rhine and the size of the IJsselmeer region make this location potentially the most valuable fresh-salt transition in the Wadden region. The planned expansion of drainage capacity, the necessary adaptation of the Afsluitdijk to the safety standards and the opportunity for power generation (Blue Energy) make it possible now to consider measures intended to restore fresh-salt transitions along the Afsluitdijk. The Council advises to work out all of the tasks and challenges in an integral project. The loss of fresh-water stock can be compensated by slightly raising the level. It will be necessary to chart the effect of this on the IJsselmeer dikes and the seepage intensity in the project. The Council has also identified ways of shaping the setup in such a way that scenic and recreational values are improved in relation to the current situation. The Council advises to focus on a transition in the IJsselmeer for the restoration of an estuarine transition in the Rhine drainage basin.

Amstelmeer: The opportunities for an inner dike fresh-salt gradient in the Amstelmeer are limited because of the lake's water management conditions and functions. Creating a direct link between the Amstelmeer and Balgzand (e.g. drainage lock in the Amstelmeer dike) could present prospects for re-establishing sea grass in the Amstelmeer, but even more so in Balgzand. The Council advises working up the prospects for an outer dike fresh-salt transition at the Amstelmeer.

Noard Fryslân Bûtendyks: Creating runoff of fresh water over the Frisian salt marsh restores the salt and fresh water mixing process, which is a contributory determining factor for the salt marsh's ecological functioning. The width of the salt marshes will make it possible to make maximum use of the fresh water runoff, which could lead to local ecologically valuable gradients. The Council advises encouraging the current planning developments to also restore this type of transition at a scale that is unique by Dutch standards.

Islands: More natural control of the coastline and outer dunes in such a way that space is provided for natural processes and dynamics will offer prospects for restoring and improving the quality of (existing) fresh-salt transitions. The Council advises working at the outer dike eastern points of the Wadden islands on the sustainable restoration of the characteristic functions of fresh-salt water transitions that are (ultimately) steered by natural processes. In other areas of the islands fresh-salt gradients can be restored by means of small-scale measures combined with (active) management.

Fish migration: The restoration of migration opportunities for fish should be encouraged where possible, while taking the location-specific demands of fish-species (and other organisms) into account, with respect to the design of the passage.

#### Potential contribution of fresh-salt restoration to safety

The Council believes that the safety of the hinterland has the highest priority and is set as a hard precondition for all possible restoration measures. This also applies for water management measures taken in respect to climate change (WB21). To make the coastline more climate-proof, natural processes should be used where possible. The opportunities for this are however limited and are mainly present at the Wadden islands.

#### Opportunities and restrictions

Fresh-salt transitions can be set up and managed at the envisaged locations in such a way that impacts on agriculture and other spatial functions can be counteracted. Improving fish migration opportunities will contribute to a better fish stock, which improves among other things the prospects of better catches for inland fishery. Several locations have opportunities to create recreational added value within the final setup. Available information about the costs and benefits of restoring the fresh-salt transitions appeared to be too limited to use as an assessment criterion. The Council advises carefully monitoring the economic effects of implementing the future projects so that the information can be used to make an effective cost-benefit analysis for future projects.

#### Social support

The Council advises to explicitly and transparently incorporate safety principles and preconditions in plans for the restoration of fresh-salt transitions and giving communication on this subject a prominent position before, during as well as after the measures have been put in place. The stakeholders ought to be involved in setting up and implementing the study into anticipated effects. Measures should be carried out in phases in order to accumulate knowledge and support as the work progresses.

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