

Ministry of Defence
Ministry of Economic Affairs
Ministry of Agriculture, Nature Management and Fisheries
Ministry of Education and Science
Ministry of Housing, Planning and Environment
Ministry of Transport, Public Works and Water Management

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BEON

Dutch cooperation
on marine ecological
research

Beleidsgericht
ecologisch onderzoek
van de
Noordzee/Waddenzee

Policy-Linked
Ecological Research
on the
North Sea/Wadden Sea



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What is BEON?

BEON is the Dutch acronym for Policy-Linked Ecological Research on the North Sea and Wadden Sea. It is a cooperative structure project involving ministries concerned with North Sea policy and research institutes engaged in ecological research on the North Sea, Wadden Sea and in estuaries. Activities are based on a multi-year programme drawn up by all the parties concerned.



The need for BEON

We increasingly associate the sea with pollution by harmful substances and other threats to its natural resources. We can no longer make unlimited use of the sea.

In recent years the deterioration in the quality of the North Sea and Wadden Sea has been charted. We have become aware of the sea's major importance to us, not only as a nature area, but also in terms of its many uses. That is why it is so important to formulate a policy which provides scope for all the functions of the sea. The Dutch government pursues a harmonized departmental policy on the North Sea and Wadden Sea. This policy is prepared in the Interdepartmental Coordinating Committee for North Sea Affairs (ICONA) and the Interdepartmental Wadden Committee (IWC).



In the coming decades we shall seek to preserve and - where possible - restore the ecological balance in the North Sea and Wadden Sea, and to do so in such a way that they can continue to perform their functions for society.



The

The first BEON multi-year programme for 1988-1992 marked the start of the research project. It identified broad areas of interest and how they should be approached.

The second multi-year programme for 1993-1997 builds on the results of the first five years and takes account of more recent developments in North Sea policy. Its objective is: "To lay the scientific foundation for the implementation of current North Sea policy. This means determining the scope for sustainable use and the environmental benefits of measures concerning the North Sea and Wadden Sea, taking into account both the interests of society and the natural behaviour of the sea."

In the first multi-year programme, research concentrated mainly on the impact of human activities on the system. In the second, research focuses on target variables and the associated requirements to be met by the ecosystem. On the basis of this approach, links are established with inputs to the system.

In the second multi-year programme, it was decided to structure research in accordance with the research areas identified in the first programme. These are:

- **eutrophication** (excessive input of phosphate and nitrogen compounds, resulting in algal blooms);
- **effects of micropollutants** (such as PCBs, PAHs and heavy metals);
- **disturbance of the seabed by fishing** (effect of beam trawling on benthic organisms).

It was also decided to add a new research area:

- **habitat disturbance.**

This last theme refers, for example, to the impacts of recreation, noise, water turbidity and the dumping of dredging spoil on inshore areas, the Wadden Sea and the estuaries. The subject of "disturbance of the seabed by fisheries" has been broadened to cover the impact of fishing on the ecosystem as a whole.

An advisory committee of researchers and policymakers has been formed for each research area. They are responsible for coordinating the relevant research projects and ensuring that they respond to the needs of policymakers.

The second multi-year programme is based on a division of policy development into five stages.

These stages and the associated research activities are:

- the establishment of target scenarios: expanding knowledge so that sustainability can be translated into measurable objectives;
- an evaluation of the North Sea/Wadden Sea/Delta in relation to the target scenario: developing and optimising monitoring and assessment systems;
- an analysis of the disparity between target scenario and reality: trends, developments, anthropogenic and natural causes;
- the formulation of priorities and measures: contributing to the development and use of policy analysis instruments;
- implementation, reduction and planning measures: development of implementation techniques.

Each stage requires certain knowledge, which in turn requires expertise in different fields. This expertise is either already available within the various BEON institutes or will be developed there.



Foto H.J.M. Baptist

Organization of BEON

The BEON programme is approved by the ministries involved, which are represented on the Steering Committee. Responsibility for the implementation of the programme lies with the Board of Directors, constituted by the directors of the following research institutes:

- Institute for Forestry and Nature Research (IBN-DLO)
- TNO Institute of Environmental Sciences (TNO-MW)
- Netherlands Institute of Ecology - the Centre for Estuarine and Coastal Ecology (NIOO-CEMO)
- Netherlands Institute for Sea Research (NIOZ)
- Netherlands Institute for Fisheries Research (RIVO-DLO)
- National Institute of Public Health and Environmental Protection (RIVM)
- Directorate-General for Public Works and Water Management (Rijkswaterstaat/RWS):
 - National Institute for Coastal and Marine Management (RWS/RIKZ) (chair)
 - North Sea Directorate (RWS/DNZ)
- Delft Hydraulics (WL).
- Universities



The Board of Directors is chaired by the chief engineer director of the National Institute for Coastal and Marine Management.

The BEON Programme Office accommodated within the National Institute for Coastal and Marine Management helps to initiate and coordinate the programme, and is responsible for the secretariat.

BEON's research field

Policy focuses on the Dutch part of the North Sea, but this geographical boundary is of less relevance to the actual research, since substance flows and organisms are naturally oblivious to national borders.

The North Sea is approached as an integrated system, comprising ecological and geographical subsystems. International cooperation is therefore essential.

Research on the North Sea covers not only the Dutch area of the continental shelf and coastal waters such as the Wadden Sea, the Delta area and other estuaries and inlets, but also adjacent parts of the continental shelf belonging to other North Sea states.

For research purposes, the marine environment is regarded as comprising not only the water, but also the seabed and adjacent atmosphere. Studies of the ecosystem look at all the biological and physico-chemical factors which affect the system.



Foto R.P.D. Aggenbach NIOZ



To take all the various interests into account requires a proper understanding of the functioning of the North Sea system, based on knowledge that is accepted both nationally and internationally. The acquisition of this knowledge will lay the foundation for a constructive dialogue between researchers and policymakers. In 1986 recognition of the need for an improved relation between these two groups led to the establishment of BEON - a broad-based cooperative structure by six ministries.

The ministries involved are:

- the Ministry of Transport, Public Works and Water Management (responsible for coordinating North Sea affairs),
- the Ministry of Housing, Planning and Environment,
- the Ministry of Education and Science,
- the Ministry of Agriculture, Nature Management and Fisheries,
- the Ministry of Economic Affairs,
- the Ministry of Defence.

Cooperation is essential in order to pool available knowledge, ensure efficient deployment of facilities and expertise, and prevent duplication of work.

The aims of BEON are:

- to ensure the exchange of information between researchers and policymakers,
- to provide an improved and coherent understanding of the structure and functioning of the marine ecosystem,
- to improve understanding of the impact of human activities on the marine ecosystem,
- to make research data more accessible,
- to promote national and international cooperation in North Sea research.



Foto H.J.M. Baptist

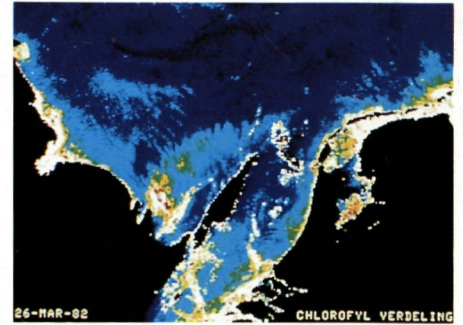
Research

External contacts

BEON seeks to cooperate with other organisations:

Nationally: inter alia, with the Council on Physical Oceanographic Research in the North Sea (RvO), the Geoscience Foundation (GOA) and the universities;

Internationally: with research programmes in other North Sea states, laying the basis for an internationally coordinated policy on the North Sea.



Dutch cooperation in marine ecological research

Institute for Forestry and Nature Research (IBN-DLO) in Wageningen
branch on Texel

Institute of Environmental Sciences (TNO-MW) in Delft
branch in Den Helder

Netherlands Institute of Ecology - Centre for Estuarine and Coastal Ecology (NIOO-CEMO) in Yerseke

Netherlands Institute for Sea Research (NIOZ) on Texel

Netherlands Institute for Fisheries Research (RIVO-DLO) in IJmuiden

National Institute of Public Health and Environmental Protection (RIVM) in Bilthoven

National Institute for Coastal and Marine Management of Rijkswaterstaat (RWS/RIKZ) in The Hague

branch in Haren, Middelburg, Rijswijk

North Sea Directorate of Rijkswaterstaat (RWS/DNZ) in Rijswijk

Delft Hydraulics (WL) in Delft

Universities



To obtain the BEON multi-year programme and for further information on BEON activities, please contact:

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