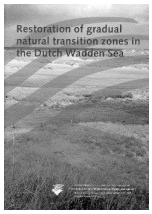
New Publications

Transition Zones



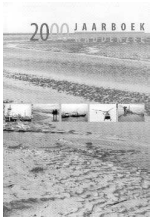
C.C. de Leeuw & J.J.G.M. Backx, 2001. Naar een herstel vam estuariene gradienten in Nederland (Toward restoration of estuarine gradients in the Netherlands). Rijkswaterstaat RIKZ and RIZA. Report RIKZ/2000.044; report RIZA/2000.034

Restoration of gradual natural transition zones in the Dutch Wadden Sea. Brochure. RWS- Noord Nederland and RIKZ, 24 p.

In the Netherlands, possibilities for the restoration of salt water gradients and rehabilitation of brackish tidal water systems have been studied intensively during the last years (see also Jager, WSNL 2000/1, Claassen WSNL 2000/2). Two new publications on this issue are now available. The first report is a literature study on general ecological principles regarding estuarine gradients which was undertaken to support policy and management in relation to restoration measures along the Dutch coasts.

The Brochure was published on the occasion of the Esbjerg-II-Conference to document the progress made with regard to the Targets on estuaries and salt marshes. It informs about the progress of several ongoing projects, e.g. restoration of fish migration, salt marsh action plan "Noord-Frieslands Buitendijks", and future projects such as IJsselmeer Dam, Lauwersmeer and Westerwoldsche Aa.

Condition of the Dutch Wadden Sea in 2000

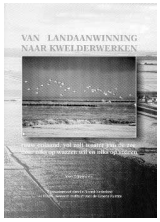


Jaarboek Waddenzee 2000. 76 pp, RWS Noord-Nederland, Leeuwarden.

This 5th Wadden Sea Yearbook has been produced by five ministries and three provinces. Facts and figures regarding the state of the Wadden Sea have been jointly compiled by many institutes and private organizations. This concerns information about the nature and environment such as seal population and water quality, as well as, human activities such as fishing, recreation, sand dredging, shell extraction and military activities. The Yearbook concludes with some caution that "things are once again heading into the right direction". However, some bird species are not thriving and the high mortality of eider ducks in the winter 1999/2000 was reason for great concern and leading up to a considerable debate on the health of the Wadden Sea.

The Yearbook can be ordered at the Bibliotheek Rijkswaterstaat, Postbus 2310, 8901 JH Leeuwarden, phone +31 58 2344405, e-mail: bibliotheek@dnn.rws.minvenw.nl

From Land Reclamation to Salt Marsh Works



Dijkema, K., A. Nicolai, J. de Vlas, C. Smit, H. Jongerius, H. Nauta, 2001. Van landaanwinning naar kwelderwerken. Rijkswaterstaat directie Noord Nederland, Leeuwarden.

The report entails a comprehensive overview of the salt marsh development and its management at the Dutch mainland coast. It involved about 30 monitoring sections, which have been maintained for more than 40 years and documents the drastic changes of salt marsh management during the last 20 years. The fact that erosion problems during the 1975-1985 period were mainly the result of more wind and higher high-water levels, resulted in a change of the salt marsh works, e.g. by modifying the groin system, which takes up now about 2000 ha less area on the mudflats. The drainage is also scarcely maintained anymore. During the last 20 years, the volume of earthwork has been reduced from 560,00 m³ per year to 7000 m³ per year. The surface area of the salt marshes is now increasing slightly and the pioneer zone is showing a natural variation from year to year. An increased elevation of the salt marshes can also lead to a succession of a less diverse vegetation (maturation). This process demands devoting attention to achieve the best possible combination of grazing and drainage.

The report has been illustrated with a number of photos of salt marsh fauna and flora, illustrations, graphics and vegetation maps and is an impressive overview of 40 years of monitoring and research.

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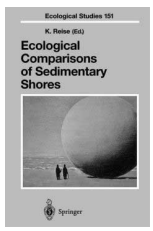
Ecological Comparison of Sedimentary Shore



Reise, K. (Ed.), 2001. Ecological Comparison of Sedimentary Shore. Ecological Studies, Analysis and Synthesis, Vol 151, 387 pp., Springer Heidelberg, DM 228.

The book analyzes and compares the ecological structures and processes at sandy beaches, tidal mudflats and shallow coastal waters around the world. Analyses of local processes are paired with comparisons between distant shores, across latitudinal gradients or between separate biogeographic provinces. Emphasis is given to suspension feeders in coastal mud and sand, to biogenic

stabilization and disturbances in coastal sediments, to seagrass beds and faunal assemblages, to recovery dynamics in benthic communities, shorebird predation, and to experimental approaches to biota of sedimentary shores (see also Reise, WSNL 200/1).

Contaminants in Birds Eggs

Becker, P.H., J. Muñoz Cifuentes, B. Behrends, K.R. Schmieder, 2001: Contaminants in Bird Eggs in the Wadden Sea. Temporal and spatial trends 1991 - 2000. Wadden Sea Ecosystem No. 11. Common Wadden Sea Secretariat, Trilateral Monitoring and Assessment Group, Wilhelmshaven, Germany.

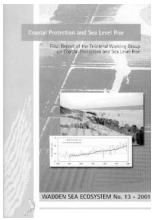
For the first time, the contaminant levels of eggs of Oystercatchers and Common Terns have been assessed at 13 sites in the Wadden Sea between Balgzand in the Netherlands and Skallingen in Denmark. The study was carried out by Prof. Peter H. Becker (Institute of Avian Research, Wilhelmshaven) in the framework of the Trilateral Monitoring and Assessment Program (TMAP). It reveals that, in general, the levels of mercury and organochlorines (PCB, DDT, HCH, HCB) in bird eggs strongly decreased during the last two decades, documenting the success of several measures and policies to reduce the burden of environmental contamination. Concentrations in the 1990s were roughly more than half of those from the decade before. However, since the mid 1990s, the decrease of the concentrations seems to stagnate at levels above the targets concentrations. Negative effects on bird reproduction and populations by the recent levels of chemicals seem unlikely as far as critical levels are known.

Furthermore, some "hot spots" such as the Elbe estuary, the inner German Bight and chemical inputs from the Rhine still deserve attention and point to pollutant sources of high significance. Considering the existence of still high local contamination, the policies for the reduction of the application of hazardous substances in the framework of OSPAR, the North Sea Conferences and the EU should be intensified. Especially measures to further minimize inputs of substances into the Wadden Sea by the rivers and the atmosphere should be reinforced.

The preparation of the report was financially supported by the National Institute for Coastal and Marine Management (The Hague), the National Park Administration Lower Saxony (Wilhelmshaven) and the Forest and Nature Agency (Copenhagen).

The report is be available as a hard copy for 6 Euro from the Common Wadden Sea Secretariat or can be downloaded as PDF file from the homepage of the secretariat (http://cwss.www.de).

Coastal Protection and Sea Level Rise

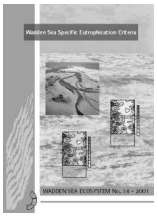


CPSL. 2001. Final Report of the Working Group Coastal Protection and Sea Level Rise. Wadden Sea Ecosystem No. 13. Common Wadden Sea Secretariat. Wilhelmshaven, Germany.

A trilateral Working Group, consisting of coastal defense and nature conservation experts, has evaluated the possible effects of increased sea level rise and storminess for the Wadden Sea (see also Steyaert, WSNL 2000/2). It was concluded that with a moderate sea level rise (25 cm/50 years), which is the most realistic expectation, no significant changes will occur, although costs for coastal defense will increase. With a sea level rise of 50 cm in the coming 50 years, together with increased storminess, which is the worst case scenario, substantial changes will occur, amongst which a reduction of the tidal flat area of up to 15 %, and the concomitant reduction of several bird populations which depend on the tidal flats. Under the worst case scenario the costs for coastal defense may be twice as high as today.

The report is be available as a hard copy for 6 Euro from the Common Wadden Sea Secretariat or can be downloaded as PDF file from the homepage of the secretariat (http://cwss.www.de).

Eutrophication Criteria



Van Beusekom, J.E.E., H. Fock, F. de Jong, S. Diel-Christiansen, B. Christiansen, 2001. Wadden Sea Specific Eutrophication Criteria. Wadden Sea Ecosystem No. 14. Common Wadden Sea Secretariat, Wilhelmshaven, Germany.

The situation with regard to nutrients and eutrophication in the Wadden Sea has been assessed in a trilateral project in which Wadden Sea specific criteria for eutrophication effects have been developed (see also van Beusekom, WSNL 2000/1; de Jong WSNL 2001/2). On the basis of these criteria, it was concluded that the whole Wadden Sea is still a eutrophication problem area, which means that the chance of negative effects of high nutrient loads, such as algal blooms, is still higher than under natural conditions. Especially inputs of nitrogen by rivers and air are still too high, although there are substantial regional differences.

The report is be available as a hard copy for 10 Euro from the Common Wadden Sea Secretariat or can be downloaded as PDF file from the homepage of the secretariat (http://cwss.www.de).