Karen Edelvang - DTU Orbit (25/12/2017)

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Organisations

Arctic Section
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Section for Oceans and Arctic
31/03/2017 → present
VIP

Publications:

Hvordan undervandsdroner og robotter kan hjælpe med at monitore det arktiske marine miljø

General information
State: Published
Organisations: National Institute of Aquatic Resources, Section for Oceans and Arctic
Authors: Edelvang, K. (Intern)
Pages: 254-264
Publication date: 2017
Main Research Area: Technical/natural sciences

Publication information
Journal: Tidsskriftet Grønland
Issue number: 3
ISSN (Print): 0017-4556
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
BFI (2016): BFI-level 1
BFI (2015): BFI-level 1
BFI (2014): BFI-level 1
BFI (2013): BFI-level 1
ISI indexed (2013): ISI indexed no
BFI (2012): BFI-level 1
ISI indexed (2012): ISI indexed no
BFI (2011): BFI-level 1
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
BFI (2009): BFI-level 1
BFI (2008): BFI-level 1
Original language: Danish
Links:
https://issuu.com/greenland/docs/tg-3-2017-gratis-artikel
Publication: Research › Journal article – Annual report year: 2017

Greenland ice sheet melt area from MODIS (2000-2014)

General information
State: Published
Organisations: Geological Survey of Denmark and Greenland
Authors: Fausto, R. S. (Ekstern), van As, D. (Ekstern), Antoft, J. A. (Ekstern), Box, J. E. (Ekstern), Colgan, W. (Ekstern), Andersen, S. B. (Ekstern), Ahlstrøm, A. P. (Ekstern), Andersen, M. L. (Ekstern), Citterio, M. (Ekstern), Charalampidis, C.
Katabatic winds and piteraq storms: Observations from the Greenland ice sheet
Darkening of the Greenland ice sheet due to the melt-albedo feedback observed at PROMICE weather stations

General information
State: Published
Organisations: Geological Survey of Denmark and Greenland
Authors: van As, D. (Ekstern), Fausto, R. S. (Ekstern), Colgan, W. T. (Ekstern), Box, J. E. (Ekstern), Ahlstrøm, A. (Ekstern), Andersen, S. B. (Ekstern), Andersen, M. L. (Ekstern), Charalampidis, C. (Ekstern), Citterio, M. (Ekstern), Edelvang, K. (Intern), Jensen, T. (Ekstern), Larsen, S. (Ekstern), Machguth, H. (Ekstern), Nielsen, S. (Ekstern), Veicherts, M. (Intern), Weidick, A. (Ekstern)
Pages: 69-72
Publication date: 2013
Main Research Area: Technical/natural sciences

Publication information
Journal: Geological Survey of Denmark and Greenland Bulletin
Issue number: 28
ISSN (Print): 1811-4598
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.343 SNIP 0.519 CiteScore 0.75
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.501 SNIP 0.443 CiteScore 0.72
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.314 SNIP 0.371 CiteScore 0.84
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.223 SNIP 0.381 CiteScore 0.42
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.494 SNIP 0.594 CiteScore 0.58
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.364 SNIP 0.392 CiteScore 0.52
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.401 SNIP 0.408
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.614 SNIP 0.571
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.404 SNIP 0.381
Scopus rating (2007): SJR 0.315 SNIP 0.324
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.319 SNIP 0.41
Scopus rating (2005): SJR 0.331 SNIP 0.349
Scopus rating (2004): SJR 0.783 SNIP 0.901
Original language: English
GEOLOGY, MASS-LOSS, PROGRAM, Greenland Nearctic region, climate change, ice sheet darkening, melt-albedo feedback, PROMICE weather station, 07504, Ecology: environmental biology - Bioclimatology and biometeorology, Environmental Sciences, Climatology
Ablation observations for 2008-2011 from the Programme for Monitoring of the Greenland Ice Sheet (PROMICE)

General information
State: Published
Organisations: Geological Survey of Denmark and Greenland
Authors: Fausto, R. S. (Ekstern), van As, D. (Ekstern), Ahlstrøm, A. (Ekstern), Andersen, S. B. (Ekstern), Andersen, M. L. (Ekstern), Citterio, M. (Ekstern), Edelvang, K. (Intern), Larsen, S. (Ekstern), Machguth, H. (Ekstern), Nielsen, S. (Ekstern), Weidick, A. (Ekstern)
Pages: 73-76
Publication date: 2012
Main Research Area: Technical/natural sciences

Publication information
Journal: Geological Survey of Denmark and Greenland Bulletin
Issue number: 26
ISSN (Print): 1811-4598
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.343 SNIP 0.519 CiteScore 0.75
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.501 SNIP 0.443 CiteScore 0.72
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.314 SNIP 0.371 CiteScore 0.84
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.223 SNIP 0.381 CiteScore 0.42
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.494 SNIP 0.594 CiteScore 0.58
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.364 SNIP 0.392 CiteScore 0.52
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.401 SNIP 0.408
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.614 SNIP 0.571
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.404 SNIP 0.381
Scopus rating (2007): SJR 0.315 SNIP 0.324
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.319 SNIP 0.41
Scopus rating (2005): SJR 0.331 SNIP 0.349
Scopus rating (2004): SJR 0.783 SNIP 0.901
Original language: English
En ny strategi for Arktis

General information
State: Published
Organisations: Geological Survey of Denmark and Greenland
Authors: Andersen, N. O. (Ekstern), Fejerskov, O. (Forskerdatabase), Nosch, M. L. (Forskerdatabase), Qvortrup, L. (Forskerdatabase), Østergaard, L. (Ekstern), Andersen, O. (Ekstern), Edelvang, K. (Intern), Staunstrup, J. (Ekstern)
Publication date: 2011

Indlandsisen smelter og så stiger havet

General information
State: Published
Organisations: Geological Survey of Denmark and Greenland
Authors: Edelvang, K. (Intern), Ahlstrøm, A. (Ekstern), Andersen, S. B. (Ekstern)
Publication date: 2011

Programme for Monitoring of the Greenland Ice Sheet (PROMICE): first temperature and ablation record

General information
State: Published
Organisations: Geological Survey of Denmark and Greenland, Universite Libre de Bruxelles
Authors: van As, D. (Ekstern), Fausto, R. S. (Ekstern), Ahlstrøm, A. (Ekstern), Andersen, S. B. (Ekstern), Andersen, M. L. (Ekstern), Citterio, M. (Ekstern), Edelvang, K. (Intern), Gravesen, P. (Ekstern), Machguth, H. (Ekstern), Nick, F. M. (Ekstern), Nielsen, S. (Ekstern), Weidick, A. (Ekstern)
Pages: 73-76
Publication date: 2011
Main Research Area: Technical/natural sciences

Publication information
Journal: Geological Survey of Denmark and Greenland Bulletin
Issue number: 23
ISSN (Print): 1811-4598
Numerical modelling of phytoplankton biomass in coastal waters

This paper introduces an effective tool for monitoring phytoplankton in open waters. In this study, phytoplankton is the principal component together with salinity and temperature for describing the water dynamics in the Danish marine waters. A major obstacle for accurate monitoring of phytoplankton (chl-alpha) is the very dynamic nature of phytoplankton and the
water masses encompassing the algae. This can be overcome by combining the very coarse temporal resolution data from the traditional monitoring programme to validate hydrodynamic modelling together with remote sensing. DHI Water and Environment's 3D modelling tool MIKE 3, which is a dynamical ecological model, has been applied to the Danish marine waters covering the Baltic sea through the inner Danish straits and extended to the North Sea. MIKE 3 is a commercially available software system that has been used in a wide variety of applications concerning 3D studies of hydrodynamics in the marine environment. MIKE 3 is an operational system with quick, less expensive and easily accessible assessments of the state and development in phytoplankton with appropriate scaling of resolutions. The paper concludes that a combination of traditional monitoring with ship, dynamical modelling of hydrodynamics and eutrophication in combination with remote sensing of chl-alpha concentrations of surface waters offers the ideal tools to enhance the temporal and spatial description of large water bodies. The results presented cover the period January to September 1999. The 3D model is verified and calibrated using in situ measurements from various monitoring stations in the Danish marine waters and validated against satellite images from SeaWiFS. The data basis for this study has been two national programmes both related to the monitoring of the coastal environment. (c) 2005 Elsevier B.V. All rights reserved.
Når havet stiger. – nyt klima – nyt liv? Rapport fra to scenarierværksteder afholdt i februar 2004

General information
State: Published
Organisations: DHI Denmark, Danmarks Miljøundersøgelser, Dansk Naturfredningsforening, Geological Survey of Denmark and Greenland, University of Copenhagen
Authors: Brüsch, W. (Ekstern), Edelvang, K. (Intern), Fenger, J. (Ekstern), Rahbek, C. (Forskerdatabase), Stoltze, M. (Ekstern), Vestergaard, P. (Forskerdatabase)
Number of pages: 16
Publication date: 2004

Publication information
Publisher: Teknologirådet
ISBN (Print): 87-90221-90-7
Original language: Danish
Main Research Area: Technical/natural sciences
Electronic versions:

Material transport from the nearshore to the basinal environment in the southern Baltic Sea: I. Processes and mass estimates
Processes involved in erosion, transport and deposition of cohesive materials are studied in a transect from shallow (16 m) to deep (47 m) water of the SW Baltic Sea. The wave- and current-induced energy input to the seabed in shallow water is high with strong variability and suspended matter concentrations may double within a few hours. Primary settling fluxes (from sedimentation traps) are less than 10 g m⁻² day⁻¹, whereas resuspension fluxes (evaluated from sedimentation flux gradients) are 15-20 times higher and the residence time for suspended matter in the water column is 1-2 days. Settling velocities of aggregates are on average six times higher than for individual particles resulting in an enhanced downward transport of organic matter. Wave-induced resuspension (four to six times per month) takes place with higher shear stresses on the bottom than current-induced resuspension (three to five times per month). The short residence time in the water column and the frequent resuspension events provide a fast operating benthic-pelagic coupling. Due to the high-energy input, the shallow water areas are nondepositional on time scales longer than 1-2 weeks. The sediment is sand partly covered by a thin fluff layer during low-energy periods. The presence of the fluff layer keeps the resuspension threshold very low (}
Material transport from the nearshore to the basinal environment in the southern Baltic Sea, II: Origin and properties of material

General information
State: Published
Organisations: DHI Denmark
Pages: 151-168
Publication date: 2002
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Marine Systems
Volume: 35
ISSN (Print): 0924-7963
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 1.403 SNIP 1.282 CiteScore 2.61
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 1.093 SNIP 1.033 CiteScore 2.19
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 1.231 SNIP 1.494 CiteScore 2.69
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 1.609 SNIP 1.457 CiteScore 2.99
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 1.534 SNIP 1.276 CiteScore 2.51
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 1.51 SNIP 1.289 CiteScore 2.43
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
Modelling of suspended matter transport from the Oder River

In order to quantify the riverine sediment flux to the Arkona Basin, the transport pathways and fate of fine-grained suspended matter discharged from the Oder River from October 1996 to October 1997 were simulated using the MIKE3 modelling system, including a cohesive sediment transport module. Results indicate that about 550,000 regular tons of sediment are transported to the Arkona Basin annually. There is some indication that transport is episodic and mainly governed by wind events. There is a general tendency for the sediment transported from the Oder to be diverged into a pathway either to the north towards the Arkona Basin (2/3) or to the east towards the Bornholm Basin (1/3) over timescales of several months. Primary sedimentation along a vertical transect from the mouth of the Oder River to the Arkona Basin generally takes place in the form of easily resuspended fluffy material. Critical shear stress for the resuspension of this fluff is 0.02 N/m². Generally, such thresholds are exceeded 5-6 times per month in shallow water (D < 10 m) during wind events normally only lasting a few hours. Vertical sedimentation fluxes measured in shallow water are less than 10 g/m²/day during short periods with calm weather. A comparison with average rates of 80-115 g/m²/day measured during 3-month observation periods indicates that the resuspension rate in shallow water is about 8-10 times higher than the primary sedimentation rate. The shallow water areas above the 20 m isobath are non-depositional areas acting as temporal deposits for sediment transported from the Oder River through Pomeranian Bay to the Arkona Basin or the Bornholm Basin.

General information
State: Published
Organisations: DHI Denmark
Authors: Edelvang, K. (Intern), Lund-hansen, L. C. (Ekstern), Christiansen, C. (Ekstern), Petersen, O. S. (Ekstern), Uhrenholdt, T. (Ekstern), Laima, M. (Ekstern), Berastegui, D. A. (Ekstern)
Pages: 62-74
Publication date: 2002
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Coastal Research
Volume: 18
Issue number: 1
ISSN (Print): 0749-0208
Ratings:
BFI (2018): BFI-level 1
The Change in Primary Production of Danish Coastal Waters

General information
State: Published
Organisations: DHI Denmark, University of Copenhagen
Authors: Edelvang, K. (Intern), Erichsen, A. (Ekstern), Gustavson, K. (Ekstern), Bundgaard, K. (Ekstern), Dahl-Madsen, K. (Forskerdatabase)
Pages: 277-291
Publication date: 2001
CASI data utilized for mapping suspended matter concentrations in sediment plumes and verification of 2-D hydrodynamic modelling

A combined tunnel and bridge between Denmark and Sweden, The Oresund Link, is presently under construction (1995-2001). The dredging spills and environmental effects are monitored continuously. The monitoring involves the simulation of suspended matter concentrations in sediment plumes from dredging operations using 2-D hydrodynamic modelling (MIKE 21 PA/MT). A Compact Airborne Spectrographic Imager (CASI) acquisition was used to map suspended matter concentrations in a plume from 10 June 1997. Suspended matter concentrations were in the range of 1-30 mg l⁻¹ with background concentrations around 1-3 mg l⁻¹, while concentrations in the plume were 3-30 mg l⁻¹. A map of suspended matter concentration was derived from an empirical algorithm between in situ irradiance reflectance at 550 nm and suspended matter concentration determined from water samples taken both inside and outside the plume. The map was used to verify the results derived by the 2-D hydrodynamic model. A comparison of the concentration variations derived using the two methods presented here shows a reasonable agreement, in spite of the fact that the remote sensing data have far more spatial details than the MIKE 21 simulation.
In situ settling velocities and concentrations of suspended sediment in spill plumes, Øresund, Denmark.

The influence of benthic diatoms and invertebrates on the erodibility of an intertidal a mudflat, the Danish Wadden Sea

The erodibility of mudflat surfaces has been investigated in the Lister Dyb tidal area. A description is given of the short-term erosional, depositional history and the main biological factors governing the stability of the sediment surface. The erosion threshold seems mainly to be controlled by the relationship between algal biomass, expressed as chlorophyll a content and the abundance of deposit feeders. Benthic microalgae are important for the sediment stabilization due to their production of extracellular polymeric substances (EPS) during locomotion. The deposit feeder Hydrobia ulvae on the other hand limits the influence of microalgae because diatoms are the main part of their diet. Additionally, H. ulvae produces fecal pellets which can be more easily eroded than the cohesive bed since they seem to behave as individual units losing cohesive properties. Freshly deposited material was more stable than eroded areas, explained by the occurrence of benthic microalgae, which stabilize the sediment surface in areas of accretion. There was a positive correlation between the water content of the surface material and erosion threshold, interpreted as a result of the dominance of biological stabilizing and destabilizing factors at the site. The variation in algal mass and species abundance causes a marked cross-shore variation in erosion threshold with an increase of stability towards the salt marsh line. The reason for this is argued to be the cross-shore variation of exposure time, which governs the growth of microphytobenthos since light exposure declines towards the low-water line. The cross-shore variation of the erosion threshold is discussed in relation to the suspended sediment transport and it is argued that the result of this variation is a tendency for net landward transport of suspended sediment. (C) 1999 Academic Press.
A fine-grained sediment budget for the Sylt-Rømø tidal basin

A budget for net accumulation of fine-grained sediment (a)

The temporal variation of flocs and fecal pellets in a tidal channel

Fine-grained sediment transported in suspension in a tidal channel consists of single grains, flocculated material and fecal pellets. The temporal variation during the tidal period in settling velocities of flocs, as well as the number and size of fecal pellets, is influenced by several parameters; current velocity and suspended-sediment concentration are shown to be the most important. The equivalent settling diameters of the suspended matter are almost constant close to the water surface, whereas at the bottom, they vary following the variation in suspended-sediment concentrations. The maximum number of fecal pellets are found around low water slack, when the tidal flats adjacent to the channel are being drained. After dispersion, the grain size distribution of both flocculated material and fecal pellets is almost identical, with a median diameter of 5 μm.
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.43 SJR 0.997 SNIP 1.127
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 1.107 SNIP 1.186 CiteScore 2.44
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 1.067 SNIP 1.257 CiteScore 2.28
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 1.323 SNIP 1.439 CiteScore 2.64
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 1.256 SNIP 1.419 CiteScore 2.52
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 1.383 SNIP 1.325 CiteScore 2.52
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.231 SNIP 1.202
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.169 SNIP 1.262
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 1.244 SNIP 1.302
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 1.114 SNIP 1.355
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 1.203 SNIP 1.365
Scopus rating (2005): SJR 0.92 SNIP 1.237
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.815 SNIP 1.044
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.934 SNIP 1.238
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 0.694 SNIP 1.25
Web of Science (2002): Indexed yes
Scopus rating (2001): SJR 1.038 SNIP 1.259
Web of Science (2001): Indexed yes
Scopus rating (2000): SJR 1.033 SNIP 1.39
Web of Science (2000): Indexed yes
Scopus rating (1999): SJR 0.662 SNIP 1.245

Original language: English

Netherlands (Europe, Palearctic region), ESTUARINE ECOLOGY, FECAL PELLETS, FLOC VARIATION, SEDIMENT TRANSPORT, TIDAL CHANNEL, WADDEN SEA, 07510, Ecology: environmental biology - Oceanography and limnology, 12100, Movement, 52801, Soil science - General and methods, Ecology, Environmental Sciences, Estuarine Ecology, Soil Science

Source: FindIt
Tidal variation in the settling diameters of suspended matter on a tidal mud flat

During one tidal period, measurements of the variation of current velocities, suspended sediment concentration and settling velocities of the suspended matter were carried out on a tidal mud flat 1.8 km west of Ballum Sluse in the northern part of the Lister Dyb tidal basin. The settling velocities have been converted to equivalent settling diameters. Current velocities follow a variation pattern well-known from other parts of the Wadden Sea. Variations in current velocities are responsible for the variation in suspended sediment concentration and thereby indirectly control the equivalent particle sizes, because high suspended sediment concentration favours the formation of flocs. Maximum concentrations of up to 532 mg/l were recorded at the beginning of the flood period and at the end of the ebb period, when current velocities are high. This is reflected in the median equivalent settling diameters, which show corresponding high values of 83 μm at the beginning of the flood period and 96 μm at the end of the ebb period.

A fine-grained sediment budget for a small tidal area, Königshafen, Sylt, Germany

A net budget for fine-grained sediment
A study of the significance of flocculation for the in situ settling velocities of suspended particles in a tidal channel

Measurements concerning current velocities, mean suspended sediment concentrations and in situ floc settling diameters were carried out in a tidal channel in Lister Tief (The German Wadden Sea). Current velocities and mean suspended sediment concentrations follow a pattern well-known from other parts of the Wadden Sea, with rapidly accelerating current velocities at the beginning of the flood period compared to slowly accelerating currents in the ebb period. The suspended sediment concentration mainly follows the variation in current velocities. At the surface, the median fall diameters were very constant, about 25 \( \mu m \), compared to between 22 and 80 \( \mu m \) at the bottom. Flocculation is influencing the settling velocities throughout the tidal period regardless of concentration. The sediment is flocculated at all concentrations and current velocities. The size of the flocs is influenced by the current velocities, the suspended sediment concentration and distance from the bottom. At the surface, the largest part of the flocs are in the 24 to 32 \( \mu m \) fraction. At the bottom, the sediment has a large percentage of fecal pellets material giving larger fall diameters. The results are comparable to investigations from other parts of the Northern Wadden Sea area.

**General information**

State: Published
Organisations: University of Copenhagen
Authors: Edelvang, K. (Intern)
Pages: 461-467
Publication date: 1996
Main Research Area: Technical/natural sciences

**Publication information**

Journal: Advances in Limnology
Measurements of in situ settling velocities in the Elbe estuary

Analysis of in situ settling velocities of suspended mud flocs in estuaries is difficult to carry out because of the very fragile nature of the sediment flocs. Therefore, a number of different analytical methods have been developed. The Owen tube was developed in the late 1960s, and has been essential to the further development of more sophisticated methods to measure in situ settling velocities. There are a number of problems connected with the use of the Owen tube: possible floc breakage during sampling, flocculation in the tube during analysis caused by differential settling, and secondary flows in the tube after withdrawal of subsamples. Nevertheless, the Owen tube is one of the few instruments generally available that can be used in all kinds of meteorological and hydrographical situations, covering suspended-sediment concentrations from tens to thousands of mg cntdot dm-3. Therefore, it is still relevant to carry out Owen tube analyses for comparison with results obtained by newly developed methods such as the in situ video technique. Another thing that makes the settling tube convenient is its inexpensiveness, making it one of the few apparatuses that one can afford to possess in duplicate. Thus, the settling tube can be tested against itself to evaluate its ability to reproduce the results when analyses are carried out simultaneously on duplicate samples. Investigations carried out with two different Owen tubes in the Danish Wadden Sea suggest that the differences between median settling velocities are typically within about 20% of one another. This is a small difference compared with those that normally occur when results of different instruments are compared.

General information

State: Published

Organisations: University of Copenhagen
The flocculation of fine-grained sediment in the estuary of Ho Bugt, Denmark.

The significance of aggregation in an estuarine environment: Case studies from the Lister Dyb tidal area
Tidal variation in field settling velocities of suspended sediment in a tidal channel

General information
State: Published
Organisations: University of Copenhagen
Authors: Edelvang, K. (Intern), Larsen, M. (Ekstern), Pejrup, M. (Ekstern)
Pages: 116-121
Publication date: 1992
Main Research Area: Technical/natural sciences

Publication information
Journal: Geografisk Tidsskrift
Volume: 92
Issue number: 1
ISSN (Print): 0016-7223
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.384 SNIP 0.566 CiteScore 1.21
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.401 SNIP 0.434 CiteScore 0.98
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.549 SNIP 0.686 CiteScore 1.08
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.382 SNIP 0.706 CiteScore 0.88
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.335 SNIP 0.453 CiteScore 0.83
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.243 SNIP 0.354 CiteScore 0.58
ISI indexed (2011): ISI indexed no
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.303 SNIP 0.299
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.219 SNIP 0.219
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.368 SNIP 0.428
Scopus rating (2007): SJR 0.136 SNIP 0.263
Scopus rating (2006): SJR 0.322 SNIP 0.374
Scopus rating (2005): SJR 0.19 SNIP 0.199
Scopus rating (2004): SJR 0.184 SNIP 0.355
Scopus rating (2003): SJR 0.176 SNIP 0.623
Scopus rating (2002): SJR 0.241 SNIP 0.361
Scopus rating (2001): SJR 0.294 SNIP 0.433
Scopus rating (2000): SJR 0.199 SNIP 0.202
Web of Science (2000): Indexed yes
Scopus rating (1999): SJR 0.21 SNIP 0.624
Original language: English
DOIs:
Projects:

**Analysis of protected areas in the North Sea and the Central Baltic (Beskyttede områder) (39425)**

The project aims at delivering a report on the scientific basis and coherence of the current system of marine protected areas in the Danish North Sea, Skagerrak and central Baltic Sea EEZ's. This will enable the Danish Nature Agency to decide whether the existing network of protected areas is coherent (representative, adequate and connected) with respect to the requirements of the MSFD art. 13 part 4.

The most important biodiversity elements, habitats and ecological processes of the North Sea/Skagerrak and the central Baltic Sea will be addressed including selected ecosystem components, oceanographic features and seabed habitats. The work will be based on available data, literature studies and results from recent investigations. Furthermore, ecologically valuable – “hot-spots” – and areas of economic value are to be identified.

The network of ecologically valuable areas will be analyzed based on data, distribution mapping, weighting of data and connectivity consideration using several types of software. Areas of economic value inside and outside the Natura2000 network will be identified based on existing data collected by the partners and located at the partner’s database. Finally, areas of economic importance will be combined to suggest marine protected areas.

The project is coordinated by DTU Aqua.

The project is funded by Danish Agrifish Agency.

National Institute of Aquatic Resources

Section for Oceans and Arctic

DCE - Danish Centre for Environment and Energy

DHI Denmark

Geological Survey of Denmark and Greenland

**Period:** 01/01/2017 → 31/12/2017

**Number of participants:** 2

**Research area:** Ecosystem Based Marine Management

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**Project**