

Sedimentary biogeochemical data from a mussel farm in As Vig, Denmark

SND-ID: 2021-60-1. **Version:** 1. **DOI:** <https://doi.org/10.5878/as06-g207>

Download data

CTD.csv (29.67 KB)

Currents.xlsx (4.96 MB)

Illuminance.csv (61.2 KB)

Sed_rate.csv (7.97 KB)

Sediment_NitrateReduction.csv (2.45 KB)

Sediment_pigment.csv (2.72 KB)

Sediment_properties.csv (17.71 KB)

Sediment-water_fluxes.csv (8.02 KB)

Associated documentation

ReadMe-CTD.txt (467 bytes)

ReadMe-Currents.txt (598 bytes)

ReadMe-Illuminance.txt (488 bytes)

ReadMe-Sed_rate.txt (1.09 KB)

ReadMe-Sediment_NitrateReduction.txt (1.88 KB)

ReadMe-Sediment_pigment.txt (984 bytes)

ReadMe-Sediment_properties.txt (1.26 KB)

ReadMe-Sediment-water_fluxes.txt (2.23 KB)

Download all files

2021-60-1-1.zip (~5.09 MB)

Citation

Hylén, A., Taylor, D., Kononets, M., Lindegarth, M., Stedt, A., Bonaglia, S., & Bergström, P. (2021) Sedimentary biogeochemical data from a mussel farm in As Vig, Denmark (Version 1) [Data set]. University of Gothenburg. Available at: <https://doi.org/10.5878/as06-g207>

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Research principal

Description

The goal of the study was to evaluate how a newly re-established mussel farm in As Vig, Denmark, affected the sediment-water nutrient exchange. A mussel farm and a reference site were sampled on four occasions in two years, spanning the entire first year of production. Nitrate reduction rates and sediment-water fluxes of nutrients, methane, dissolved inorganic carbon and oxygen were measured in situ with benthic chamber landers. Sediment cores were collected for measurements of carbon, nitrogen and pigments and sedimentation rates were measured with sediment traps. Currents, illuminance at the seafloor and water column profiles of salinity, temperature and chlorophyll a were measured to describe the environmental characteristics of the stations.

The dataset contains 8 files with the following data:

- CTD profiles and chlorophyll a concentrations in the water column
- Current speed and current directions
- Illuminance at the sediment surface
- Sedimentation rates (total, organic matter, inorganic matter)
- Sediment-water fluxes of oxygen, nutrients, methane and dissolved inorganic carbon
- Nitrate reduction rates in the sediment
- Sedimentary pigment content (chlorophyll a, fucoxanthin, pheopigments)
- Carbon and nitrogen in the sediment solid phase, porosity

Full descriptions of the data can be found in the corresponding readme files accessible from the Description tab.

Data contains personal data

No

Language

[English](#)

Time period(s) investigated

2017-06 - 2019-02

Data format / data structure

[Numeric](#)

[Text](#)

Data collection 1

- Description of the mode of collection: Sampling June 2017 (before settling)
- Time period(s) for data collection: 2017-06-26 - 2017-06-30

Data collection 2

- Description of the mode of collection: Sampling July 2018 (post settling)
- Time period(s) for data collection: 2018-07-09 - 2018-07-13

Data collection 3

- Description of the mode of collection: Sampling October 2018 (peak growth)

- Time period(s) for data collection: 2018-10-22 – 2018-10-27

Data collection 4

- Description of the mode of collection: Sampling February 2019 (post harvest)
- Time period(s) for data collection: 2019-02-18 – 2019-02-23

Geographic spread

Geographic location: [Denmark](#)

Geographic description: As Vig, Denmark

Responsible department/unit

Department of Marine Sciences

Funding

- Funding agency: BONUS

Research area

[Environmental sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Geochemistry](#) (Standard för svensk indelning av forskningsämnen 2011)

[Oceanography, hydrology and water resources](#) (Standard för svensk indelning av forskningsämnen 2011)

[Fish and aquacultural science](#) (Standard för svensk indelning av forskningsämnen 2011)

Keywords

[Nutrients](#), [Sediment chemistry](#), [Aquaculture](#), [Eutrophication](#), [Benthic](#), [Mussels](#), [Mussel farming](#)

Publications

Hylén, A., Taylor, D., Kononets, M., Lindegarth, M., Stedt, A., Bonaglia, S., Bergström, P. (2021). In situ characterization of benthic fluxes and denitrification efficiency in a newly re-established mussel farm. *Science of the Total Environment*, 782, 146853.

DOI: <https://doi.org/10.1016/j.scitotenv.2021.146853>

If you have published anything based on these data, [please notify us](#) with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

Polygon (Lon/Lat)

10.005796508489, 55.815943903905

10.005796508489, 55.736002578656

10.095788824911, 55.736002578656

10.095788824911, 55.815943903905

10.005796508489, 55.815943903905

Accessibility level

Access to data through SND

Data are freely accessible

Use of data

[Things to consider when using data shared through SND](#)

License

[CC BY 4.0](#)

Versions

Version 1. 2021-03-26

Homepage

[Project web page BONUS OPTIMUS](#)

Contact for questions about the data

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Download metadata

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

[Citation \(CLS\)](#)

[File overview \(CSV\)](#)

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