

Long-term monitoring data, collected around Seili island, Archipelago Sea, SW Finland

METADATA FILE

This document contains a metadata list of the currently ongoing monitoring programs at Seili. Most of the data is collected by the Archipelago Research Institute of the University of Turku (ARI) for various stakeholders.

Hydrographical data ODAS monitoring station "Päiväluoto"

Coordinates: 60° 15' 18.9972" N, 21° 57' 3.744" E

Depth: ca. 50 m

Vessel: small motorboat or Hydrokopter (during ice winters)

Seawater temperature and salinity 1

- Variables: Temperature (°C) and salinity (PSU)
- Time interval: 1st, 11th, 21th of each month (+/- 2 days), 1967-2017
- Sampling interval: 0m, 5m, 10m, 15m, 20m, 30m and 40 m depth
- Equipment: Limnos/Ruttner water sampler
- Collected by: ARI
- Collected for: Finnish Marine Research Institute (FIMR) (1967-1985) & Finnish Meteorological Institute (FMI) (1986-2017)
- Data repository: FMI Open data repository (<https://ilmatieteenlaitos.fi/avoin-data>) & UTU server
- Data policy: open data
- More information: Katja Mäkinen (UTU), Pekka Alenius (FMI)

Seawater temperature and salinity 2

- Variables: Temperature (°C) and salinity (PSU)
- Time interval: 1st, 11th, 21th of each month (+/- 2 days), 2017-
- Sampling interval: 0-50 m
- Equipment: RBR CTD sonde
- Collected by: ARI
- Collected for: FIMR & FMI
- Data repository: FMI Open data repository
- Data policy: open data
- More information: Heini Jalli (FMI; ctddata@fmi.fi)

Seawater quality

- Variables: temperature (°C), salinity (PSU), phytoplankton abundance (biomass, ind./m³), Absorbance coefficient (400 & 750 nm, 1/m), Alkalinity (mmol/l), Ammonium as nitrogen (µg/l), Arsenic (µg/l), Biological primary productivity net (BPY, mg/m³ C), Cadmium (CD, (µg/l)), Chloride (CL, (mg/l)), Chlorophyll a (CP, (µg/l)), Chromium (CR, µg/l), Cobalt (CO, µg/l), Colour number (CNR, mg/l Pt), Conductivity (COND, mS/m), Copper (CU, µg/l), Dissolved oxygen (O2D, mg/l), Iron (FE, µg/l), Lead (PB, µg/l), Manganese (MN, µg/l), Mercury (HG, µg/l), Nickel (NI, µg/l),

Nitrate as nitrogen (NO₃N, µg/l), Nitrite as nitrogen (NO₂N, µg/l), Oxygen saturation (O₂S,%), pH, Pheopigment (FP, µg/l), Phosphate as phosphorous (PO₄P, µg/l), Selenium (SE, µg/l), Silicadioxide (SiO₂, mg/l), Suspended solids (SS, mg/l), Total nitrogen (NTOT, µg/l), Total organic carbon (TOC, mg/l), Total phosphorous (PTOT, µg/l), Turbidity (TURB, FNU), Vanadium (V, µg/l), Zinc (ZN, µg/l)

- Time interval: variable, from 1974s onwards
- Sampling interval: 1m, 5m, 10m, 20m, 40m & 1m from the bottom
- Equipment: Limnos water sampler
- Collected by: ARI/VarEly Centre/Lounais-Suomen vesi- ja ymp.tutk. Oy
- Collected for: Centres for Economic Development, Transport and the Environment (Southwest Finland's ELY Centre)
- Data repository: Hertta open environmental database (Oiva-database), http://www.syke.fi/fi-FI/Avoin_tieto/Ymparistotietojarjestelmat
- More information: Janne Suomela (Southwest Finland's ELY Centre)

Online monitoring station, ODAS buoy, seawater quality

- Variables: temperature (°C), salinity (PSU), turbidity (NTU), chlorofyll (mg/L), blue-green algae (cells/mL), and oxygen (mg/L)
- Time interval: 2006-; installed to operate in the spring as soon as the ice allows (with the objective of recording the spring blooming of phytoplankton in its entirety) and removed in early winter before the ice comes.
- Sampling interval: four times a day/from 2 m to 40 m depth
- Sampling accuracy: 1 m
- Equipment: YSI 6952 buoy base and a multiparameter sonde YSI 6000
- Collected by: Turku University of Applied Sciences (TUAS), ARI, FMI, Finnish Marine Research Infrastructure network (FINMARI)
- Data repository: FMI server
Website: <http://saaristomeri.utu.fi/odas>
- More information: Jussi Laaksonlaita (TUAS)

Online monitoring station, ODAS buoy, weather data

- Variables: wind speed and direction, precipitation, atmospheric pressure, temperature and relative humidity
 - Time interval: Open water season (April/May-October/November)
 - Equipment: Vaisala WXT-520 with LUODE GPRS datalogger
 - Collected by: TUAS, ARI, FMI, SYKE (FINMARI network)
 - Data repository: FMI server
 - Website: <http://saaristomeri.utu.fi/odas>
 - More information: Jari Hänninen (UTU), Jussi Laaksonlaita (TUAS)
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Hydrographical data at Seili post pier

Coordinates: 60.236592 N, 21.955186 E

Depth: ca. 2–4 m

Daily seawater temperature

- Time interval: Monday to Friday, year-round, from 1981 to 2018, continuing
- Sampling interval: ca. 1 m depth
- Equipment: Water thermometer
- Collected by: ARI
- Collected for: FMI
- Data repository: FMI open data repository & UTU server
- Data policy: open data
- More information: Katja Mäkinen (UTU), Pekka Alenius (FMI)

On-line blue-green algae concentration

- Time interval: open water period, from 2016-2017
- Sampling interval: ca. 1 m, continuous
- Equipment: Water thermometer,
- Collected by: TUAS & ARI
- Data repository: TUAS server
- Data policy: open data
- Website: saaristomeri.utu.fi/sinileva
- More information: Jussi Laaksonlaita (TUAS)

Ecological datasets at and around Seili

Macrobutterfly data

- Coordinates: 60°14'22.9"N 21°57'41.1"E
- Variables: species occurrence
- Time interval: From 1993 onwards,
- Sampling interval: every week (Tuesday), from April to October (night temperatures above 1 °C)
- Equipment: Light trap (Jalas) with 160W lamp
- Collected by: ARI & Biology Department of the University of Turku
- Collected for: SYKE/ELY Centre
- Data repository: SYKE open data repository & UTU server
- More information: Juha Pöyryä (SYKE), Kai Ruohomäki (UTU)

Blue mussel data

- Coordinates: 60°14'33.9"N 21°58'08.4"E (Seili coastal waters)
- Variables: blue mussel samples
- Time interval: open water season, 2011-
- Sampling interval: transect
- Equipment: epibenthic dredge

- Collected by: ARI
- Collected for: Pirjo Rantamäki (UTU)
- More information: Pirjo Rantamäki (UTU)

Blue mussel larvae data

- Coordinates: 60° 15' 18.9972" N, 21° 57' 3.744" E (Päiväluoto monitoring station)
- Variables: zooplankton abundance (ind./m³)
- Time interval: ca. 21th of every month, 2011-
- Sampling interval: 0-25 m
- Equipment: Standard plankton net (150 µm, mouth opening 30 cm)
- Collected by: ARI
- Collected for: Pirjo Rantamäki (UTU)
- More information: Pirjo Rantamäki (UTU)

Herring data

- Time interval: Annual, spring 1984 onwards
- Variables: length (cm), weight (g), sex (F/M), age, gonad stage, gonad weight, mesenteric fat (%), muscle lipid content (%), fatty acid composition, parasites, stomach content (adult & larvae), ovary fat content (%)
- Equipment: trap net catches & trawl samples
- Collected by: ARI
- Data repository: UTU server
- Open data: By agreement
- Website: <https://utu.fi/herringproject>
- More information: Jari Hänninen, Katja Mäkinen (UTU)

Zooplankton 1

- Coordinates: 60° 15' 18.9972" N, 21° 57' 3.744" E (Päiväluoto monitoring station)
- Variables: species occurrence and abundance (ind./m³)
- Time interval: ca. 21th of every month, 1967-1985
- Sampling interval: 0-25 m depth
- Equipment: Plankton net (150 µm, Ø 70 cm)
- Collected by: ARI
- Collected for: Former Finnish Marine Research Institute (MTL)
- Analysed by: FIMR
- Data repository: UTU, SYKE servers
- Open data: Baltic Sea zooplankton network/by agreement
- More information: Katja Mäkinen (UTU)

Zooplankton 2

- Coordinates: 60° 15' 18.9972" N, 21° 57' 3.744" E (Päiväluoto monitoring station)
- Variables: species occurrence and abundance (ind./m³)
- Time interval: ca. 21th of every month, 1991-
- Sampling interval: 0-25 m depth
- Equipment: Plankton net (150 µm, Ø 35 cm)

- Collected by: ARI
- Analysed by: Satu Zwerver (zwerver.fi)
- Data repository: UTU server
- Open data: Baltic Sea zooplankton network (1991-2013)/by agreement/ Pangaea: <https://doi.pangaea.de/10.1594/PANGAEA.701575> (1996-2006)
- More information: Katja Mäkinen (UTU)

Zooplankton 3

- Coordinates: 60° 15' 18.9972" N, 21° 57' 3.744" E (Päiväluoto monitoring station)
- Variables: species occurrence, abundance (ind/m³)
- Time interval: ca. 21th of every month, 2015-
- Sampling interval: 20-40 m depth
- Equipment: Closing plankton net (150 µm, mouth opening 30 cm)
- Collected by: ARI
- Analysed by: zwerver.fi
- Data repository: UTU server
- More information: Katja Mäkinen (UTU)

Radioactive substances in herring and pike (STUK)

- Sampling location(s): coastal waters of Seili
- Variables: radioactive Cs-137 and gammanucleotide's Sr-90, Pu-239 ja -240 concentrations
- Time interval: Annual, spring (pike) & autumn (herring), 1984, continuing
- Sample size: 5 kg of fish
- Equipment: fish nets
- Collected by: ARI
- Collected for: Radiation and Nuclear Safety Authority in Finland STUK
- Publications: Yearly reports from [Julkari](#) online publication
- More information: Veli-Pekka Vartti (STUK)

Tick abundances at Seili

- Time interval: every 2-3 weeks, approximately from April to October
- Sampling location(s): 15 lines across various habitats
- Sample size: 50 m line/station
- Equipment: drag cloth
- Collected by: ARI
- Collected for: UTU
- Data repository: UTU Server
- More information: Jani Sormunen, Jari Hänninen (UTU)

Occurrence of bat species at Seili

- Sampling location(s): Different habitats at Seili island
- Variables: species occurrence
- Time interval: April-October, 2015-
- Equipment: bat detector
- Collected by: ARI

- Collected for: Biology department/Biodiversity Unit UTU
- Data repository: UTU Server
- More information: Ville Vasko, Eero Vesterinen (UTU)

Occurrence of bird species at Seili

- Sampling location(s): Seili island
- Variables: species occurrence
- Time interval: January-December, 1981-
- Collected by: ARI staff and visiting researchers
- Collected for: ARI
- Data repository: UTU Server
- More information: Jasmin Inkinen (UTU)

Other

Weather data at Seili

- Coordinates: 60.239690 N, 21.961959 E (the roof of the main building at Seili)
 - Variables: outside temperature, humidity (%), Dew point (C), Wind chill (C), THW Index (C), Heat index (C), UV index, Solar radiation (W/m²), wind direction (°), 10 min average wind speed, wind speed, Barometer (hPa), day rain (mm), storm rain (mm), rain rate (mm/hr), month rain (mm), Year rain (mm)
 - Time interval: Year round since 2011
 - Equipment: Davis Vantage Pro 2 Plus
 - Collected by: ARI
 - Data repository: UTU server
 - Website: <https://saaristomeri.utu.fi>
 - More information: Katja Mäkinen (UTU)
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