

Catchment-scale aquatic C emissions

SND-ID: 2024-364. **Version:** 2. **DOI:** https://doi.org/10.48360/syr8-8f59_v2

Download data

Daily_aquatic_lateral_C_emissions_SRC.csv (41.79 KB)

Daily_aquatic_vertical_C_emissions_SRC.csv (47.32 KB)

Stream_DIC_concentrations.csv (911 bytes)

Stream_DOC_concentrations.csv (3.53 KB)

Stream_gas_concentrations_k_SRC.csv (27.53 KB)

Associated documentation

README.txt (2.23 KB)

Download all files

2024-364-2.zip (~123.3 KB)

Citation

Balathandayuthabani, S. (2024) Catchment-scale aquatic C emissions (Version 2) [Data set]. Linköping University. Available at: https://doi.org/10.48360/syr8-8f59_v2

Creator/Principal investigator(s)

Sivakiruthika Balathandayuthabani - Linköping University

Research principal

[Linköping University](#)

Description

The csv file "Daily_aquatic_lateral_C_emissions_SRC" contains the daily data of

- Stream discharge (missing data linearly interpolated) in L/s
- DOC load (with interpolated DOC concentrations, see main text) in mg C/s
- DIC load (with interpolated DIC concentrations, see main text) in mg C/s
- DOC export in Mg C/d (1 Mg = 10^6 g)
- DIC export in Mg C/d (1 Mg = 10^6 g)

The file includes data for days excluding freezing temperatures. NA indicates no data - during these days the lakes were covered with ice and the streams were frozen with little or no flowing water. NA days differed between lakes and streams as the lakes were covered with ice for longer time.

The csv file "Daily_aquatic_vertical_C_emissions_SRC" contains the daily data of

- Mean total CH₄ emissions in the three lakes in SRC (ebullition+diffusive flux; see main text) in mmol/m²/d
- Mean CO₂ emissions in the three lakes in SRC in mmol/m²/d
- Lake C emissions, from the three lakes in SRC in Mg C/d (1 Mg = 10^6 g)
- Mean CH₄ emissions in the streams of SRC in mmol/m²/d
- Mean CO₂ emissions in the streams of SRC in mmol/m²/d
- Stream C emissions from the stream network of SRC in Mg C/d (1 Mg = 10^6 g)

The file includes data for days excluding freezing temperatures. NA indicates no data - during these

days the lakes were covered with ice and the streams were frozen with little or no flowing water. NA days differed between lakes and streams as the lakes were covered with ice for longer time.

The csv file "Stream_DIC_concentrations" contains DIC concentrations measured in the station near the outlet of SRC, in μM . The file includes the dates when the measurements were made and other dates were omitted.

The csv file "Stream_DOC_concentrations" contains DOC concentrations measured in the station near the outlet of SRC, in mg/L. Multiple measurements were made in some days, and those are individual samples and not replicates. The file includes the dates when the measurements were made and other dates were omitted.

The csv file "Stream_gas_concentrations_k_SRC" contains mean values of the following (mean of all the measurements in the different stream reaches in SRC for the given day).

- measured pCO_2 in μatm
- measured CH_4 concentrations in μM
- modelled k values in m/d

NA indicates no data. See main text for details.

The dataset was originally published in DiVA and moved to SND in 2024.

Data contains personal data

No

Language

[English](#)

Data format / data structure

[Numeric](#)

[Text](#)

Contributor(s)

Marcus B Wallin - Swedish University of Agricultural Sciences, Department of Aquatic Sciences and Assessment

Leif Klemedtsson - University of Gothenburg, Department of Earth Sciences

Patrick Crill - Stockholm University, Department of Geological Sciences and Bolin Centre for Climate Research

David Bastviken - Linköping University

Identifiers

URN: [urn:nbn:se:liu:diva-170267](https://nbn-resolving.org/urn:nbn:se:liu:diva-170267)

Research area

[Earth and related environmental sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

Keywords

[Emissions](#), [Aquatic ecology](#)

Accessibility level

Access to data through SND
Data are freely accessible

Use of data

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

Versions

Version 2. 2024-08-22

[Version 1](#). 2020-10-07

This resource has the following relations

Obsoletes <urn:nbn:se:liu:diva-187114>

Download metadata

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

[Citation \(CSL\)](#)

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

Published: 2024-08-22