Beyond the Surface: a symposium on inland water greenhouse gas emissions

21st and 22nd of May, 2025
Aarhus Institute of Advanced Studies,
Conference Room 1630.301

Programme

Wednesday May 21st

08:30	Coffee and registration
09:00 – 09:30	Welcome and introduction with **Joachim Audet**

Keynotes and presentations

09:30 – 10:00	**Keynote by Peter Raymond** – 'Global Significance of Inland Waters'
10:00 – 10:20	**Presentation by Ronny Lauerwald** – 'Global Inland Water Greenhouse Gas Emissions: Patterns, Trends, and Anthropogenic Drivers'
10:20 – 10:40	Coffee Break
10:40 – 11:00	**Presentation by Alberto Borges** – 'Emissions of CO2, CH4, and N2O from African lakes and headwaters of the Amazon River'
11:00 – 11:20	**Presentation by Chris Evans** – 'The UK GHG-Aqua project – overview and some initial results'
11:20 - 11:40	**Presentation by Tonya del Sontro** – 'Trophic state, area, and system type determine aquatic methane variability globally'
11:40 – 12:15	Plenary discussion
12:15 - 13:00	Lunch

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13:00 – 13:40	Flash talks*
13:40 – 14:10	**Keynote by David Bastviken** – 'Small-scale versus integrated catchment patterns in aquatic network carbon gas fluxes.'
14:10 – 14:30	**Presentation by Ricky Mwanake** – 'From data to insights: Upscaling riverine GHG fluxes in Germany with machine learning'
14:30 – 14:50	**Presentation by Erik Sahlée** – 'Determining methane gas transfer velocity in lakes using eddy covariance'
14:50 -15:10	Coffee Break
15:10 – 15:30	**Presentation by Andreas Lorke** – 'Sediment Gas Storage: A Hidden but Crucial Regulator of Methane Flux Dynamics in Aquatic Systems'
15:30 - 15:50	**Presentation by Katrin Attermeyer** – 'Chasing bubbles: towards a standardized approach for quantifying methane ebullition in streams and rivers'
15:50 - 16:10	**Presentation by Sebastian Sobek** – 'Linking the properties of lake sediment to methane formation and emission '
16:10 - 16:50	Plenary discussion
16:50 – 17:45	Walk to Den Gamle By
17:45 – 21:00	Dinner in Den Gamle By

Thursday May 22nd

08:30 – 08:45	Intro and coffee
08:45 – 09:15	**Keynote by Meredith Holgerson** – 'Why are ponds biogeochemical hotspots? Exploring how waterbody size shapes greenhouse gas emissions '
09:15 – 09:35	**Presentation by Mike Peacock** - 'The full carbon balance of an urban pond'
09:35 – 09:55	**Presentation by Gretchen Gettel** - 'Water pans as hot spots for CH4 and N20 emissions in East-African dry lands'
09:55 – 10:15	Coffee Break
10:15 – 10:35	**Presentation by Mette Vodder Carstensen** - 'Exploring drivers of nitrous oxide dynamics in streams
10:35 – 10:55	**Presentation by Marcus Wallin** - 'Does peatland rewetting increase the source of carbon and greenhouse gases to inland waters?'
10:55 – 11:15	**Presentation by Tom Davidson** - 'Temporary thermal stratification and mixing drive variation in CO2 and CH4 dynamics in a shallow lake'
11:15 - 11:35	**Presentation by Charlotte Grasset** - 'Integrating littoral habitats of inland waters into the continental carbon cycle'
11:35-12:15	Plenary discussion
12:15 - 13:00	Lunch

13:00 – 13:30	**Keynote by Sarian Kosten** – 'Anthropogenic greenhouse gas emissions from inland waters: drivers and potential mitigation measures'
13:30 - 13:50	**Presentation by Janviere Tuyisenge** – 'Methane gas concentration and fluxes from cage fish farms in lakes Kivu and Muhazi-Rwanda'
13:50 – 14:10	**Presentation by Rachel Burns** – 'Methane and carbon dioxide dynamics in open water bodies of drained and rewetted forest peatlands'
14:10 -14:30	**Presentation by Annelies Veraart** - 'New insights into the microbial players controlling greenhouse gas emissions from aquatic ecosystems'
14:30 - 15:10	Plenary discussion
15:10 - 15:30	Coffee break and cake
15:30 - 16:00	Wrap-up, thinking forward, and goodbye

*Programme for Flash talks

Presenter	Title
Khadija Aziz	Spatiotemporal dynamics and controls of greenhouse gas emissions in agricultural ditches
Elizabeth Wanderi	Drivers of greenhouse gas emmisions in afrotropical shallow ponds – a case study of Narok county, Kenya
Sharon Gubamwoyo	Greenhouse gas dynamics in tropical highland valley-bottom wetland streams
Theresa Silverthorn	The importance of ditches and canals in global inland water CO2 and N2O budgets
Adam Rexroade	Hydrology Regulates Sources and Sinks of CO2 and CH4 in a tropical headwater stream
Quinten Struik	Macrophyte-associated methane oxidation strongly suppresses methane emissions from shallow freshwater systems
Christian Juncher Jørgensen	GlacierPro – autonomous methane profiler for marine terminating outlet glaciers.
Tuba Bucak	Sampling Frequency Matters: Capturing Temporal Variability in GHG Emissions with Low-Cost Sensors
Henrique Sawakuchi	The Effects of Water Column Dissolved Oxygen Concentrations on Lake Methane Emissions—Results From a Whole-Lake Oxygenation Experiment