

METTE BENDIXEN, assistant professor, McGill University

September 2022 – Curriculum Vitae

Department of Geography, McGill University
Burnside Hall 705
805 Sherbrooke St. W.
Montreal, Quebec, Canada, H3A 0B9

mail: mette.bendixen@mcgill.ca
phone: +1 438 378 9748
webpage: www.mettebendixen.com

EDUCATION

2017 PhD in Physical Geography – *Center for Permafrost* (CENPERM), University of Copenhagen (June 1)
2011 MSc in Geography and Geoinformatics, University of Copenhagen (October 14)
2009 BSc in Geography and Geoinformatics, University of Copenhagen (June 26)

CURRENT APPOINTMENT

Sep 2021– Tenure Track Assistant Professor, Department of Geography, McGill University, Canada

SCIENTIFIC APPOINTMENTS

Mar 2021– Sep 2021 Assistant Professor, Department of Food and Resource Economics, Uni. of Copenhagen
Mar 2019– July 2021 Research Fellow at the Institute of Arctic and Alpine Research (INSTAAR), Uni. of Colorado, Boulder. PI on the 'Warming Greenland' project funded by the Independent Research Council Denmark (2 yrs)
Mar 2018– Feb 2019 Research Fellow at the Institute of Arctic and Alpine Research (INSTAAR), Uni. of Colorado, Boulder. PI on PROGLAKE project funded by the Carlsberg Foundation. (11 months).
April 2018– Mar 2019 Researcher, Department of Geosciences & Natural Resource Management, Uni. Copenhagen. (4 months).
2017 Postdoctoral researcher at the Center of Excellence *Center for Permafrost* (CENPERM), Uni. of Cph. (2 months).
2017 Postdoctoral researcher at the project '*Differential vertical land movement at Greenland margins during the past ~10,000 years*', Uni. of Cph. (1 month).
2012–2017 Ph.D. student at Center of Excellence, *Center for Permafrost* (CENPERM). Uni. of Cph.

MAIN GRANTS AND PROJECT FUNDINGS

(Total amount as PI: CAD \$1.225.855/6.455.719dkk). Total as PI at McGill University (CAD \$650.602)

2022 NSERC (National Sciences & Engineering Research Council of Canada). PI (CAD\$187.000/1.066.000 dkk)
'Anthropogenic pressure on global sediment fluxes and reserves: Towards monitoring and documenting challenges and opportunities'
2021 Villum Foundation 'Villum Experiment'. PI (CAD\$303.000/1.528.922dkk)
'Drawing a line in the sand: Mapping sand mining in Africa for future sustainable usage'
2021 Carlsberg Foundation Reintegration Fellowship. PI. (CAD\$250.627/1.237.797dkk)
'Conflicts and Synergies on the increasingly populated African Continent'
2020 Carlsberg Foundation 'Research Infrastructure'. PI. (CAD\$17.210/85.000dkk).
'Including Indigenous Perspectives in Emerging Greenlandic Resource Exploration'
Independent Research Fund Denmark, Intl. Postdoctoral Fellow. PI. (CAD\$368.219/1.818.560dkk).
'Warming Greenland – The unknown role of proglacial lakes on coastal dynamics'.
2018 Carlsberg Foundation International Postdoctoral Fellow. PI. (CAD \$78.881/389.580dkk).
'PROGLAKE – Understanding the influence of proglacial lakes on coastal evolution in Greenland'.
2017 EUopSTART Project funding for PROGLAKE. PI. (CAD \$10.123/50.000dkk).
2015 Torben&Alice Frimodts Fond (CAD \$2.024/10.000 dkk) Participation in AGU Fall Meeting, San Francisco.

CAREER BREAKS IN RESEARCH

June 2014– June 2015: Maternity leave

METRICS

H-index (Sept 2022): 11 Number of citations: 489 (Sept 2022)

AWARDS

American Geophysical Fall Meeting 2020, 'Science for Solutions' award

The PhD-prize at SCIENCE 2018, Faculty of Science, University of Copenhagen, Denmark.

Nominated in 2017 for the most influential Danish scientific discovery (awarded by public scientific outlet Videnskab.dk).

TEACHING EXPERIENCE AND SUPERVISION

Supervision

2022-ongoing Co-supervisor PhD student Michelle Blade, Dept. of Geography, McGill University
2022-ongoing Supervisor MSc student Nicolas Dos Santos, Dept. of Geography, McGill University
2021-2022 Supervised two Master-thesis project in Physical Geography, University of Copenhagen
2016 Supervised one Master-thesis project in Physical Geography, University of Copenhagen
2013-2014 Co-supervision of five BSc-thesis project in Physical Geography, University of Copenhagen

Courses and teaching

McGill University

2022 Course instructor GEOG514 'Climate Change Vulnerability and Adaptation'
Course instructor GEOG272 'Earth's Changing Surface'
Guest Lecturer GEOG631 'Methods of Geographical Research'
Guest Lecturer at Lund University, MSc course GEON 'Global Environmental Change from a Geological Perspective'
Course instructor GEOG396 'Undergraduate Research Project'
2021 Guest Lecturer GEOG631 'Methods of Geographical Research'

University of Copenhagen

2021 Lectured in the graduate course 'Fluvial and Estuarine Geoscience'
2018 Lectured in the introductory course 'Human and Physical Geography' in Denmark
2016 Lectured a course on Physics under the topic 'Polar Research Expeditions' at the *Danish Uni. Extension*
2016 Lectured in interdisciplinary Master program 'Climate Change' combining social and natural science
2013 + 2014 Lectured undergraduate field-course in 'Physical Geography' in Denmark
2013 Lectured graduate field-course in 'Physical Geography' in Greenland

OUTREACH ACTIVITIES

Public outreach is important in my work. On average, I give interviews to the global media more than once a month and have done so since early 2019, spanning tv, radio, web medias and podcasts. Examples of media outreach featuring my work are e.g. National Geographic, The Independent, Washington Post, The Economist, Reuters, Foreign Policy, Der Spiegel and Al Jazeera. On 4th of July 2019, my research was featured on the front page of the NY Times.

PROFESSIONAL SERVICES & MANAGEMENT EXPERIENCE

Committee Chair, management and organizer

Sept 2022 - Co-chair of McGill Senate Sub-Committee on Women (SSCOW), McGill University
Sept 2021 - Undergraduate Affairs Committee, member, Department of Geography, McGill University
2019-2021 Head of Funding and Finance in Danish Society for Women in Science (DANWISE)
2018-2019 Organizer of the Institute of Arctic and Alpine Research seminar series, University of Colorado, USA
2007 - I have participated in eight field-campaigns in the Arctic, of which I have been in charge of the planning and logistics of five.

Journal Peer Review

Arctic, Antarctic, and Alpine Research (AAAR), Frontiers in Earth Science, Geologos, Geology, Journal of Industrial Ecology, Nature, Nature Climate Change, Nature Communications, Nature Geoscience, Nature Sustainability, Ocean Dynamics, Permafrost and Periglacial Processes, Remote Sensing, Water.

Conference Chair

Chairing American Geophysical Union Fall meeting 2022 session C010 'Arctic Coastal Dynamics: Rates, Impacts, Hazards, and Implications for the Future'

Chairing American Geophysical Union Fall meeting 2021 session C44A 'Arctic Coastal Dynamics: Rates, Impacts, Hazards, and Implications for the Future'

Service

2022 (Aug) Invited speaker at Welcome meeting for incoming BA & Sc students

2022 (Aug) Invited speaker for Networking Session 'Dual Couple Careers – Spousal hiring' PROMOTE CREATE

2022 (June) Invited speaker McGill Alumni Association

2022 (May) Invited speaker for Faculty of Science Townhall Panel Discussion on 'Teaching during the Pandemic'

2021 (Oct) Presenter 'Soup & Science' McGill Welcome event

INVITED SCIENTIFIC PRESENTATIONS

8. Bendixen, M. (2020): Global sand scarcity – Conflicts and Synergies with an increasingly populated world. London School of Hygiene and Tropical Medicine. Online seminar, May 14, 2020.
7. Bendixen, M. (2019): Can coastal changes in Greenland create prosperity for the country? American Geophysical Union, AGU Fall Meeting, San Francisco, December 8, 2019
6. Bendixen, M. (2019): Sand – an overlooked resource. Greenland Science Week, Nuuk, Greenland December 3, 2019.
5. Bendixen, M. (2019): Can coastal changes in Greenland create prosperity locally? Ilisimatusarfik, University of Greenland, Nuuk, Greenland June 3, 2019.
4. Bendixen, M. (2017): Greenland in a changing climate – coastal response to climate change. Association for Arctic Research and Technology (SAFT). Yearly SAFT conference, Copenhagen, Denmark, November 14, 2017.
3. Bendixen, M. (2017): Greenland in a changing climate – coastal response to climate change. Society for Medicine in Greenland. Yearly conference, Copenhagen, Denmark, November 18, 2017.
2. Bendixen, M. (2014): Coastal Evolution in Sedimentary Areas in Greenland. DANCORE Young Professionals Day, Copenhagen, Denmark, April 4, 2014.
1. Bendixen, M. (2012): Berms, Beach Ridges and Swales – Formation, Characteristics, and Implications for Sea-level Studies. DANCORE Young Professionals Day, Copenhagen, Denmark. March, 9 2012.

- *16. **Bendixen, M.** Nielsen, RL, Plesner, JL and Minor, K. (2022) Opportunistic climate adaptation and public support for sand extraction in Greenland. *Nature Sustainability* 2 (2), 98–104.
- *15. Irrgang, A.M. **Bendixen, M.** Farquharson, L.M. Baranskaya A.V. Gibbs, A.E. Erikson, L.H. Ogorodov, S.A. Grigoriev, M.N. Overduin, P. Lantuit, H. Jones, B.M. (2022) Permafrost coastal dynamics in the twenty-first Century Arctic. *Nature Earth & Environment Reviews*.
- *14. **Bendixen, M.**, Iversen, L.L., Best, J., Franks, D., Hackney, C., Latrubesse, E. & Tusting, L. (2021) Sand, gravel, and UN Sustainable Development Goals: Conflicts, synergies and pathways forward. *One Earth*, Vol. 4. Issue 8, 1095–1111.
13. Jones, B. M. Irrgang, A. M. Farquharson, L. M Lantuit, H. Whalen, H. D. Ogorodov, S. Grigoriev, M. Tweedie, C. Gibbs, A. E. Strzelecki, M. C. Baranskaya, A. Belova, N. Sinitsyn, A. Kroon, A. Maslakov, A. Vieira, G. Grosse, G. Overduin, P. Nitze, I. Maio, C. Overbeck, J. **Bendixen, M.** Zagórski, P. Romanovsky V. E. (2020): Coastal Permafrost Erosion. *Arctic Report Card* in R. L. Thomas, J. Richter-Menge, and M. L. Druckenmiller, DOI: 10.25923/e47w-dw52
12. **Bendixen, M.**, Best, J., Hackney, C., Iversen, L. L. (2019): Time is running out for sand. *Nature*, 571, 29–31. DOI: 10.1038/d41586-019-02042-4
11. **Bendixen, M.**, Overeem, I., Rosing, M., Bjørk A.A., Kjaer, K.H., Kroon, A., Zeitz, G., Iversen, L.L. (2019): Promises and Perils of Sand Exploitation in Greenland. *Nature Sustainability* 2, 98–104. DOI: 10.1038/s41893-018-0218-6
10. **Bendixen, M.**, Iversen, L.L., Overeem, I. (2017): Greenland: Build an economy on sand. *Science* 358, p.879. DOI: 10.1126/science.aar3388
9. **Bendixen, M.*.**, Iversen L.L*., Bjørk A.A., Elberling B., Westergaard-Nielsen A., Overeem I., Barnhart K., Khan S.A., Box J.E., Abermann J., Langley K. and Kroon A. (2017): Delta progradation in Greenland driven by increasing glacial mass loss. *Nature* 550, p. 101–104 [*contributed equally]. DOI:10.1038/nature23873
8. Nielsen, L., **Bendixen, M.**, Kroon, A., Hede., M-U., Clemmensen, L., Wessling, R., Elberling, B. (2017): Sea-level proxies in Holocene raised beach ridge deposits (Greenland) revealed by ground-penetrating radar. *Scientific Reports* 7. DOI:10.1038/srep46460
7. **Bendixen, M.** & Kroon, A. (2017): Conceptualizing Delta Forms and Processes in Arctic Coastal Environments. *Earth Surface Processes Landforms*, Vol. 42, Issue 8, p. 1227–1237. DOI: 10.1002/esp.4097
6. Kroon, A., Abermann, J., **Bendixen, M.**, Lund, M., Sigsgaard, C., Skov, K., Hansen, B-U. (2017): Deltas, Fresh Water Discharge and Waves along the Young Sound, NE Greenland. *AMBIO*, Vol. 46 (Suppl. 1): 132. DOI:10.1007/s13280-016-0869-3
5. Clemmensen, L. B., **Bendixen, M.**, Hede, M-U., Kroon, A., Nielsen, L., Murray, A. (2014): Morphological Records of Storm Floods Exemplified by the Impact of the 1872 Baltic Storm on a Sandy Spit System in South-eastern Denmark. *Earth Surface Processes Landforms*, Vol. 39, No. 4, p. 499–508. DOI: 10.1002/esp3466
4. **Bendixen, M.**, Clemmensen, L. B., Kroon, A. (2013): Sandy Berm and Beach-ridge Formation in relation to Extreme Sea-levels: a Danish Example in a Micro-tidal Environment. *Marine Geology*, Vol. 344, p. 53–64. DOI: 10.1016/margeo.2013.07.006
3. Hede, M-U., **Bendixen, M.**, Clemmensen, L. B., Kroon, A., Nielsen, L. (2013): Joint Interpretation of Beach-ridge Architecture and Coastal Topography show the Validity of Sea-level Markers Observed in Ground-Penetrating Radar. *The Holocene*, Vol. 23, No. 9. DOI: 10.1177/095968361348618
2. Clemmensen, L-B., Nielsen, L., **Bendixen, M.**, Andrew, M. (2012): Morphology and Sedimentary Architecture of a Beach-ridge System (Anholt, the Kattegat Sea): A Record of Punctuated Coastal Progradation and Sea-level Change over the Past ~1000 Years. *Boreas*, Vol. 41, No. 3, p. 422–434. DOI: 10.1111/j.1502-3885.2012.00250.x

1. Clemmensen, L-B., **Bendixen, M.**, Nielsen, L., Jensen, S., Schrøder, L. (2011): Coastal evolution of a cusate foreland (Flakket, Anholt, Denmark) between 2006–2010. *Bulletin of Geological Society of Denmark*. Vol. 59, p.37–42.

PUBLICATIONS IN REVIEW

Bendixen, M. Iversen L., Kanhema, T. (2022) Map the streets of Africa. *Nature sustainability*. (resubmitted September 2022 with major revisions).

G. Luetzenburg, D. Townsend, K. Svennevig, **M. Bendixen**, A. A. Bjørk, E. F. Eidam and Aart Kroon (2022) Drivers of soft sediment Arctic coastal cliff erosion in West Greenland. In review in *JGR Earth Surface* since July 2022.

K. Minor, M. Lund-Jensen, L. Hamilton, **M. Bendixen**, D. Dreyer Lassen, M. Rosing. Awareness of Anthropogenic Climate Change in Greenland. To be submitted in Fall 2022.

Bendixen, M. Hackney, C. Iversen, L.L Best, J. (2021) Mining the world's rivers: environmental and social impacts, and the need for sustainability (**book chapter**) in *Minerals under water* (in review since July 2022).

Meehan, C.F. Høg Utoft, E. Parsons, C. Hall, V.J. **Bendixen, M.** Vogel, I. Gill, K.P. Louth, E. (2021): Impact of the first COVID-19 lockdown on scientific productivity and workload in Denmark: a gender analysis. *Gender Work & Organization* (re-submitted in January 2022 with major revisions).

PUBLICATIONS IN SCIENTIFIC JOURNALS RELATED TO EQUITY, DIVERSITY & INCLUSIVITY (EDI)

5. Ward, M. & **Bendixen, M.** (2022): 'It's time to make science in remote places family-friendly'. *Nature*. DOI: <https://doi.org/10.1038/d41586-022-02048-5>

4. **Bendixen, M.** & Hall, V. (2020): 'How the pandemic could choke gender equity for female researchers in Denmark'. *Nature*, DOI: [10.1038/d41586-020-02527-7](https://doi.org/10.1038/d41586-020-02527-7)

3. **Bendixen, M.**, Meehan, C., Hall, V.J., & Vogel, I. (2019): Denmark's exemplary gender balance trips up in science. *Nature*, 572, 178. DOI: [10.1038/d41586-019-02369-y](https://doi.org/10.1038/d41586-019-02369-y)

2. Iversen, L. L. & **Bendixen, M.** (2019): 'One couple, two cities: How to handle an international career move'. *Nature*, DOI [10.1038/d41586-019-00582-3](https://doi.org/10.1038/d41586-019-00582-3)

1. Iversen, L. L. & **Bendixen, M.** (2018): Funding agencies can prevent harassment. *Science* 361, p. 140. DOI: [10.1126/science.aau3979](https://doi.org/10.1126/science.aau3979)