

Rachael Treharne

Address: 12 Randolph Street
Oxford
OX4 1XY
Mobile: +447788765609

Email: rachael.treharne@gmail.com
Twitter: @RachaelTreharne
LinkedIn: [linkedin.com/in/rachael-treharne/](https://www.linkedin.com/in/rachael-treharne/)

EDUCATION:

- 2014 – 2018 **University of Sheffield, PhD Arctic Ecology: ‘Arctic Browning: impacts of winter climate change on vegetation and carbon balance in high latitude ecosystems’.**
- Assessed impacts of extreme events linked to winter climate change on ecosystem carbon balance.
 - Using a combination of fieldwork campaigns, laboratory work and statistical modelling and analysis.
 - Supervised by Dr Gareth Phoenix (University of Sheffield), Dr Jarle Bjerke and Dr Hans Tømmervik (Norwegian Institute for Nature Research) and Dr Lisa Emberson (University of York).
- 2010-2014 **University of Sheffield, MBIoSci Biology (first class integrated master’s degree).**
- Main subjects covered: Ecosystem and Landscape Ecology, Global Change, Sustainable Agro-ecosystems, Conservation Biology, Plant Physiology and Habitats, Biodiversity and Evolution.
 - Master’s thesis assessed the impacts of wildfire on boreal forest nitrogen stocks, finding potential for changing fire regimes to enhance progressive nitrogen limitation.
 - Awarded the Ian Rorison memorial prize for plant science research and third prize in the 2014 AGU undergraduate research showcase.

EMPLOYMENT

- From: **Woods Hole Research Center: Postdoctoral Researcher**
April 2020
- Postdoctoral position working on carbon cycling in Arctic and boreal environments and leading the field component of the Arctic Carbon Monitoring and Prediction System project. This project will improve coverage of on-the-ground monitoring of changing Arctic landscapes while strengthening process-level understanding of drivers of change including permafrost thaw and wildfire.
 - Program of work includes measurement of CO₂ and CH₄ fluxes from wetlands and peat uplands in the Yukon Kuskokwim Delta of Alaska, using both chamber based and eddy covariance approaches.
- Jan 2019 - present **ClimateCare: Carbon Portfolio Manager (June – present)**
- Carbon market facing role requiring a thorough knowledge of compliance and voluntary market mechanisms at UK, EU and international level. Responsibilities include:
- Creating and managing portfolios of verified emission reductions for sophisticated carbon market participants and for large corporates looking to take responsibility for their residual carbon footprint.
 - Identifying project and carbon asset development opportunities related to natural climate solutions (NCS), with particular responsibility for UK woodland creation and ecosystem restoration.
 - Supporting advocacy related to NCS in the UK, including engaging with the Woodland Carbon Code and working with third sector organizations to call for a UK market mechanism to support NCS.
- Marketing and Communications Executive (January – May)**
- Responsible for tracking climate change science and policy developments and for producing relevant, timely and engaging content to position ClimateCare as a sector expert.
 - Independently managed the launch of new website and brand positioning.
- Oct-Dec 2018 **Institute for European Environmental Policy: Agriculture and Climate Policy Intern**
- Tracked reform of the Common Agricultural Policy.
 - Developed internal resources demystifying the process of EU legislative reform.

- Undertook research and analysis relating to climate change mitigation options in the land sector.

2017 – **Hope for the Future: Climate Change Policy Intern**

- Worked with constituents and Members of Parliament to help deliver effective advocacy.
- Provided support on environmental and climate change policy at UK and EU level, including by researching and writing briefings on key issues and policy developments.

2016–2017 **BirdLife International: Climate Change Policy Intern**

- Supported engagement with the 22nd Conference of the Parties to the UNFCCC (COP22) through research, policy analysis and internal and external communications.
- Joined the BirdLife delegation at COP22 to track negotiations and help organise a side event.
- Supported development of a Ecosystem-based Adaptation plan for the Americas including by co-authoring a concept note and grant application.
- Independently researched and wrote a policy brief and position on loss and damage.

2013 – **CYCLOPS (Carbon Cycle Linkages in Permafrost Systems), field assistant**

- Joined a team of postdoctoral scientists to assist with data collection during two three-month field campaigns in boreal forest areas in the Yukon Territory and the North West Territories.
- Learned to independently collect measurements of ecosystem, vegetation and soil CO₂ fluxes, vegetation characteristics including LAI and NDVI, and soil and vegetation samples.

ADDITIONAL SKILLS:

COMMUNICATION

- Extensive public speaking experience, including as a speaker at TEDx Bonn Square 2019 and as a University finalist in the international ‘Three Minute Thesis’ communication challenge.
- Confident and experienced in writing for varied audiences in order to engage, inform and persuade.
- Experience working with the media including writing press releases, working with journalists to support print and online articles, and participating in interviews for radio and TV.
- Trained in negotiation with three years of part-time experience in telephone fundraising.

CRITICAL AND QUANTITATIVE ANALYSIS

- Highly proficient in critical analysis and review and in advanced data analysis and visualisation.
- Experienced in remote field work, requiring an ability to self-motivate and work adaptively to strict deadlines.
- Highly computer literate with advanced knowledge of Microsoft Office and the programming language R.

TEAMWORK

- Experience working in international and interdisciplinary teams throughout research and professional career.
- Member of the Athena SWAN action committee for two years while a PhD student, helping to implement and monitor an action plan to promote workplace equality and the representation of women in STEM.
- Worked with teams of scientists and campaigners to deliver public outreach activities.

LEADERSHIP

- Regularly lead on corporate client or carbon market participant accounts at ClimateCare, as well as on NCS-related outreach, sourcing and project development activities as required.
- Independently managed the Marketing, Communication and PR function at ClimateCare while in a trainee role due to a recruitment gap, successfully driving brand and website relaunch alongside maintaining core activities.
- Co-chaired the Carbon Neutral University network (2015-2018); a collaboration of more than 300 students, staff and members of the public committed to encouraging The University of Sheffield to become carbon neutral.

PUBLICATIONS:

Treharne R, Bjerke JW, Tømmervik H, Phoenix GK (2020). Development of new metrics to assess and quantify climatic drivers of extreme event driven Arctic browning. Manuscript accepted, Remote Sensing of Environment.

Treharne R, Bjerke JW, Tømmervik H, Phoenix GK. Extreme event impacts on CO₂ fluxes across a range of high latitude, shrub-dominated ecosystems. Manuscript in preparation.

Myers-Smith IH, Kerby JT, Phoenix GK, Wipf S (2020). Complexity revealed in the greening of the Arctic. Nature Climate Change, 10, 106–117.

Nanni S, Allen B, Riera A, Treharne R, Meredith S and Bowyer C (2020) Discussion paper on the determination of sustainability criteria for deforestation, degradation and conversion-free, and human rights compliant agriculture and forestry commodities and products to be placed on the EU market. Institute for European Environmental Policy (IEEP), London.

Treharne R, Bjerke JW, Tømmervik H, Stendardi L, Phoenix GK (2018). Arctic browning: Impacts of extreme climatic events on heathland ecosystem CO₂ fluxes. Global Change Biology, 25, 489–503.

Estop-Aragonés C, Cooper MDA, Fisher JP, Thierry A, Garnett MH, Charman DJ, Murton J, Phoenix GK, Treharne R, ... Hartley IP (2018). Limited release of previously-frozen C and increased new peat formation after thaw in permafrost peatlands. Soil Biology and Biochemistry, 118, 115-129.

Bjerke JW, Treharne R, Vikhamar-Schuler D, Karlsen SR, Ravolainen V, Bokhorst S, Phoenix GK, Bochenek Z, Tømmervik H (2017). Understanding the drivers of extensive plant damage in boreal and Arctic ecosystems: Insights from field surveys in the aftermath of damage. Science of the Total Environment, 599-600, 1965-1976.

Cooper MDA, Estop-Aragonés C, Fisher JP, Thierry A, Garnett MH, Charman DJ, Murton J, Phoenix GK, Treharne R, ... Hartley IP (2017). Limited contribution of permafrost carbon to methane release from thawing peatlands. Nature Climate Change, 7, 507-511.