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Dear Defra Consultation Team,

We write to you in regard to the consultation on Heather and Grass Burning and the suggestion to change the depth over which burning may not be undertaken thus expanding the area under new regulations to 368,000 hectares in England.

We are a group of academics currently undertaking a 5-year £2.5 million research project funded by the UKRI (NERC) specifically looking at the impact of different land management interventions on heathlands and moorlands. This includes the following:

- 1) Assessing the influence of prescribed fires/rotational burning on soil surface and sub-surface temperatures
- 2) Assessing the variability in impact of mowing, cutting, burning and no intervention on plant, insect and bird biodiversity
- 3) Assessing the variability in impact of mowing, cutting, burning and no intervention on carbon fluxes and long-term carbon dynamics
- 4) Determining the variability in wildfire behaviour that may result in areas treated with different interventions (mowing, cutting, burning, no intervention/rewilding)
- 5) Determining what the power of different mosaic patchworks is to influence subsequent wildfire spread and mitigate fire severity.
- 6) Determine using next generation modelling the long-term carbon effects and or benefits of different interventions on the UKs overall carbon budget surrounding these ecosystems aiming to better target NetZero agendas.
- 7) Using this information, we will also develop and provide Lantra approved training schemes that will improve training in wildfire, prescribed fire and other land management approaches. With the aim to upskill the land management sector to protect these important habitats. These build on recent training developed in collaboration with Defra and the Forestry Commission.

In addition, part of the team is now finalising a Natural England Evidence Review on Fire Adaptations of Heathland and Moorland Species which determines whether some species need fire and how often they may require it. Also, essential evidence required for the decision to expand the no burn area.

We felt it pertinent to draw this research to your attention at this time, as the project will produce a large amount of new information that will be at the forefront of global knowledge surrounding different management interventions in our important peatland regions. We therefore feel that it would be more timely to reach a final decision on the change to the area under which fire management practices may be removed after this government funded research has been completed.

At present we do not feel that there is sufficient evidence to set aside the use of burning as a management tool over this proposed expanded area and push landowners towards other intervention types. Not least because there has not been enough research to consider the full impact of other intervention types, which could at this point in time, do more harm than good.

We would be very happy to discuss in more detail the plans and any current findings and results from this research with DEFRA in advance of any final decisions being made. Our project will produce the highest quality and most in depth dataset and our aim with this research is to determine the best way to protect our peatlands, their long-term function, resilience, biodiversity and carbon stores.

Yours faithfully

*The IDEAL UK Fire Research Team*

*Prof Nick Kettridge, Peatland Ecohydrology, University of Birmingham*

*Prof Claire Belcher, Wildfire Lab, University of Exeter*

*Prof Stefan Doerr, Centre for Wildfire, Swansea University*

*Dr Laura Graham, Ecology and biodiversity, University of Birmingham*

*Dr Andreas Heinemeyer, Ecosystem Ecology, University of York*

*Prof Kevin Gaston, Biodiversity and Conservation, University of Exeter*

*Dr Kerry Little, Wildfire, University of Birmingham*

*Dr Sarah Baker, Wildfire Lab, University of Exeter*

*Dr Joe Wayman, Ecology and biodiversity*

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