Flood, Fire & Sphagnum

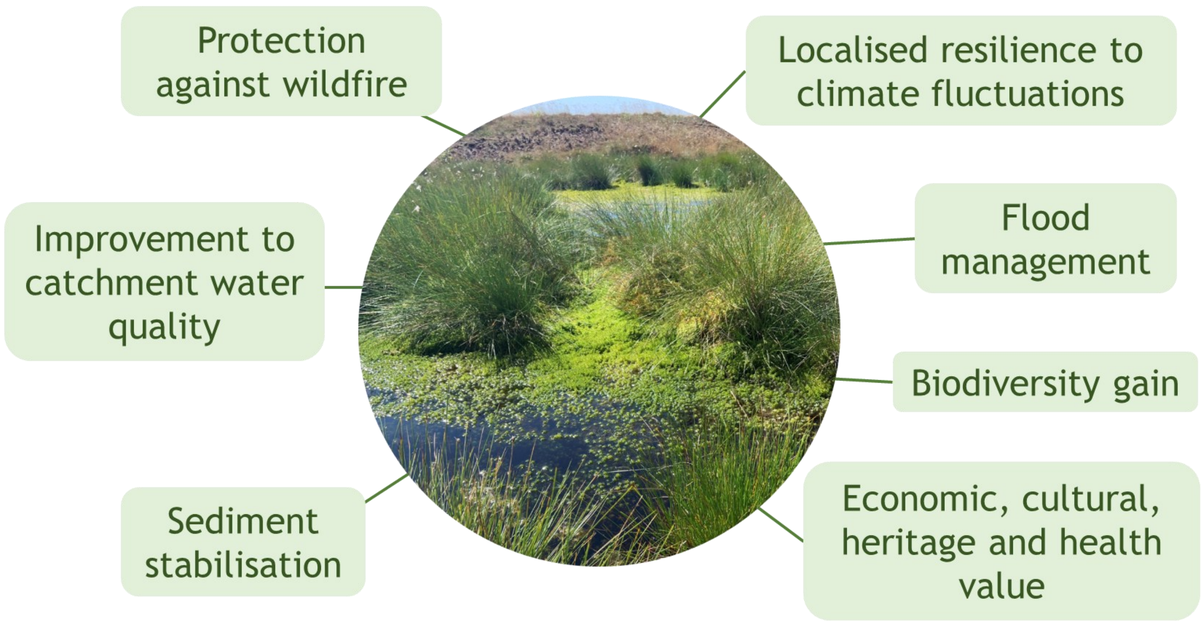
Benefits of Micropropagated Sphagnum Moss for Peatland Restoration

Micropropagated BeadaMoss® Sustainable Sphagnum

Sphagnum BeadaHumok®

BeadaHumok® are sustainably produced multi species Sphagnum moss plugs developed for optimal establishment and growth

Micropropagation process eliminates the need for damaging wild-harvesting practices



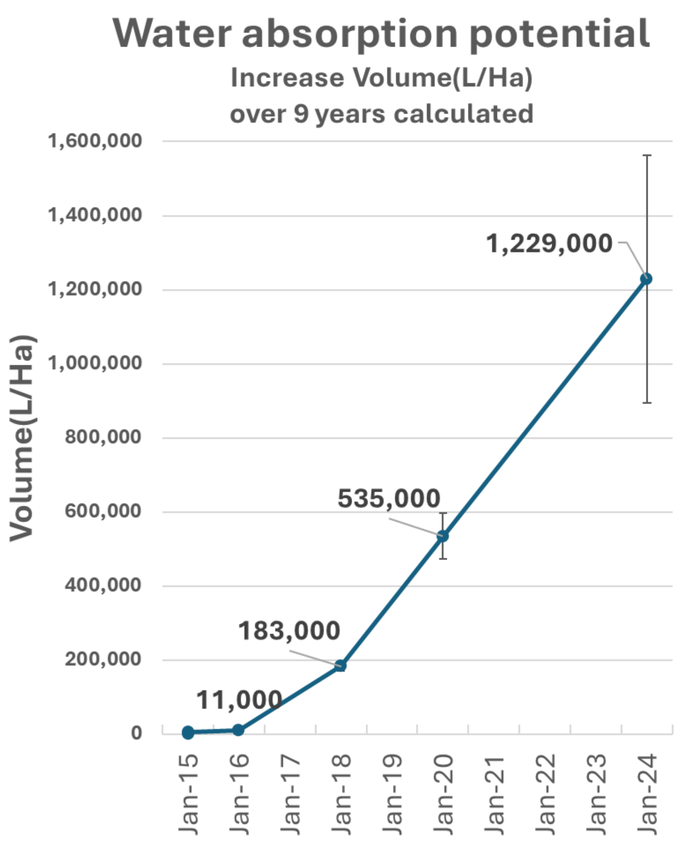




- **>25 million supplied to peatland restoration projects**
- Glasshouse grown - 100% Peat Free
- Multiple Sphagnum species for targeted restoration
- Resilient and rapid establishment and growth
- Easy to transport and plant
- Free of pests and disease
- Sustainable production methods

Natural Flood Management

- The ability of sphagnum to retain 20x its weight in water slows the flow through peatland catchments
- Reduces the frequency and severity of flooding as well as improving water quality
- Conducting catchment-scale trials planting Sphagnum plugs at 4 and 8/m² over four 1ha catchments to substantiate evidence from trials on Kinder Scout at scale (2025-30)
- Alternative solution to costly flood prevention infrastructure with considerably cheaper initial capital expenditure - provides a permanent natural flood management effect which increases in efficiency over time and provides resilience against climate change



Moors for the Future Kinder Scout high density planting trial - 9yr dataset 2015-2024

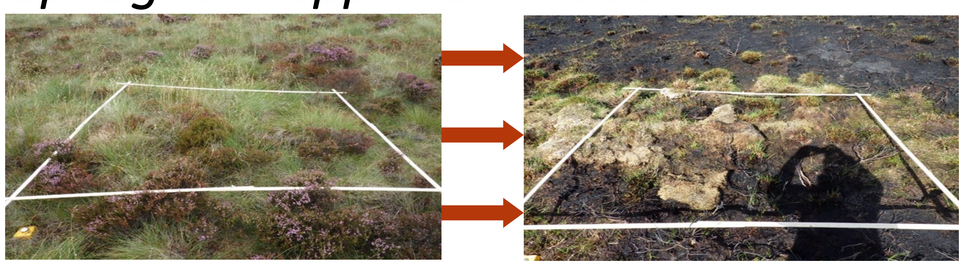
Wildfire Risk Reduction and Resilience

- Post-wildfire monitoring suggests significantly higher chances of survival and recovery in densely Sphagnum dominated areas
- Provides protection for other flora and fauna on sites to prevent total loss of seedstock = faster recovery & improved **biodiversity**
- Maintenance of water table in unburnt Sphagnum dominated areas = faster recovery and reduced fire severity.

Calluna vulgaris Domination



Sphagnum spp. Domination



Images provided by the Moors for the Future Partnership- 2018

Restoration with BeadaHumok® in Region Hannover

- To date, 80,000 mixed species Sphagnum BeadaHumok plugs have been planted as part of the government-supported project “Insekten beleben Moore” (“InsMoor” – Insects Enliven Bogs)
- Sphagnum source material originated from rare samples collected directly at the project site (Totes Moor) ensuring strong local provenance. Species selection focused on resilience across a broad range of hydrological conditions
- When planted in favourable hydrological conditions exceptional growth was observed, with some Sphagnum patches reaching diameters of up to 45 cm within two years
- **“BeadaMoss® plugs grown from local material have been invaluable in reintroducing Sphagnum species to former peat extraction areas.”** - Project Site Manager, Insekten beleben Moore

Leibniz Universität Hannover · Region Hannover · Biologische Vielfalt – Das Bundesprogramm · INS MOOR

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