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## Sphagnum regeneration on Irish Cutaway Peatlands

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Bord na Móna currently operates on 7%, or up to 80,000ha, of Irish peatlands spread across 130 bogs. The majority of these have been developed for peat production, from which 4 million tonnes of milled peat are harvested each year mainly for the energy sector and the horticulture and fuel markets. Under IPPC (Integrated Pollution Prevention Control) licensing, issued and regulated by the Environmental Protection Agency (EPA), Bord na Móna is required to develop rehabilitation plans for all peat production areas. For the most part, both the upper horticultural and lower peat layers are removed, leaving the underlying fen peat exposed as in the Lough Boora Parklands, County Offaly. However, in some horticultural bogs in the eastern counties of Ireland, there may not be a market for the extraction of the fuel peat into the future and deeper, acidic cutaway bog areas would remain.

The goal of this study is to investigate the potential of Sphagnum moss cultivation as a rehabilitation solution with possible commercial applications for these deeper cutaway bogs. Sphagnum cultivation has already been identified as a successful technique for rehabilitation of cutaway peatlands and as a sustainable after-use in North America and Europe. Trial regeneration plots of Sphagnum under Irish conditions are currently being established on a horticultural cutaway peatland in County Kildare. The target Sphagnum species in this investigation are *S. palustre*, *S. subnitens* and *S. cuspidatum*. Techniques involve active re-introduction of Sphagnum diaspores, straw cover for protection, water management and monitoring. Results will determine optimal parameters for regeneration under local conditions and inform future trials.