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### **The rehabilitation of peatlands in France using the dry restoration approach: possibilities and limitations.**

In Central Europe, the rehabilitation of peatlands often proceeds by rewetting the abandon peat fields which without further intervention are colonised and dominated by *Sphagnum cuspidatum*, *Eriophorum spissum* and/or *Juncus effusus*. This is an effective approach as the surface of abandon peat fields are for a good part of the year below the regional water table and thus can be easily rewetted. In other cases, the exploitation of raised bogs for supplying horticulture peat do not extract the fen peat layers thus leaving residual raised peat massif above the regional water table. For such cases, which are common in North America, we have developed a restoration approach which does not require flooding hence the term “dry restoration approach”. Briefly, the six steps of this dry restoration method are: 1. Surface preparation, to remove biological crusts and flatten the surface; 2. Collection and transport of plant material to the site to be restored; 3. Spread of the moss material at the ratio of 1: 12 or 15; 4. Protection of the newly reintroduced moss material with a straw mulch; 5. Fertilisation if the site is known to be prone to frost heaving and 6. Blocking of the former drainage system to rewet the site. Can this approach be easily transferred to situations in France?

As surfaces to be restored in France are usually smaller there often might be less possibilities to work with heavy machineries but the dry restoration method can definitively be applied manually to the restoration of sites in the order of 1 ha or less. This approach can thus be ideal for small pocket of wetlands to be restored in National Parks or ecological reserves. Still one small machine will be needed to build the peat dams for the final rewetting stage. One of the main limitations to apply the dry restoration approach in Central Europe is the need of *Sphagnum* moss material for reintroduction as they are no vast expanse of *Sphagnum* carpets outside ecological reserves. One solution is to grow regionally its own moss material needed for restoration. The production of such material is currently being tested in Canada and Germany. We believed that material produce on a *Sphagnum* farm can be ready for reintroduction within 3 to 4 years. Because of the great regeneration potential of the peatland mosses, the restoration of any dry peat remnants should be attempted and if successful these restored disturbed peatlands can become interesting ecological reserves for rare plants or increasing the biodiversity in wetland plants of a given region.