Past, present and future of monitoring of raised bogs in Ireland by National Parks & Wildlife Service

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1.1- High Bog Vegetation Surveys - Ecotopes

1 - Central
2 - Sub-central
3 - Sub-marginal
4 - Marginal
5 - Facebank
1 - Clara bog SAC – Community complexes map 2009

3 - Clara bog SAC – Ecotopes changes 2009 - 2016

2 - Clara bog SAC – Ecotopes map 2009
2.1 Habitats Directive (92/43/EEC) – Article 11 & 17

Monitoring only of high bog habitats
EU habitats: 7110, 7120, 7150 & 91D0
2.2- The Living Bog Project (http://raisedbogs.ie/)

- 12 SAC raised bogs
- High Bog and cutover

A- Ecological-Habitat Monitoring

- Before & after restoration works
- Assessment of restoration results
- Hydro-topographical modelling
- Detailed ecotopes and cutover habitats mapping
- Quadrats

B- Hydrological Monitoring

- Before & after restoration works
- Assessment of restoration results
- Hydro-topographical modelling
- Runoff - flumes
- Water table
- Quadrats

Ecosystem services related to water storage, quality and carbon sequestration
2.3- Additional Work

- Clara Bog SAC and Abbyleix Bog – integrated ecohydrology and GHG monitoring project
- GHG emissions associated with high bog and cutover vegetation

*EPA Research Report.*
*Regan et al., 2019*
3.1- New Monitoring Programme

A - Not only driven by Habitats Directive but also National Climate Change Action Plan & International Commitments (LULUCF)

B- Eco-hydrologist working full time in NPWS

C- Challenges:
- Limited resources
- Evolving technology: Remote sensing
- Need for multidisciplinary approaches (Ecologists + Hydrologists + Climate scientists + Remote sensing specialists)

Thanks for your attention