

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



**IUCN Peatland Programme Conference**  
**Peatlands: Investing in the Future**  
**(Belfast October 2019)**

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03/10/2019



An Roinn Cultúir,  
Oidhreacht agus Gaeltachta  
Department of Culture,  
Heritage and the Gaeltacht



## 1 – PAST

### 1.1- High Bog Vegetation Surveys - Ecotopes

1- Central



2 - Sub-central



3 - Sub-marginal



5 - Facebank



4 - Marginal

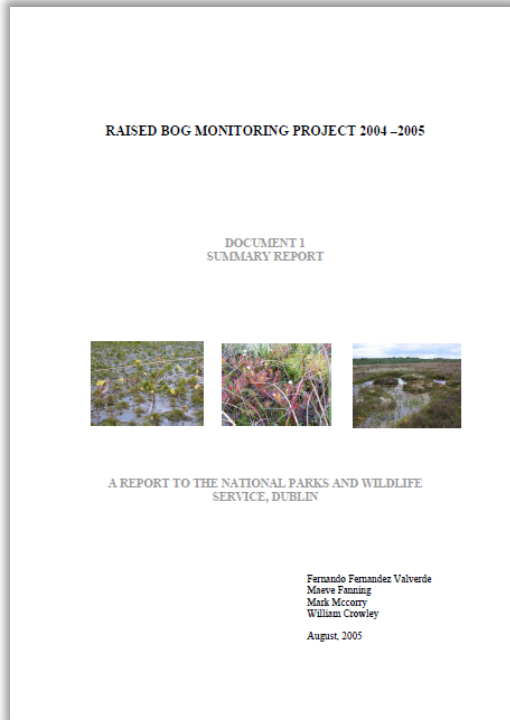




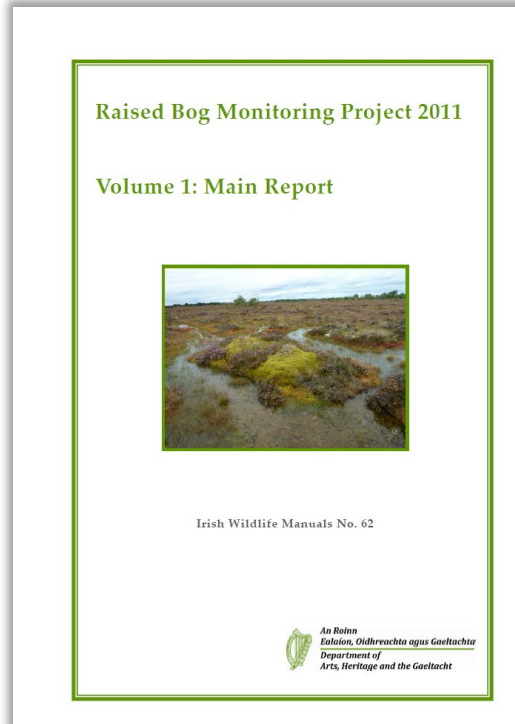


## 2 – PRESENT

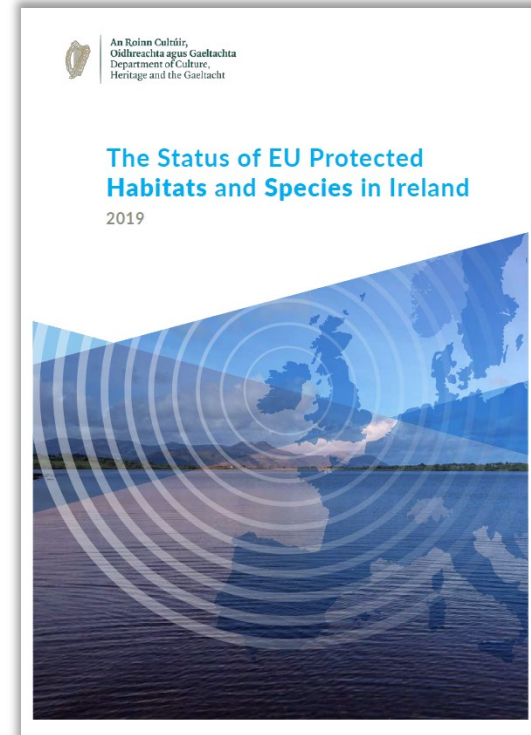
### 2.1- Habitats Directive (92/43/EEC) – Article 11 & 17



1<sup>st</sup> Report: 1994- 2005



2<sup>nd</sup> Report: 2006-2012



3<sup>rd</sup> Report: 2013-2019

Monitoring only of high bog habitats  
EU habitats: 7110, 7120, 7150 & 91D0

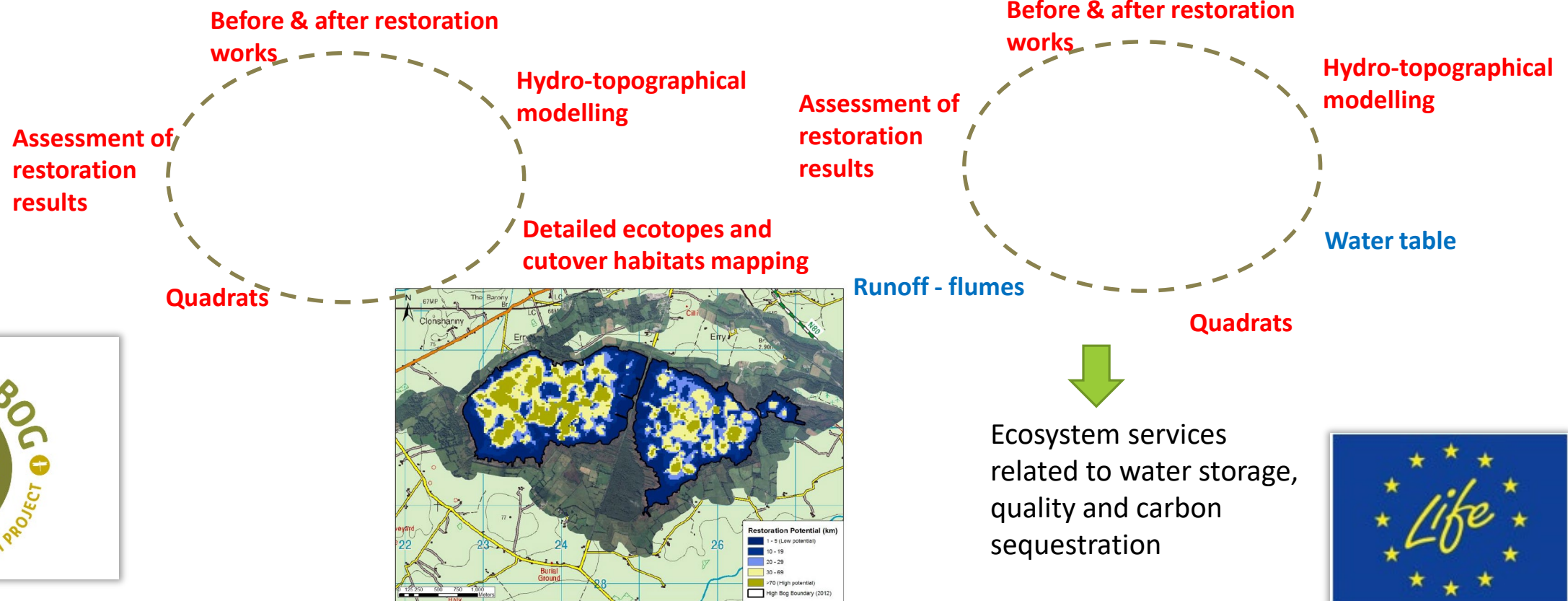
## 2 – PRESENT

### 2.2- The Living Bog Project (<http://raisedbogs.ie/>)

- 12 SAC raised bogs
- High Bog and cutover

#### A- Ecological-Habitat Monitoring

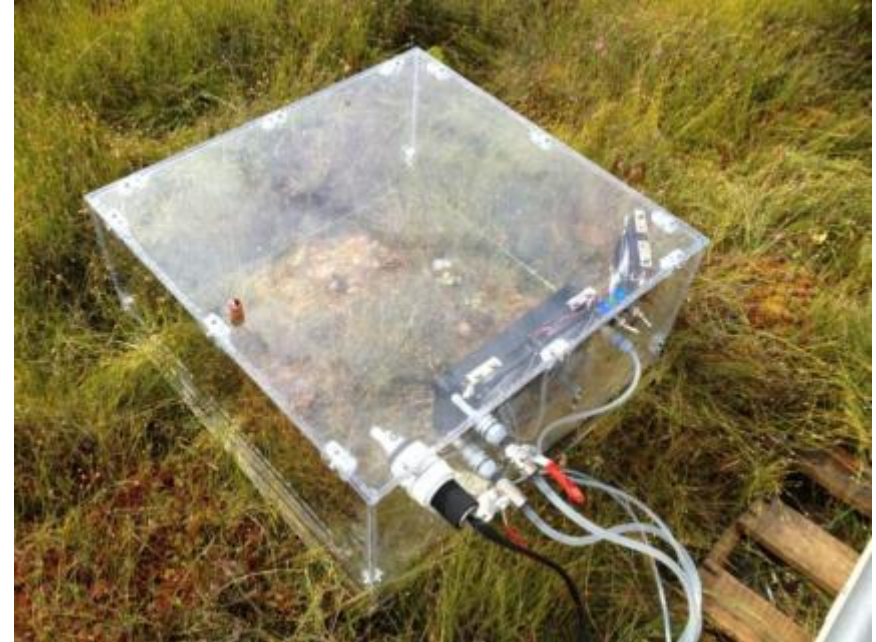
#### B- Hydrological Monitoring





### 2.3- Additional Work

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



*Ecohydrology, Greenhouse Gas Dynamics and Restoration  
Guidelines for Degraded Raised Bogs (2014-NC-MS-2).  
EPA Research Report.  
Regan et al., 2019*

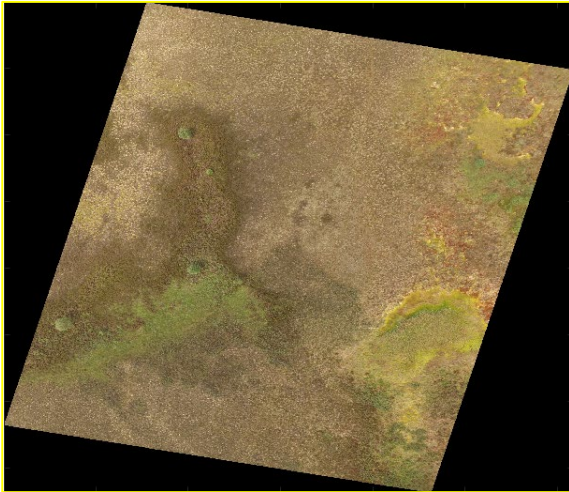


## 3 – FUTURE

### 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



#### High Bog Habitats Monitoring (Ecotopes)

**Need to develop remote sensing techniques: modelling, satellites data *versus* drones**

**Need to incorporate cutover habitats monitoring**

**GHG emissions monitoring**

**Further ecosystem services (e.g. water quality & storage capacity)**

#### C- Challenges:

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

**Thanks for your attention**