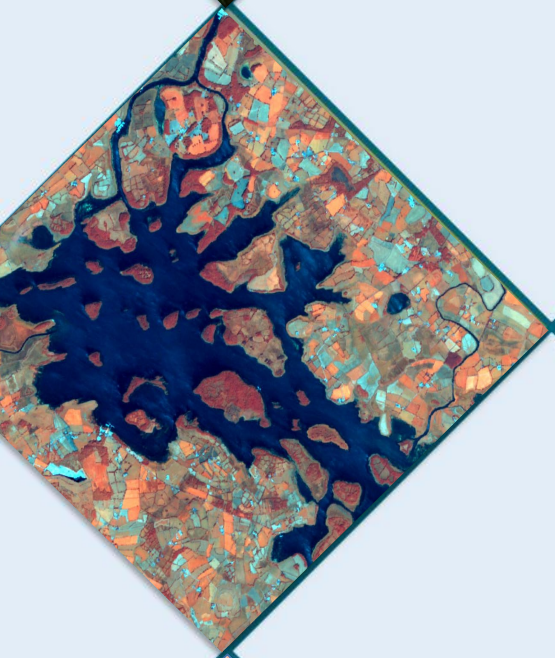
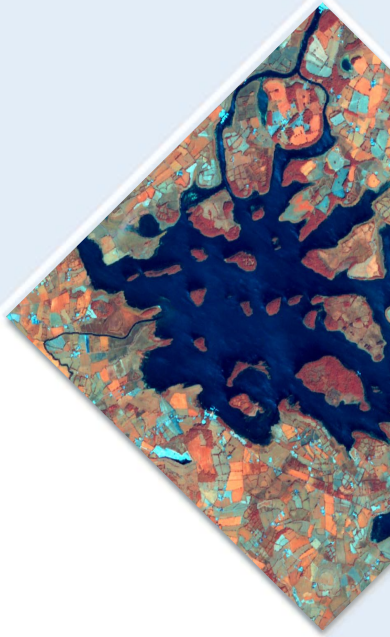


JNCC

Monitoring and Reporting on UK Peatlands



Paul Robinson: Senior Natural Capital Evidence Specialist

IUCN Peatlands Conference – 4th October

Paul.Robinson@jncc.gov.uk

JNCC

Structure

- International reporting
- Role of Earth observation – classification
- Role of Earth observation – condition
- Key messages

Structure

- International reporting
- Role of Earth observation – classification
- Role of Earth observation – condition
- Key messages

International reporting requirements

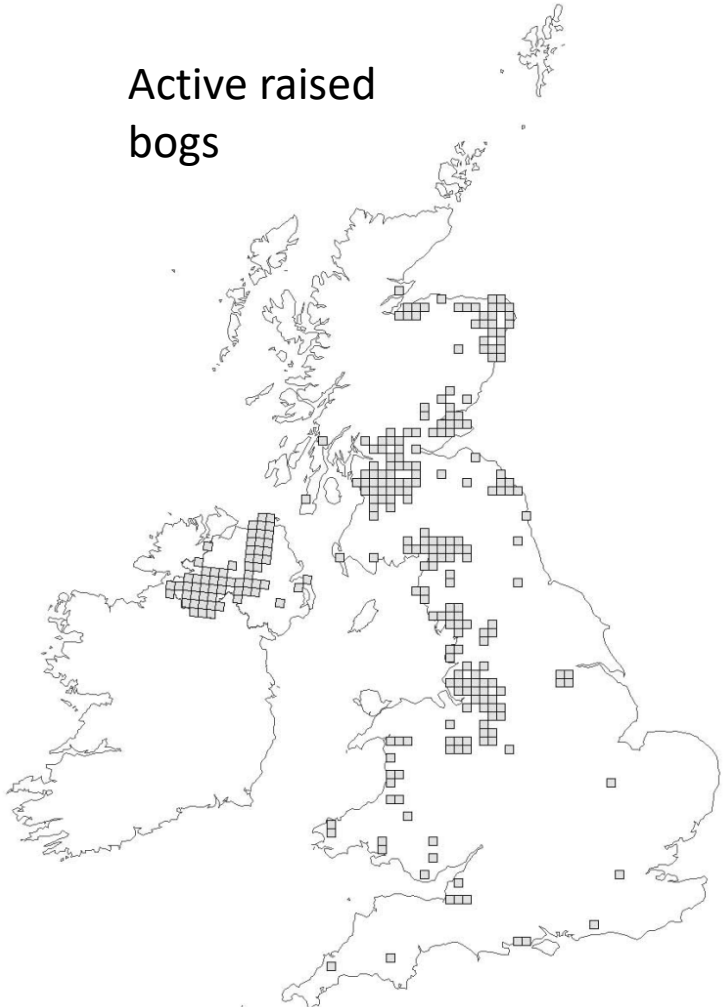
- Habitats Directive – Article 17
- Birds Directive – Article 12
- Convention on Migratory Species (CMS)
- Convention on Wetlands of International Importance (Ramsar)
- Convention on Biological Diversity (CBD)

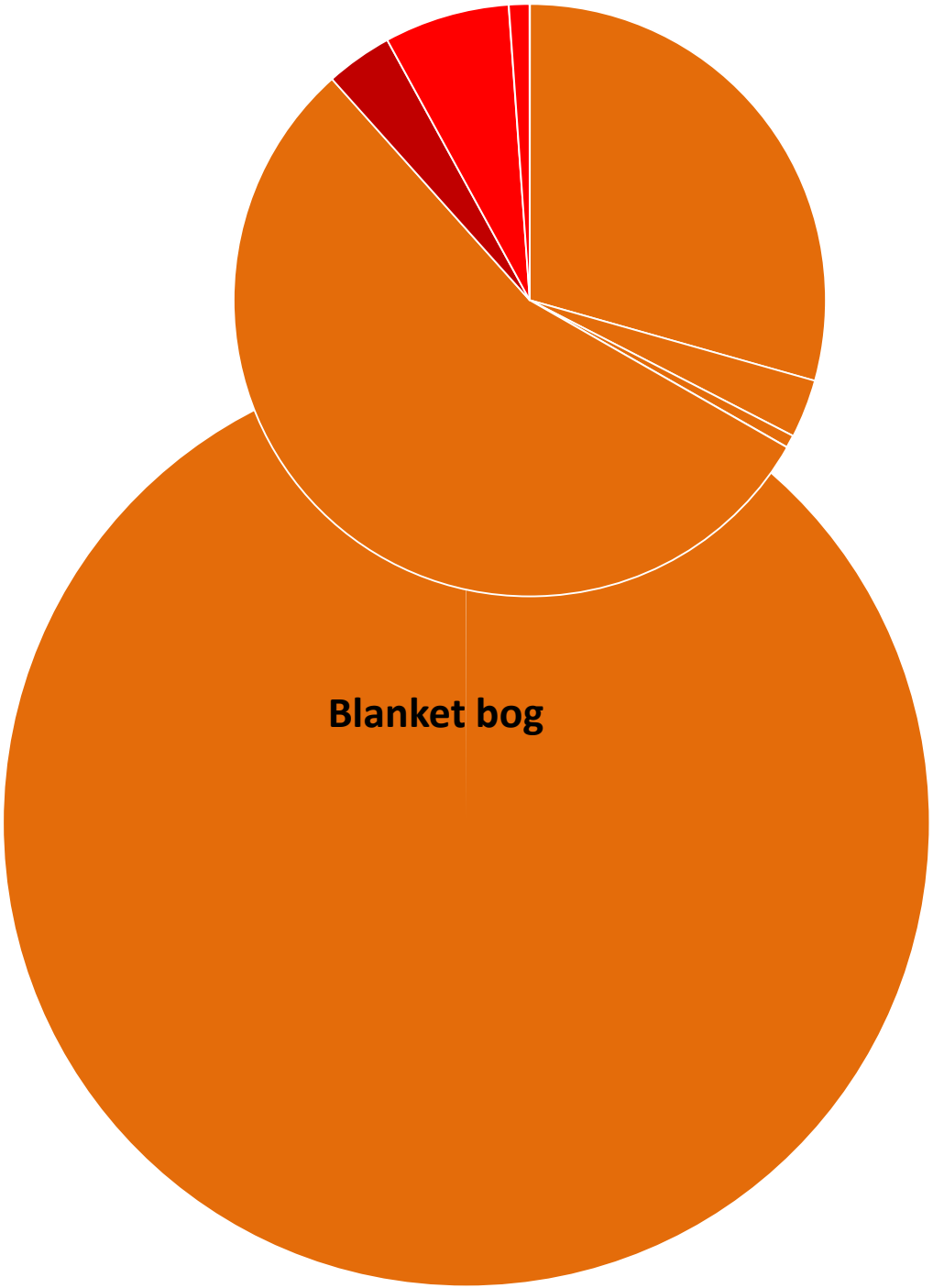
EU Habitats Directive – Article 17

Annex I habitat assessments

2001-07 & 2007-13

- Extent and trend in area
- Pressures and threats
- Conservation status

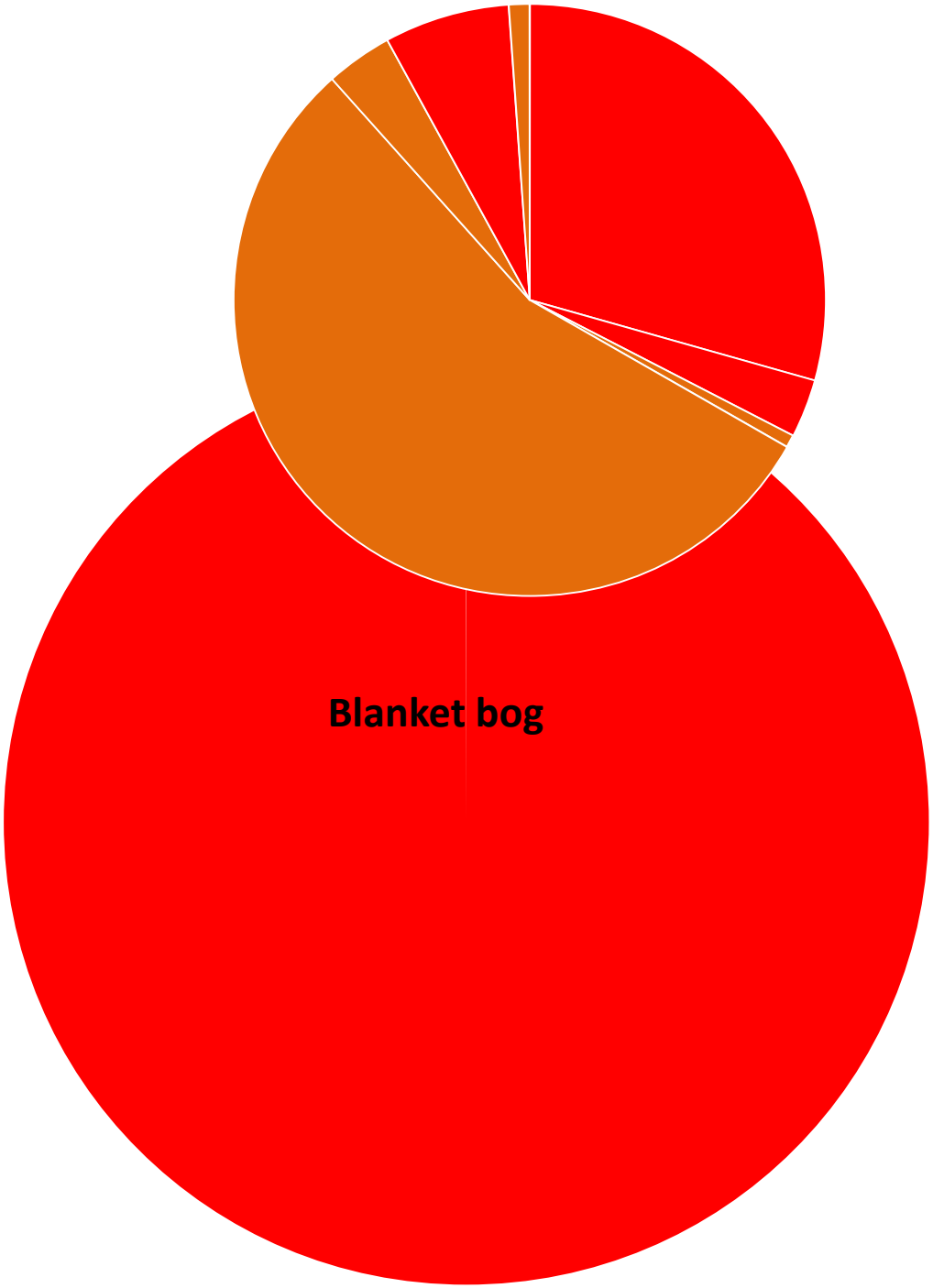




- Active raised bog
- Rhynchosporion
- Caricion bicoloris
- Degraded raised bog
- Alkaline fen
- Transition mire & quaking bog
- Cladium fen

Unfav.: Bad and deteriorating
Unfav.: Bad
Unfav.: Bad but improving
Unknown
Favourable

Overall conservation status assessment by peatland type (2001-2007)



- Active raised bog
- Rhynchosporion
- Caricion bicoloris
- Degraded raised bog
- Alkaline fen
- Transition mire & quaking bog
- Cladium fen

Unfav.: Bad, declining
Unfav.: Bad
Unfav.: Bad, improving
Unknown
Favourable

Overall conservation status assessment by peatland type (2008-2013)

What is the reporting status? What is the key content?

Instrument	Reporting status	Key information sources
Convention on Migratory Species (CMS)	CoP12 was October 2017. The report was submitted in **March 2017**.	• Status of Appendix I species. • Indicators for the Strategic Plan for Migratory Species • Implementation of Resolutions.
Convention on Wetlands of International Importance (Ramsar)	CoP13 to be in October 2018. Latest report submitted in **September 2017**.	• The content is mainly focussed on implementation of the new Ramsar Strategic Plan. • Annex on Ramsar site information
Convention on Biological Diversity (CBD)	The 6th National Report is due in **December 2018** in advance of CoP14.	• UK and country biodiversity / natural environment indicators; • reports on country strategies and action plans and UK biodiversity framework; • other information sources such as State of UK Birds, State of UK Butterflies etc.

Structure

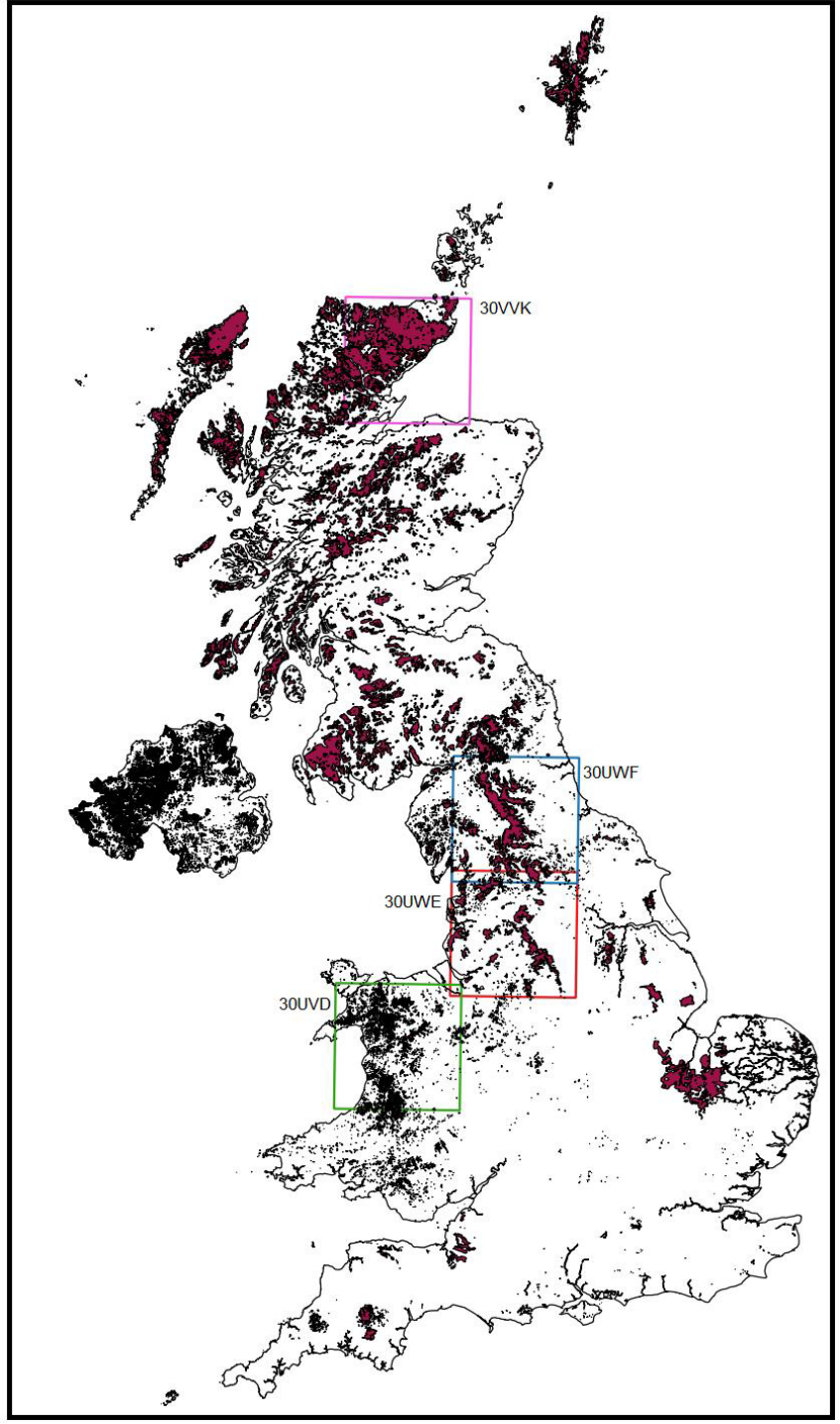
- International reporting
- Role of Earth observation – classification
- Role of Earth observation – condition
- Key messages

Background

- Project funded by Scottish Govt and Defra EOCoE/SSGP
- Contractors were CEH and JHI
- Focus on assessing habitat condition for the purpose of Greenhouse Gas Accounting
- Development of Framework for incorporating EO methodologies with current peatland condition monitoring

CEH Centre for Ecology & Hydrology
NATURAL ENVIRONMENT RESEARCH COUNCIL

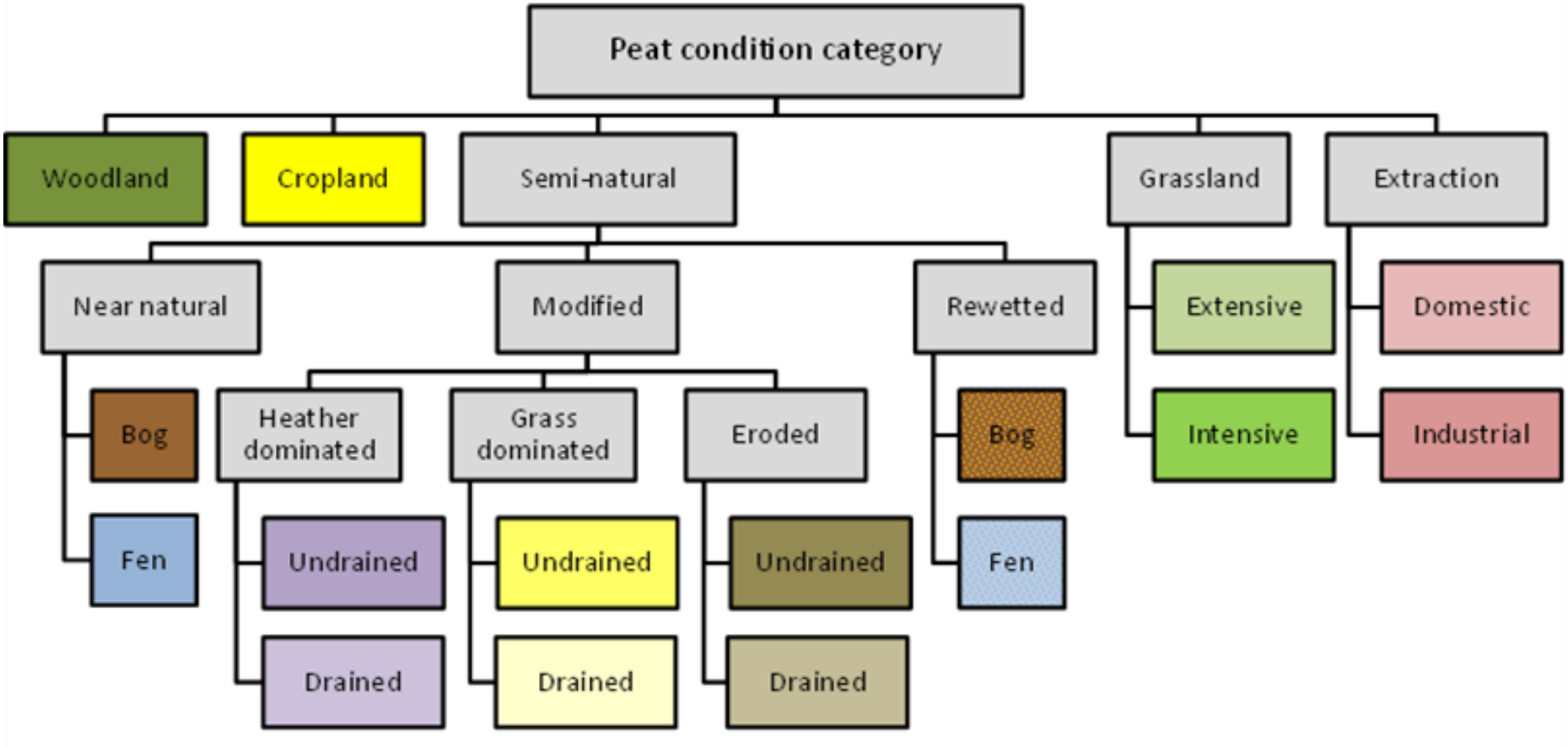
The James Hutton Institute



Test areas

Peatland mask and areas used in the study

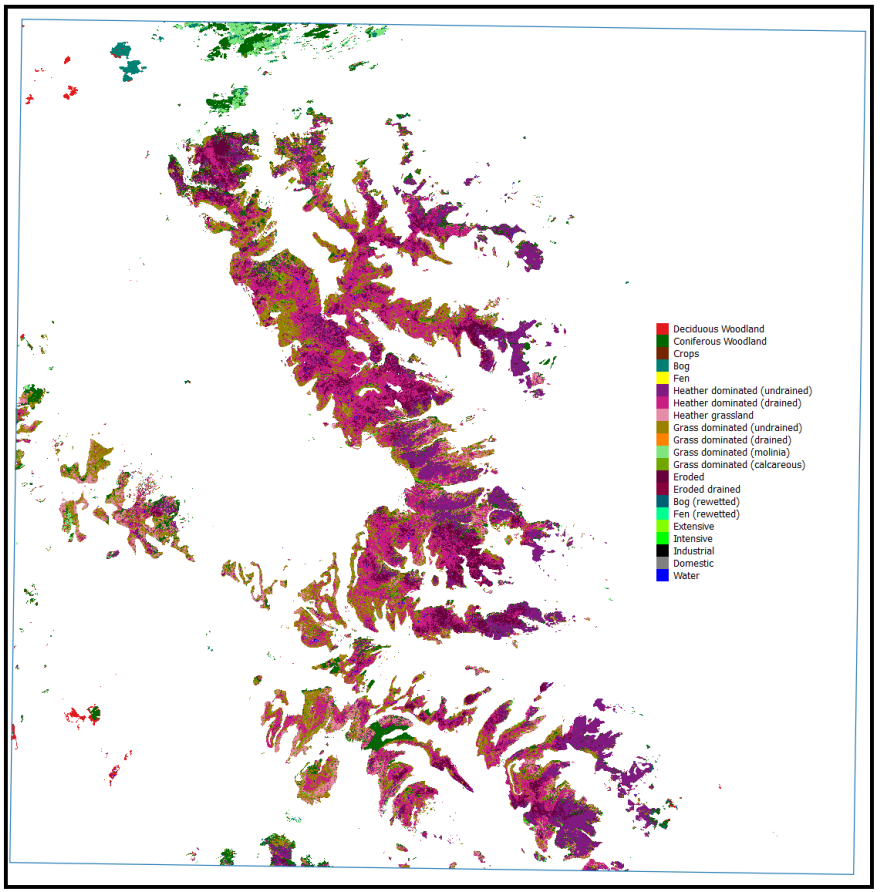
BEIS peat condition categories

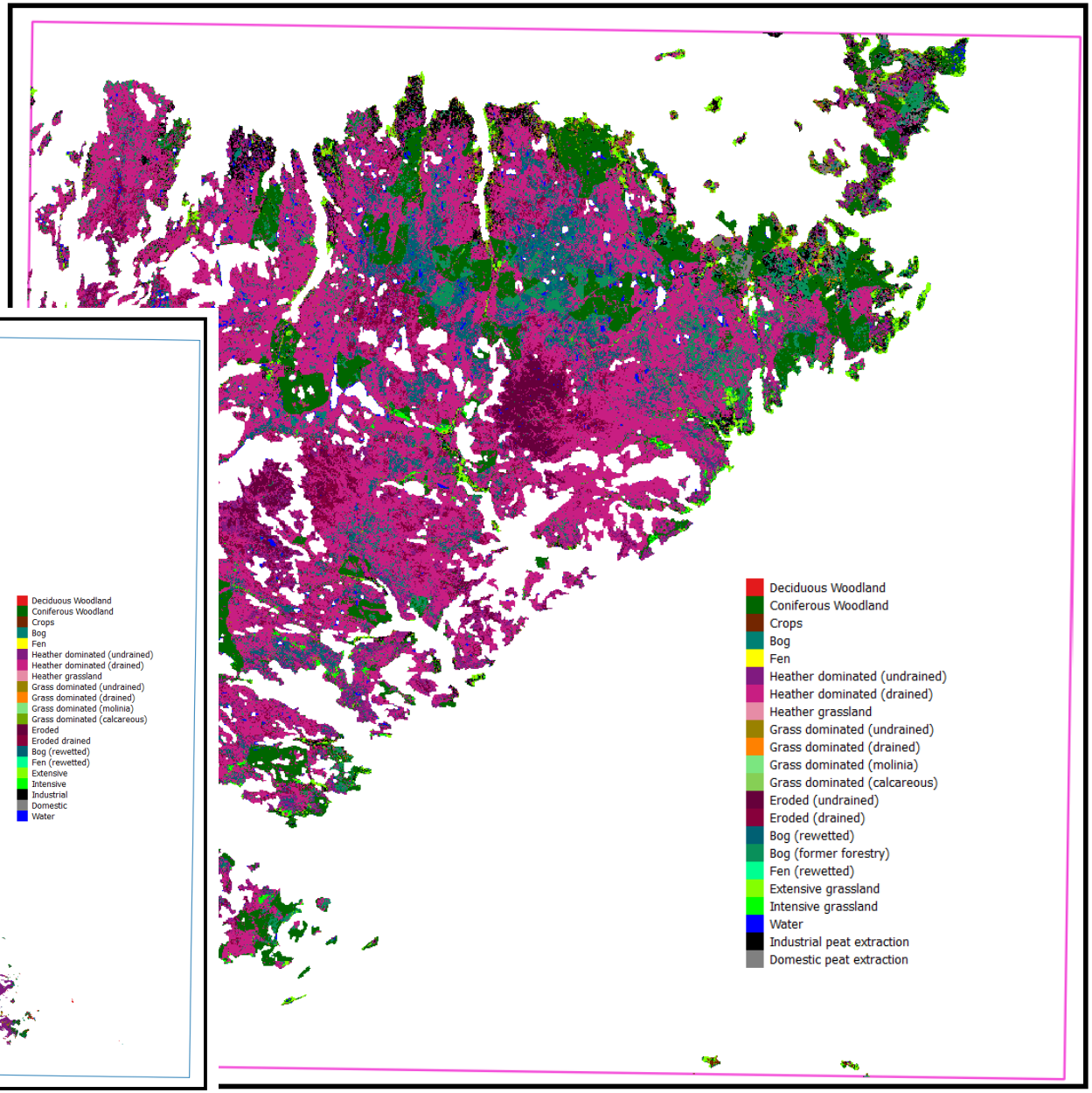


Supervised classification

Flow country

North Pennines



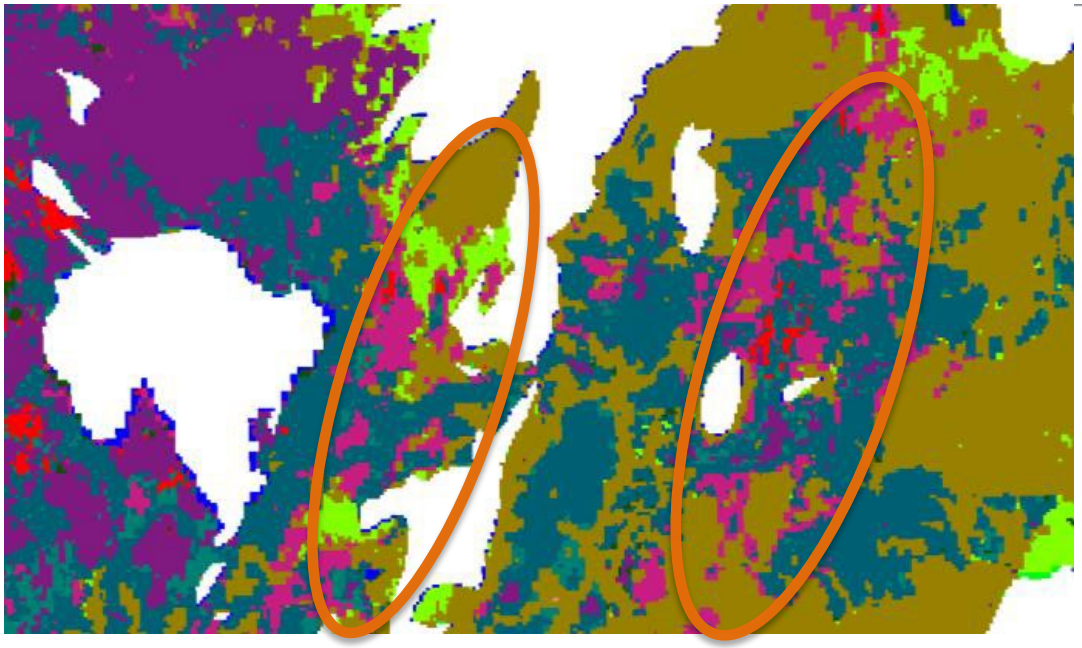


Structure

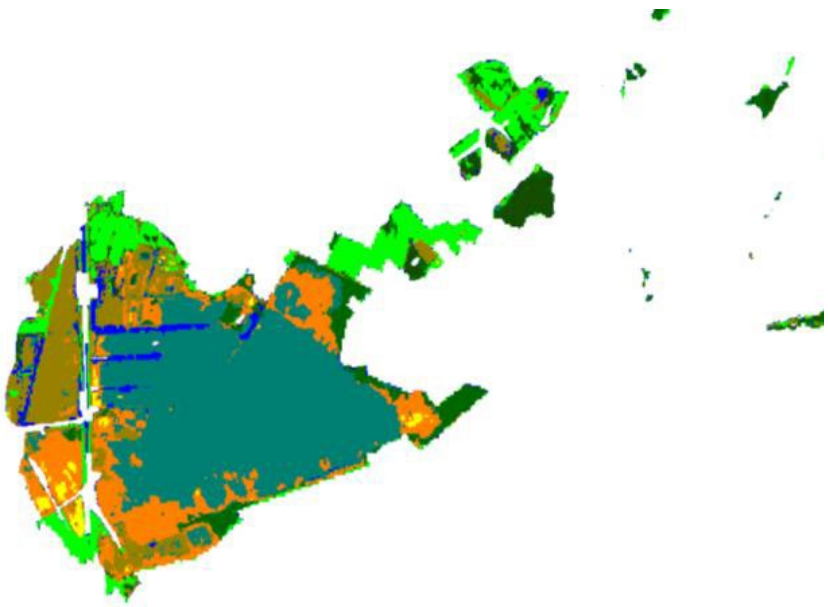
- International reporting
- Role of Earth observation – classification
- Role of Earth observation – condition
- Key messages

Drained / undrained?

Migneint



Woodland
Crops
Bog
Fen
Bog (rewetted)
Fen (rewetted)
Extensive
Intensive
Domestic
Industrial
Heather dominated (undrained)
Heather dominated (drained)
Heather grassland
Grass dominated (undrained)
Grass dominated (drained)
Grass dominated (molinia)
Grass dominated (calcareous)
Eroded
Water

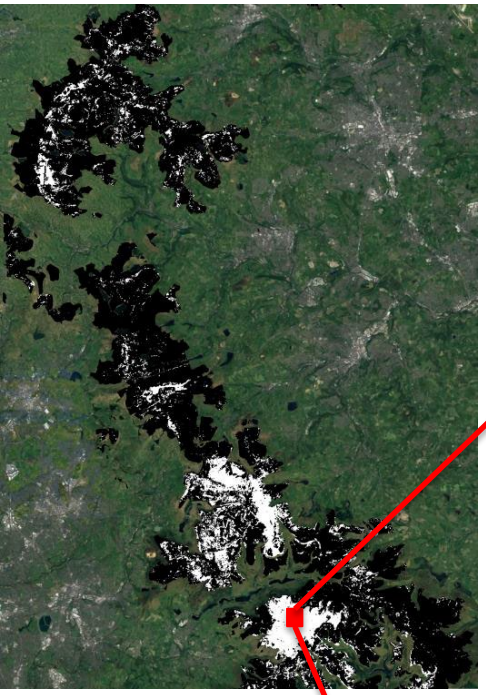


Woodland
Crops
Bog
Fen
Bog (rewetted)
Fen (rewetted)
Extensive
Intensive
Domestic
Industrial
Heather dominated (undrained)
Heather dominated (drained)
Heather grassland
Grass dominated (undrained)
Grass dominated (drained)
Grass dominated (molinia)
Grass dominated (calcareous)
Eroded
Water

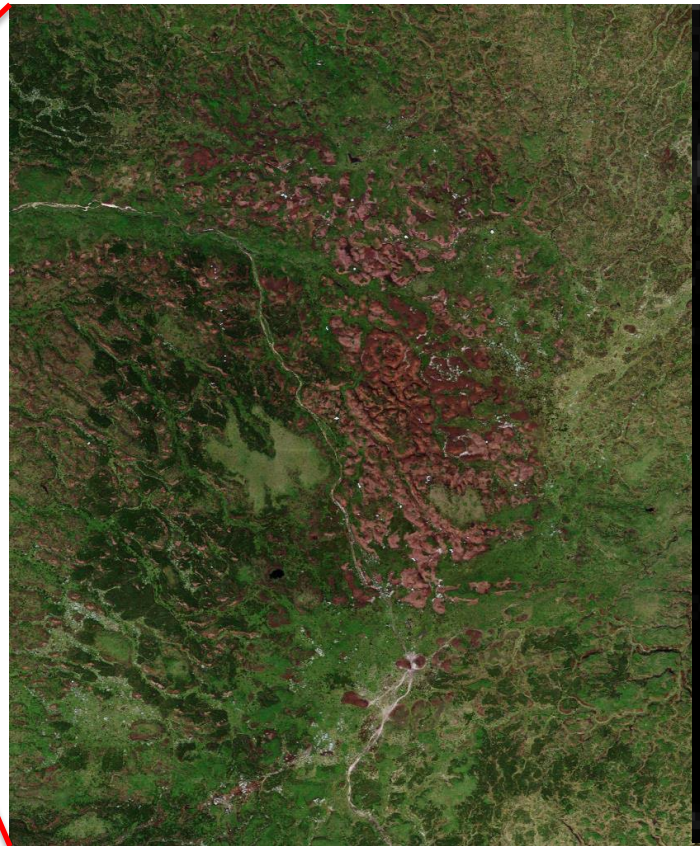
Cors Fochno

JNCC

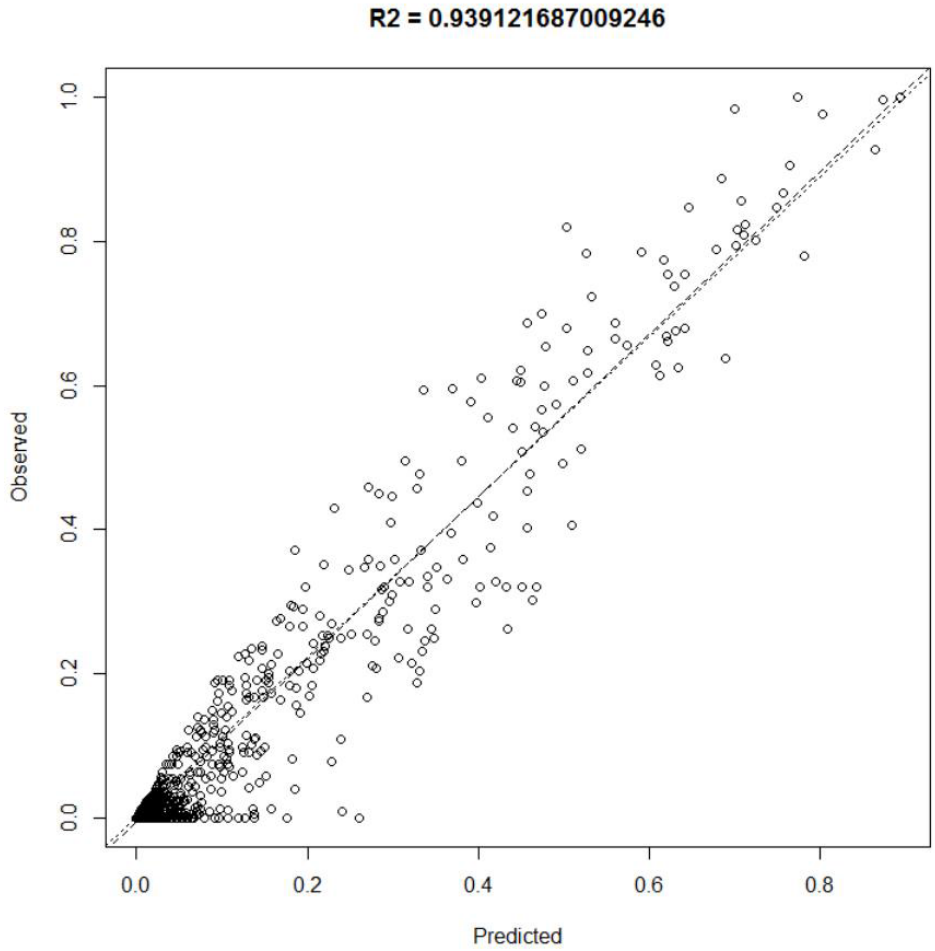
Habitat Condition – bare peat



- Figure on the left: Peatland classification (white: eroded peat; black: rest of the classes).
- Figures below: detail of eroded peat. Google earth image and RF regression prediction of % bare peat.



Habitat Condition – bare peat



Observed vs predicted % of bare peat

Structure

- International reporting
- Role of Earth observation – classification
- Role of Earth observation – condition
- Key messages

Key messages

- International reporting obligations are significant and that will continue
- There are significant evidence requirements for assessment of condition
- Earth observation has a role to play in generating evidence – but not the sole answer
- Features such as bare peat can be modelled effectively
- How to make assessments may need to be reconsidered (Drained/undrained vs Wet/dry)