Refertilsing Wester Ross **workshops**
7th - 9th April 2016 Gairloch Community Hall, Wester Ross

SRUC

What future for our hill farming and crofting systems?

Davy McCracken

Head of SRUC's Hill & Mountain Research Centre

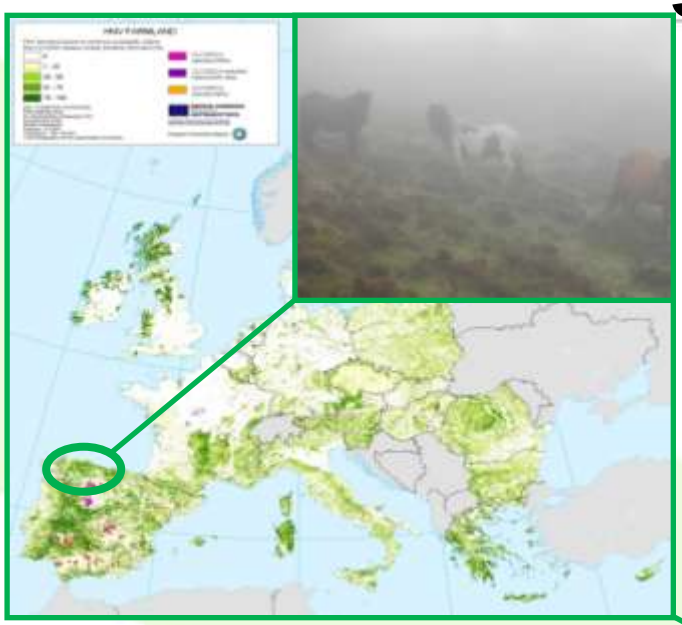
davy.mccracken@sruc.ac.uk https://www.facebook.com/SRUCKirkton





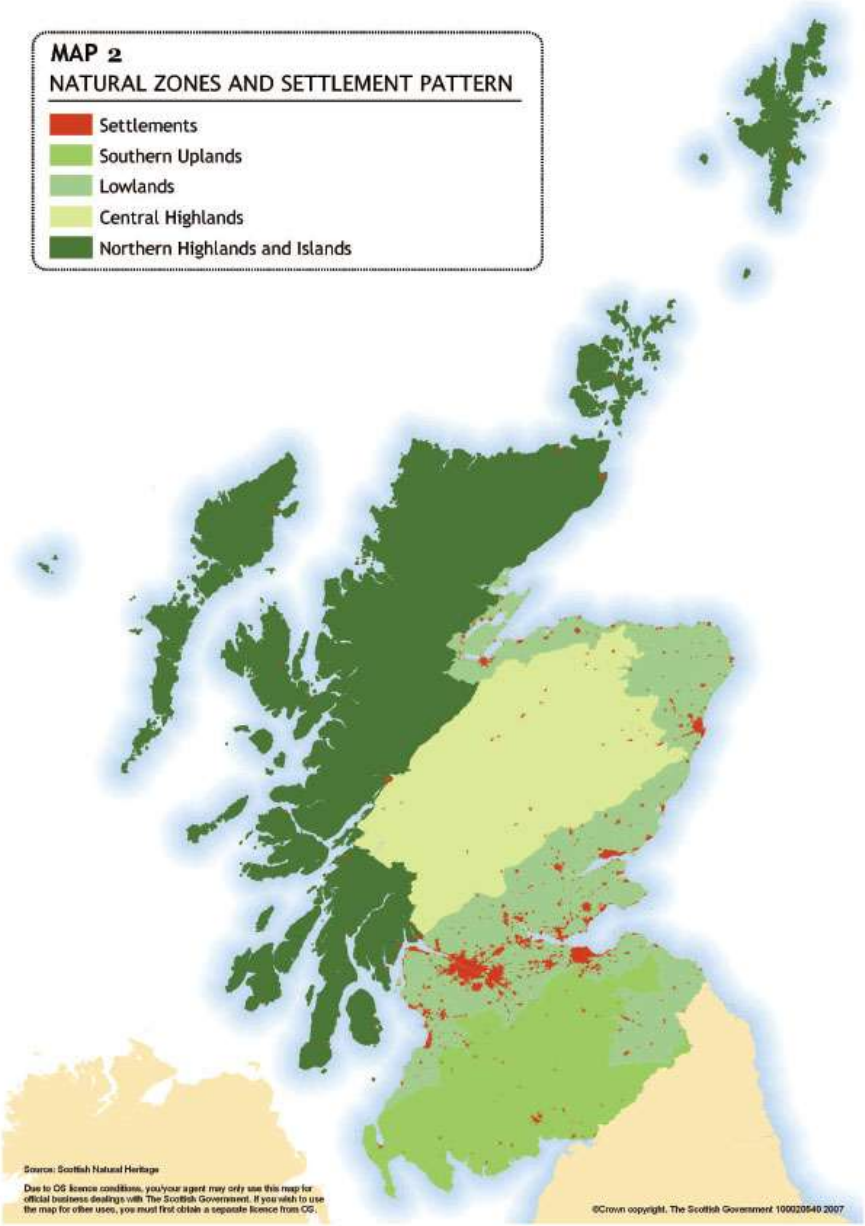

Leading the way in Agriculture and Rural Research, Education and Consulting

Scotland: the globe in miniature

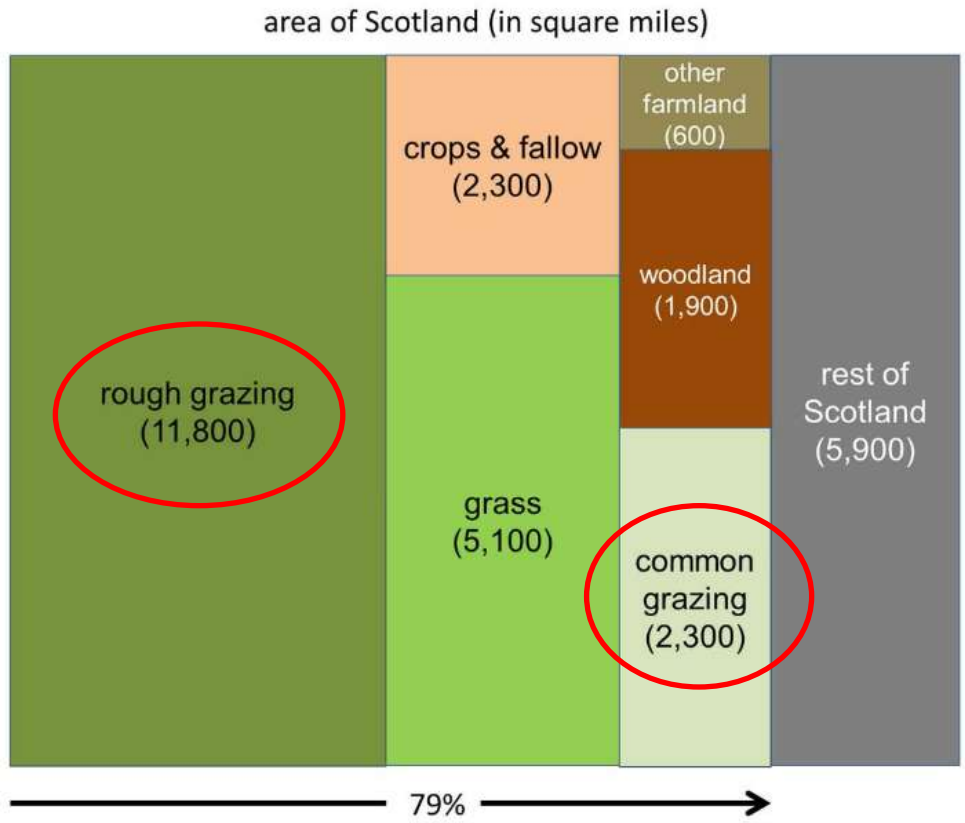


Similar climatic, agricultural and/or environmental challenges also facing other farming systems

The uplands of Scotland:



Agricultural land accounts for 79% of Scotland's land area



8% of Scotland's agricultural land is suitable for arable farming, with nearly 70% deemed of severely limited agricultural use (rough and common grazing)

Scottish Natural Heritage
Dualchas Nàdair na h-Alba

0 50 100 km
0 50 100 Miles

EUNIS Land Cover of Scotland

The EUNIS Land Cover Scotland is an amalgamation of data collected from several data sources and converted into the EUNIS habitat classification system. It covers all of Scotland down to mean low water spring.

Made by the Geographic Information Group. GIG job log 70085

EUNIS Level 1 Classes

- A Marine habitats
- B Coastal habitats
- C Inland surface waters
- D Mires, bogs and fens
- E Grasslands and lands dominated by forbs, mosses or lichens
- F Heathland, scrub and tundra
- G Woodland, forest and other wooded land
- H Inland unvegetated or sparsely vegetated habitats
- I Regularly or recently cultivated agricultural, horticultural and domestic habitats
- J Constructed, industrial and other artificial habitats
- K Montane habitats (added class due to lack of information)
- X Habitat complexes

SE Web Mountains & Uplands

State and trend

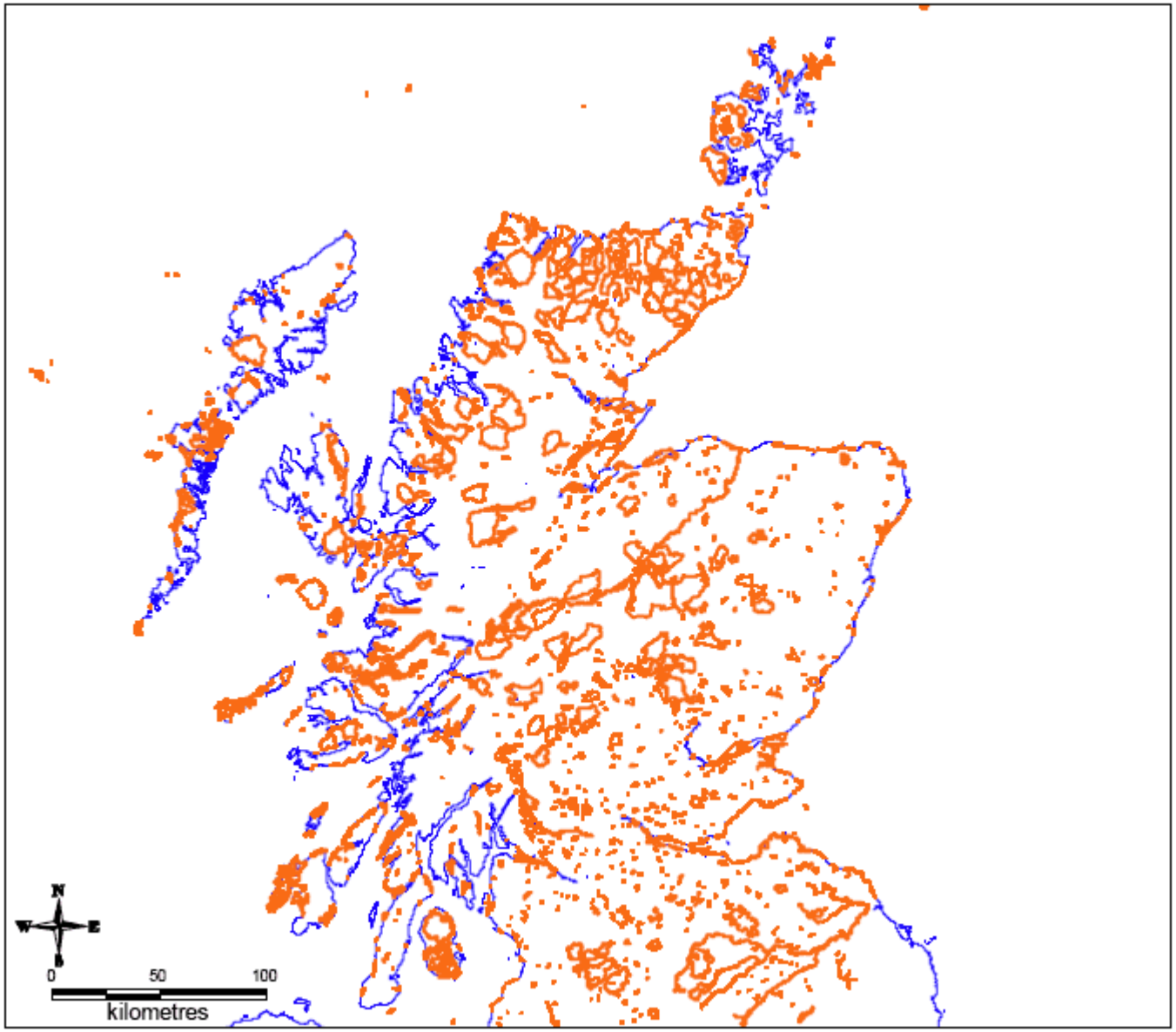
State: Moderate - high agreement, low evidence

Trend: Stable/declining - high agreement, low evidence

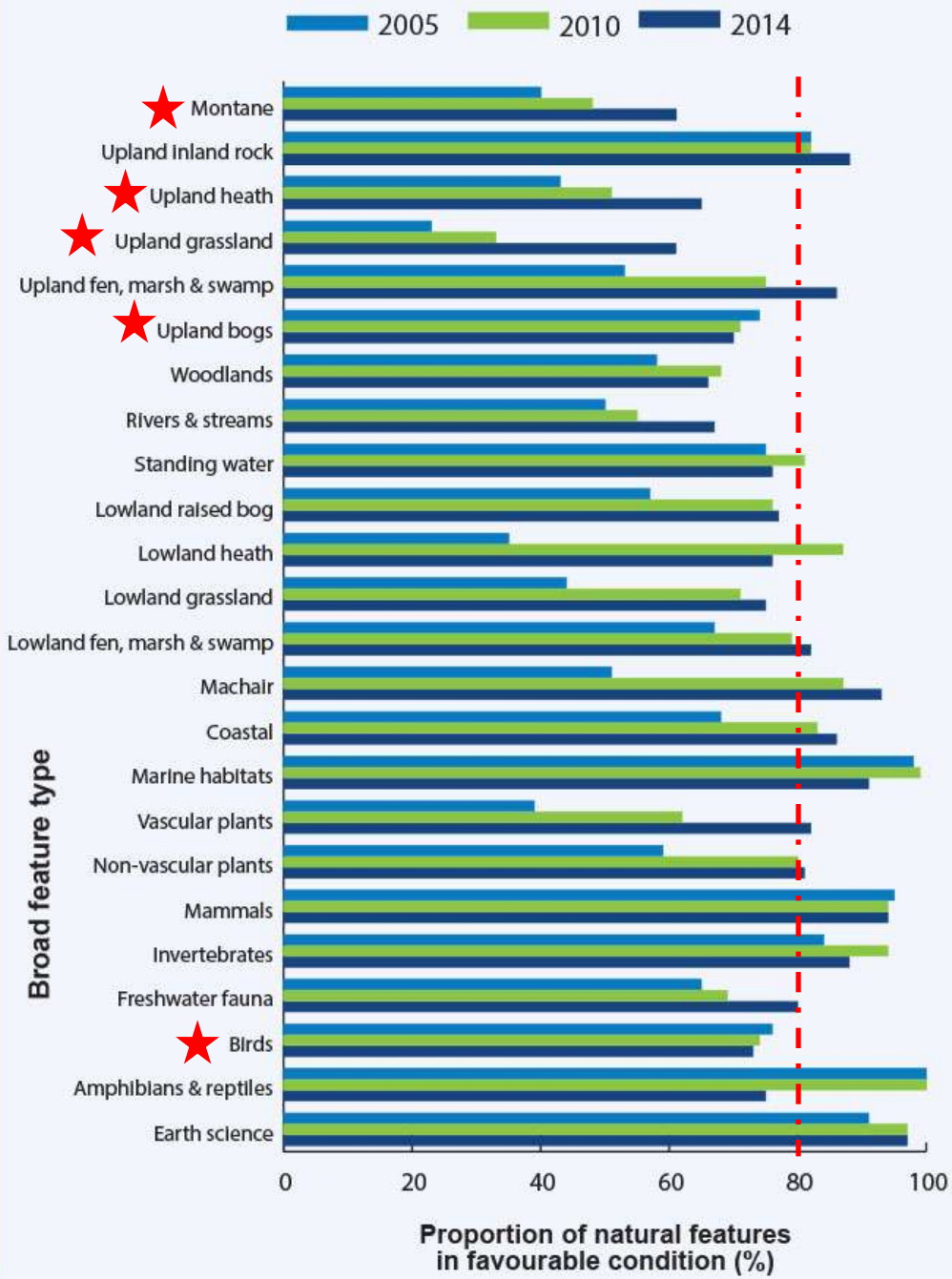
There is an explanation of the diagram and further information on how we carried out the assessments on the summary pages.

- Assessments are of the current "average condition"; some habitats and species are in a poorer condition, and others are in a better one.
- Making any overall assessment is necessarily a simplification.
- The assessment covers the wildlife of mountains and uplands, excluding forestry. This assessment covers areas such as the Cairngorms, the Ochil Hills and the Pentlands.
- We have taken account of the scale of any damage to the environment in these assessments; impacts can be locally damaging, but may have little effect on a national scale.
- We have stated how confident we are in the assessments based on the level of agreement between the specialists involved, and the quality and quantity of the supporting evidence.
- The evidence base is low, as there are relatively few monitoring sites covering the extensive upland areas.

Environmental condition of the uplands



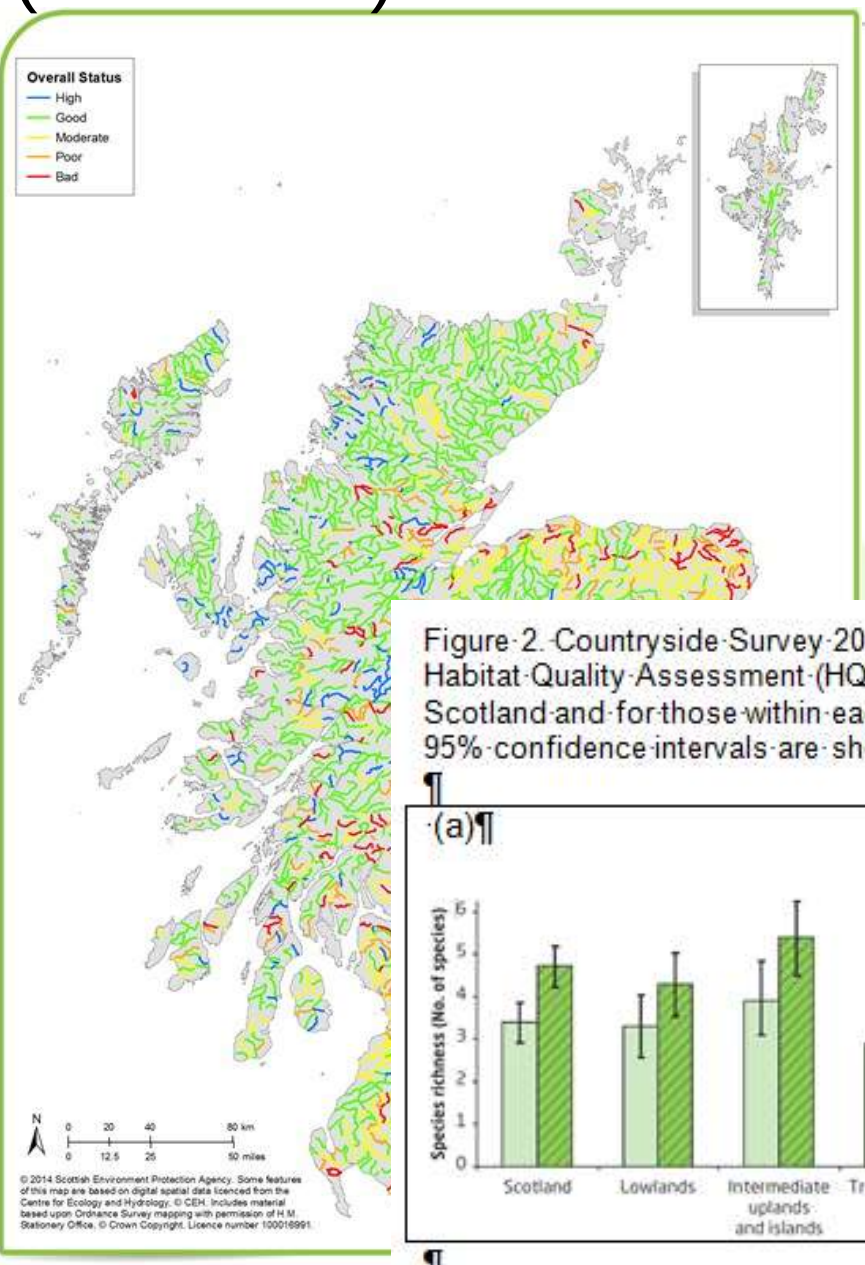
Protected areas (e.g. SSSIs) versus wider countryside



SRUC

Results of site condition monitoring for a range of features in the Scottish uplands (SE Web June 2014)

Wider countryside: overall status and river quality (data 2012)



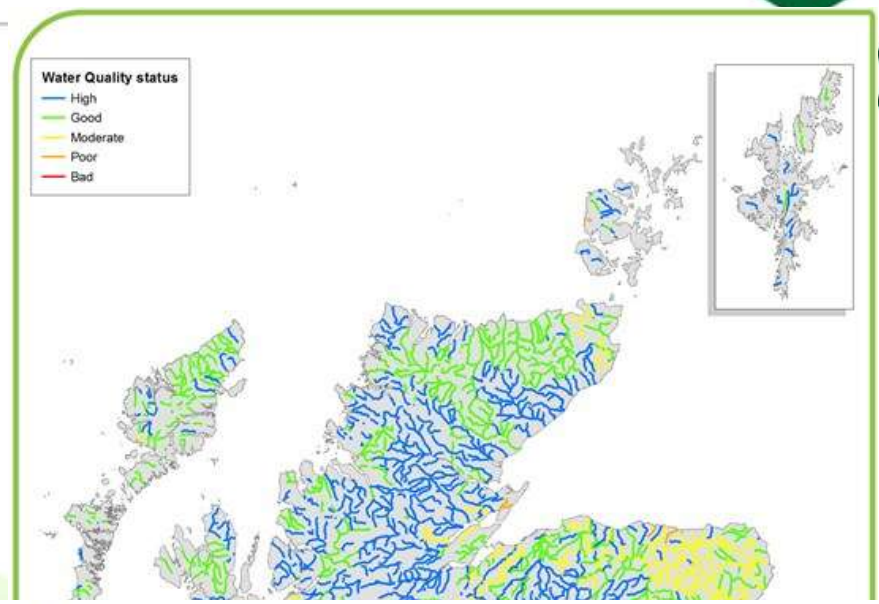
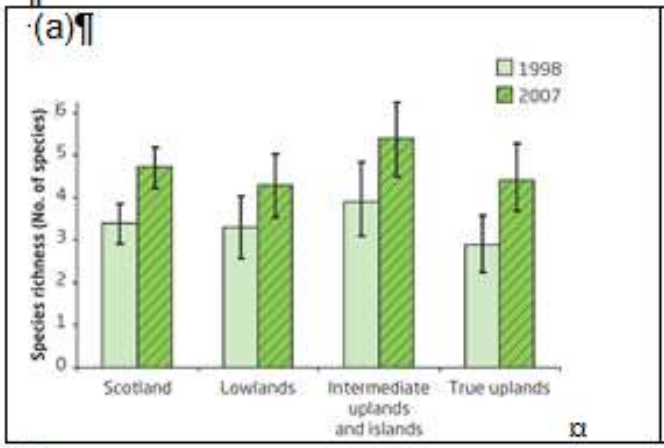
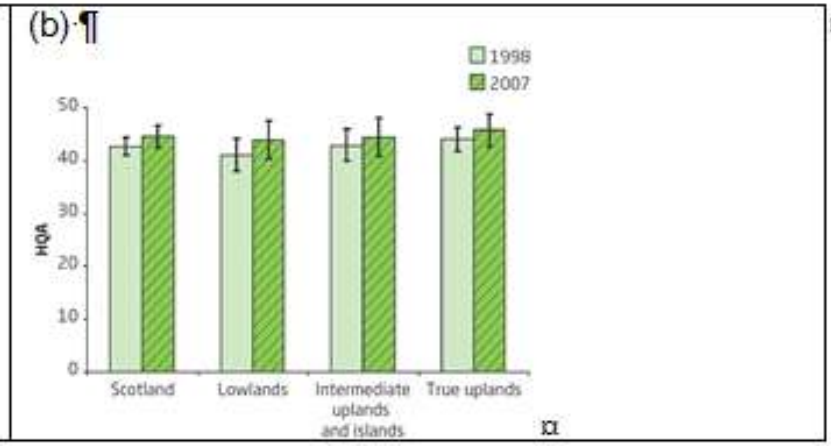
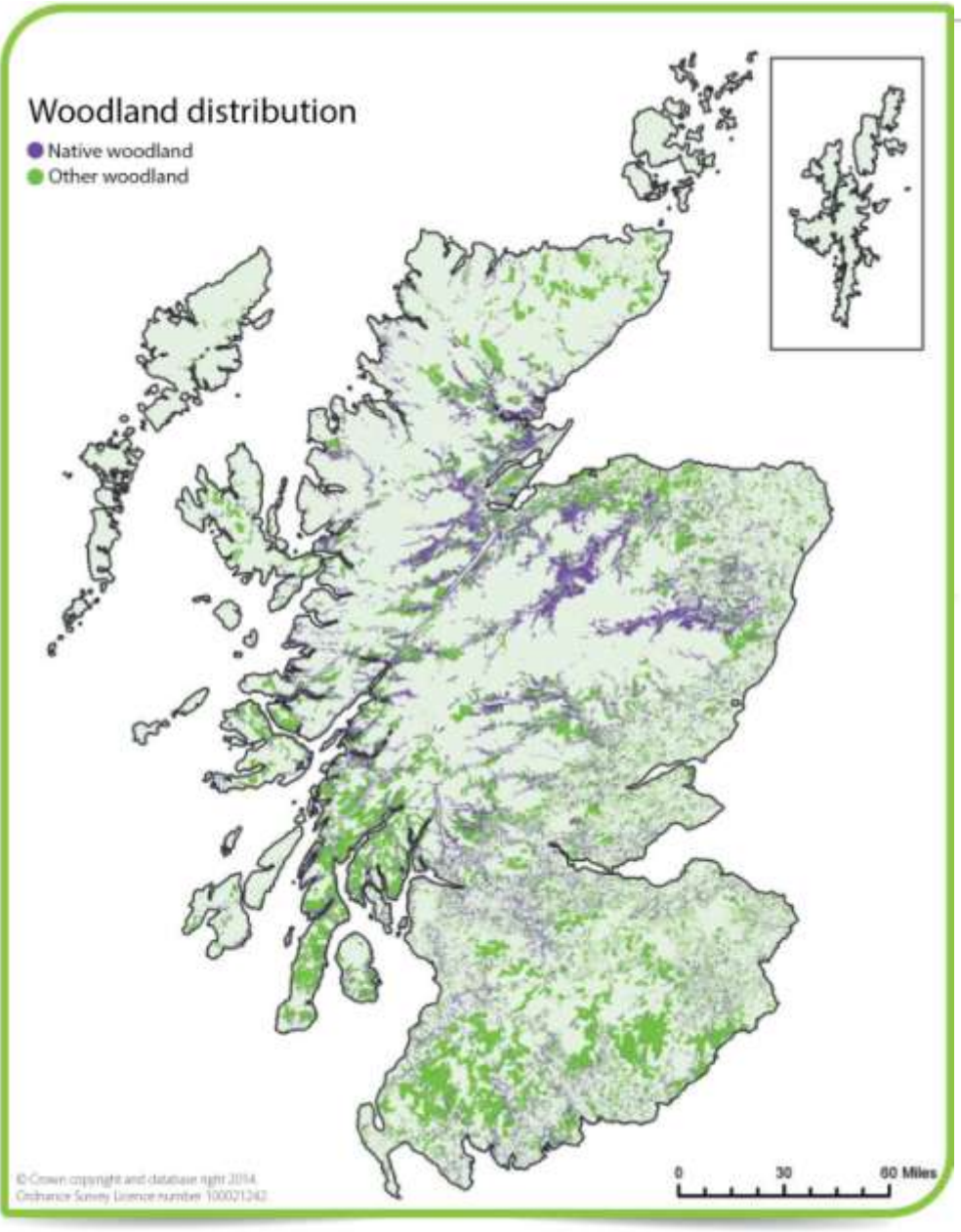


Figure 2. Countryside Survey 2007 results of headwater stream (a) aquatic plant species richness and (b) Habitat Quality Assessment (HQA). Means for 1998 and 2007 are provided for all samples taken across Scotland and for those within each of the three Environmental Zones recognised by the Countryside Survey. 95% confidence intervals are show for each data point.





Wider countryside: native woodlands (NWS 2014)



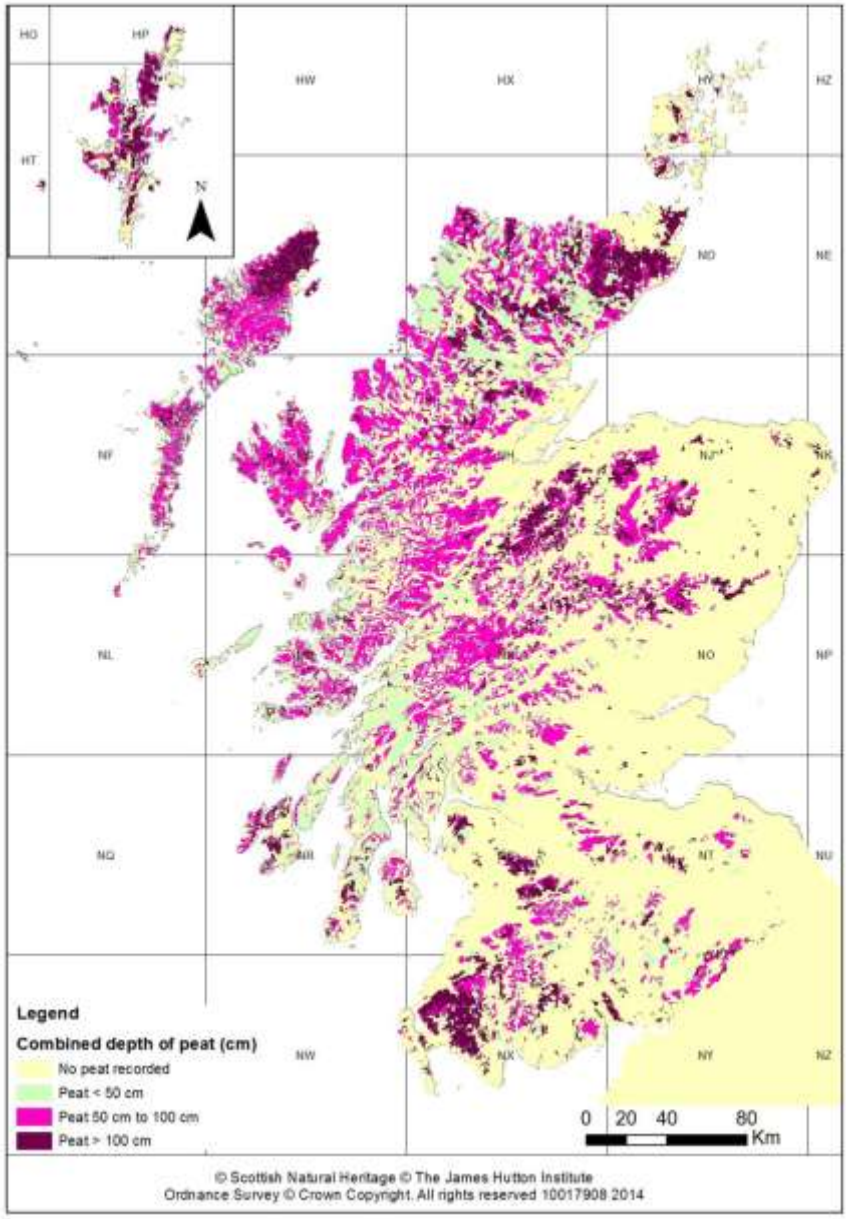
In 2014:

Upland native woodland & scrub = 120,000 ha
[commercial coniferous woodland = 1.1 million ha]

14% loss in native woodlands over 40 years, mostly in uplands

Less than 50% in satisfactory condition for biodiversity – grazing and browsing main threat

Wider countryside: peatlands



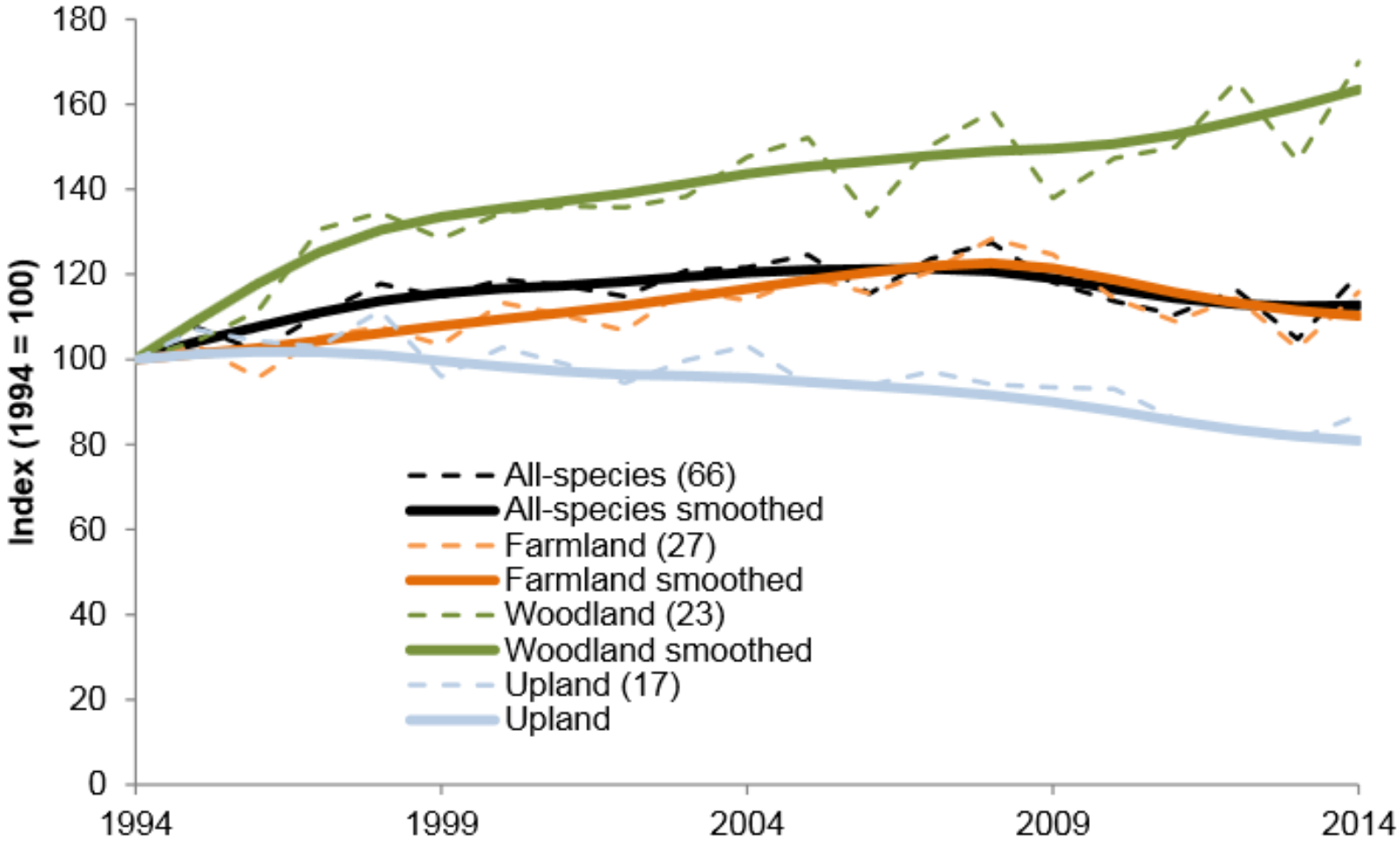
Extent in uplands stable but some decreases in plant species richness and many emitting rather than sequestering carbon

Table 8. Countryside Survey data for Scotland, showing Broad Habitat extent. (Extract form Countryside Survey – Scotland results from 2007- chapter 7)

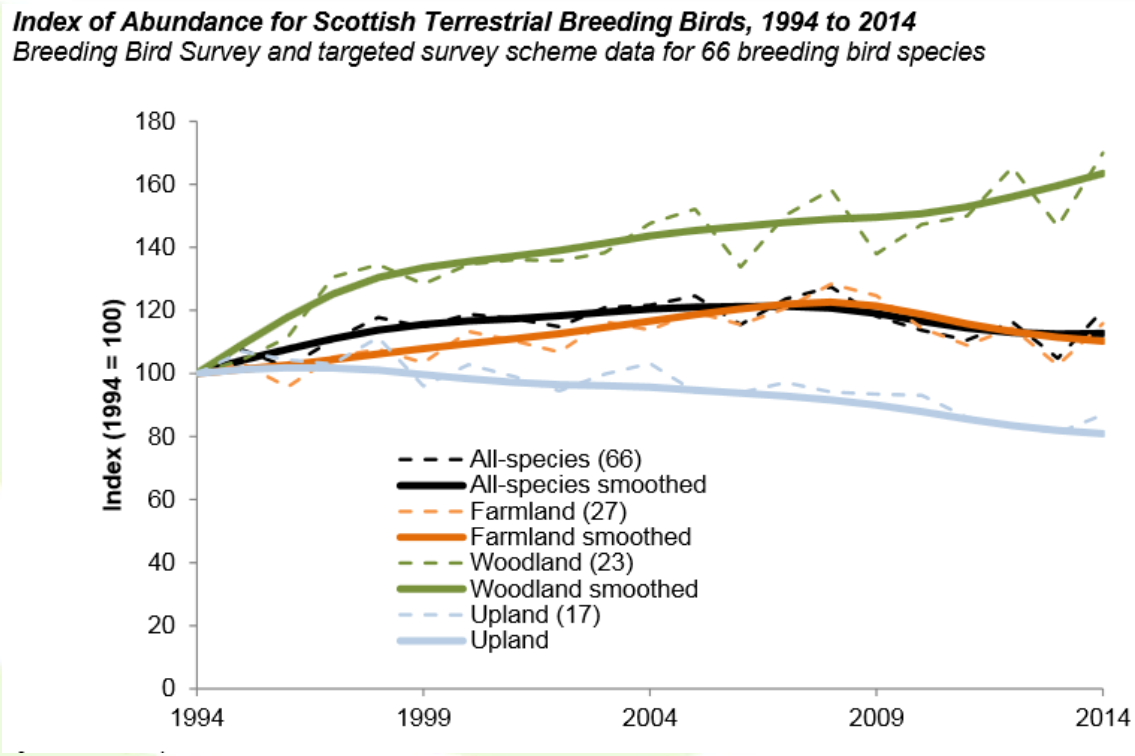
	1990 Area ('000s ha)	1998 Area ('000s ha)	2007 Area ('000s ha)	Direction of significant trends 1998-2007
BH – Fens, marsh and swamp				
Total Scotland	289	261	238	
EZ4 (Lowlands)	58	72	71	NO
EZ5(Intermediate Uplands and Islands)	151	109	95	SIGNIFICANT CHANGE
EZ6 (true Upland)	80	80	72	
BH – Bog				
Total Scotland	1,922	2,039	2,044	
EZ4 (Lowlands)	158	160	156	DECREASING
EZ5(Intermediate Uplands and Islands)	832	872	890	
EZ6 (true Upland)	932	1,006	998	

Wider countryside: upland birds (SNH, BTO)

Index of Abundance for Scottish Terrestrial Breeding Birds, 1994 to 2014
Breeding Bird Survey and targeted survey scheme data for 66 breeding bird species



Wider countryside: birds



1994-2014

Increasing:

- Raven (+92%)
- Red Grouse (+22%)
- Snipe (+21%)

Declining

- Dotterel (-60%)
- Curlew (-49%)
- Black Grouse (-47%)
- Golden Plover (-33%)
- Hooded Crow (-32%)





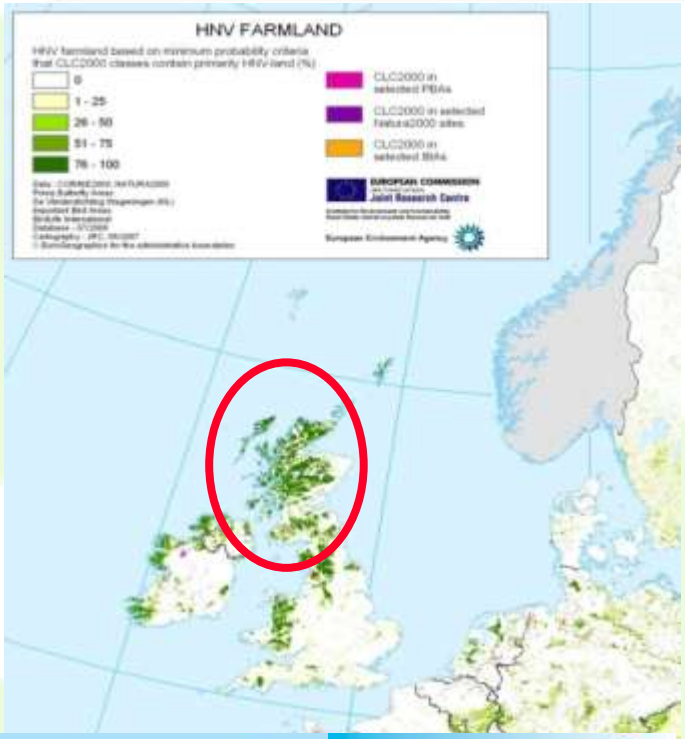
Farmland or ‘wilderness’ areas?

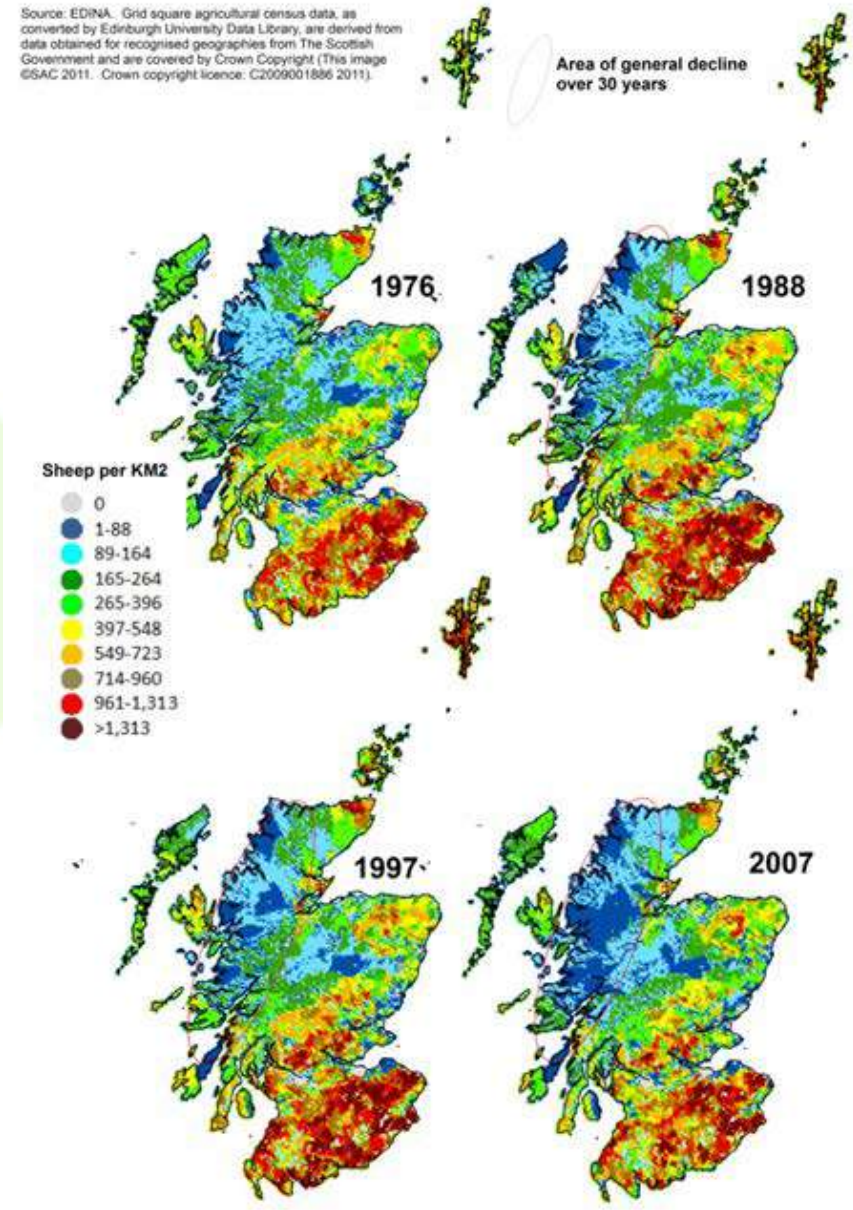
SRUC

Year of Natural Scotland 2013

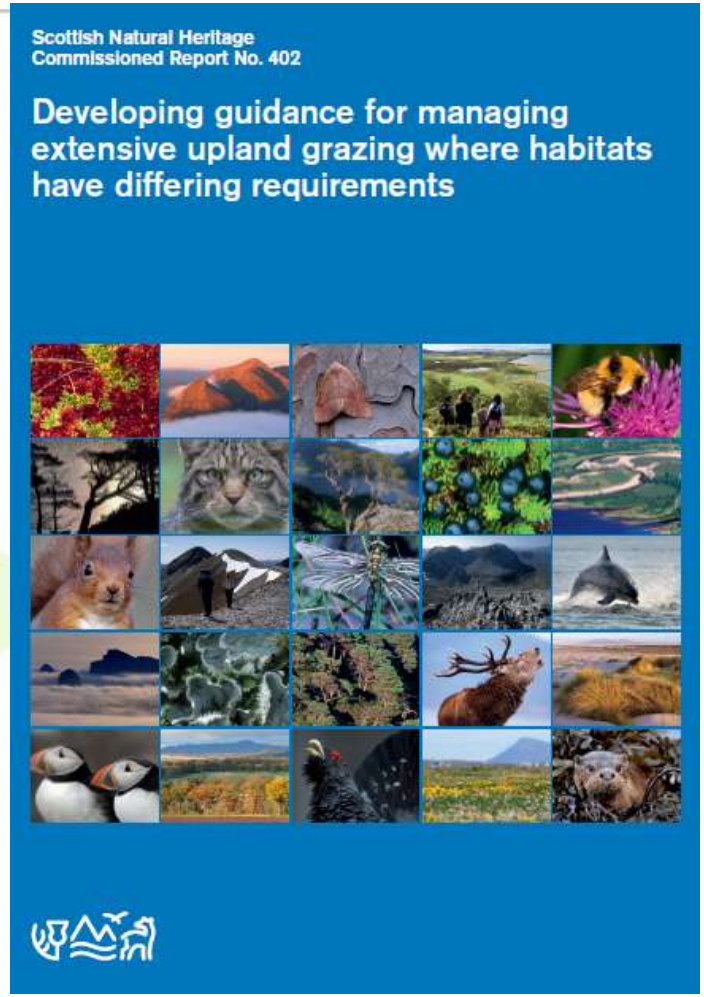
Landscapes of economic, environmental and social/cultural importance shaped by land use systems

Sheep per 2 km^2 over time:

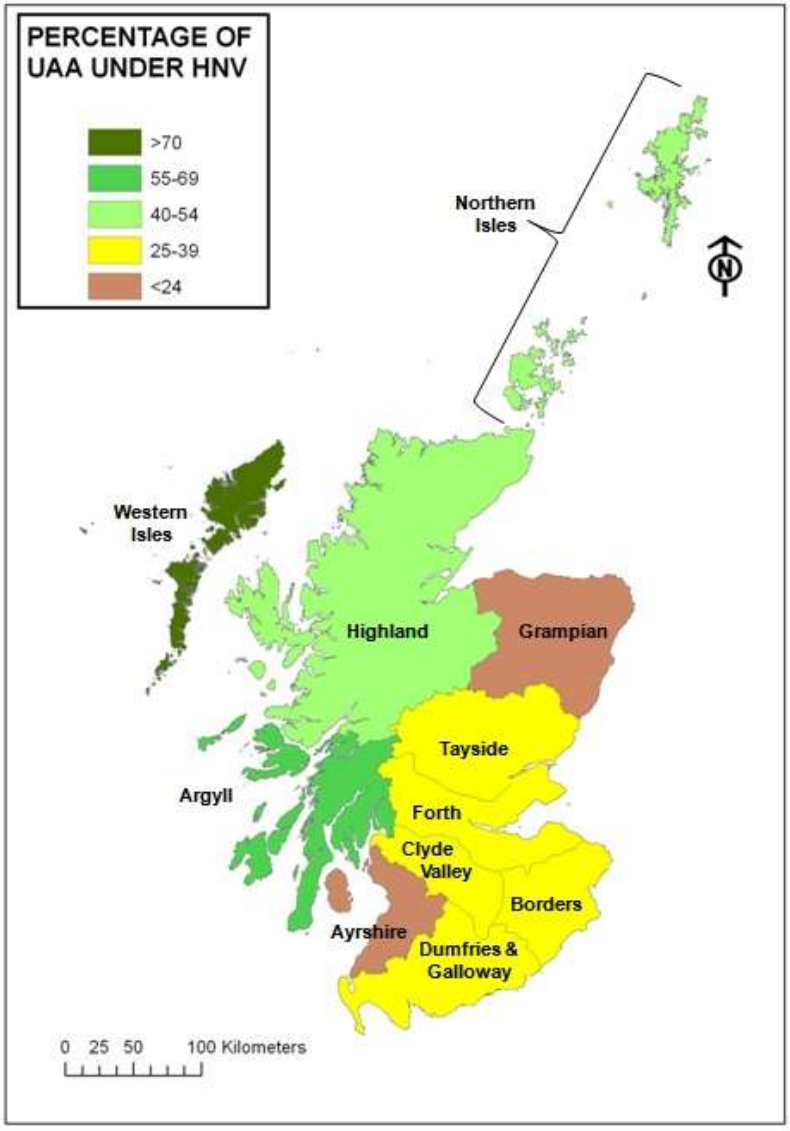




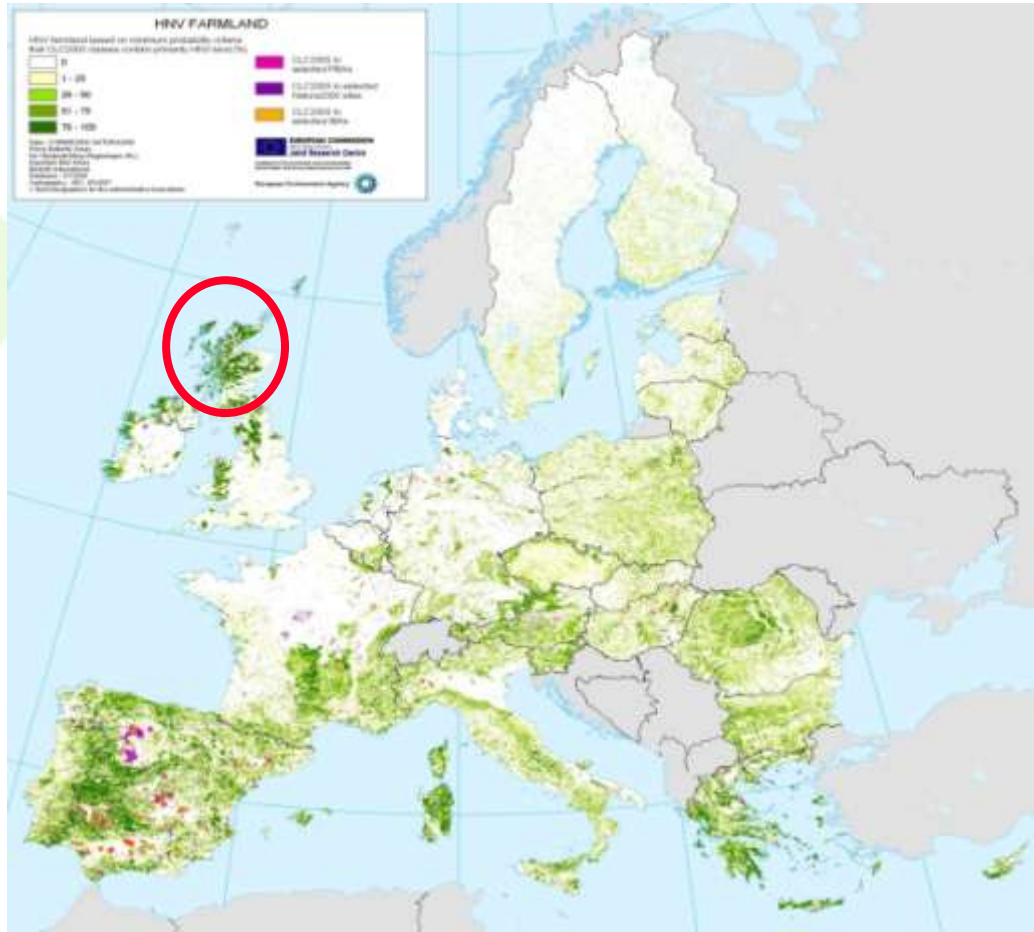
Biodiversity impacts:



Identification of HNV in Scotland



2010: 2.2 million ha (40%) of UAA in Scotland estimated to be under HNV farming systems [of which c. 592,000 ha common grazings]



What future for upland farming & crofting?

SRUC

Range of agricultural production challenges, e.g.:

- Low productivity
- Blackloss
- Poor nutrition
- Predation
- Pests and Disease
- Climate change






What future for upland farming & crofting?

SRUC

Three overarching issues:

- Fragile economic viability
- Competition with other land uses
- Assumption rewilding good, farming bad

Range of agricultural production challenges, e.g.:

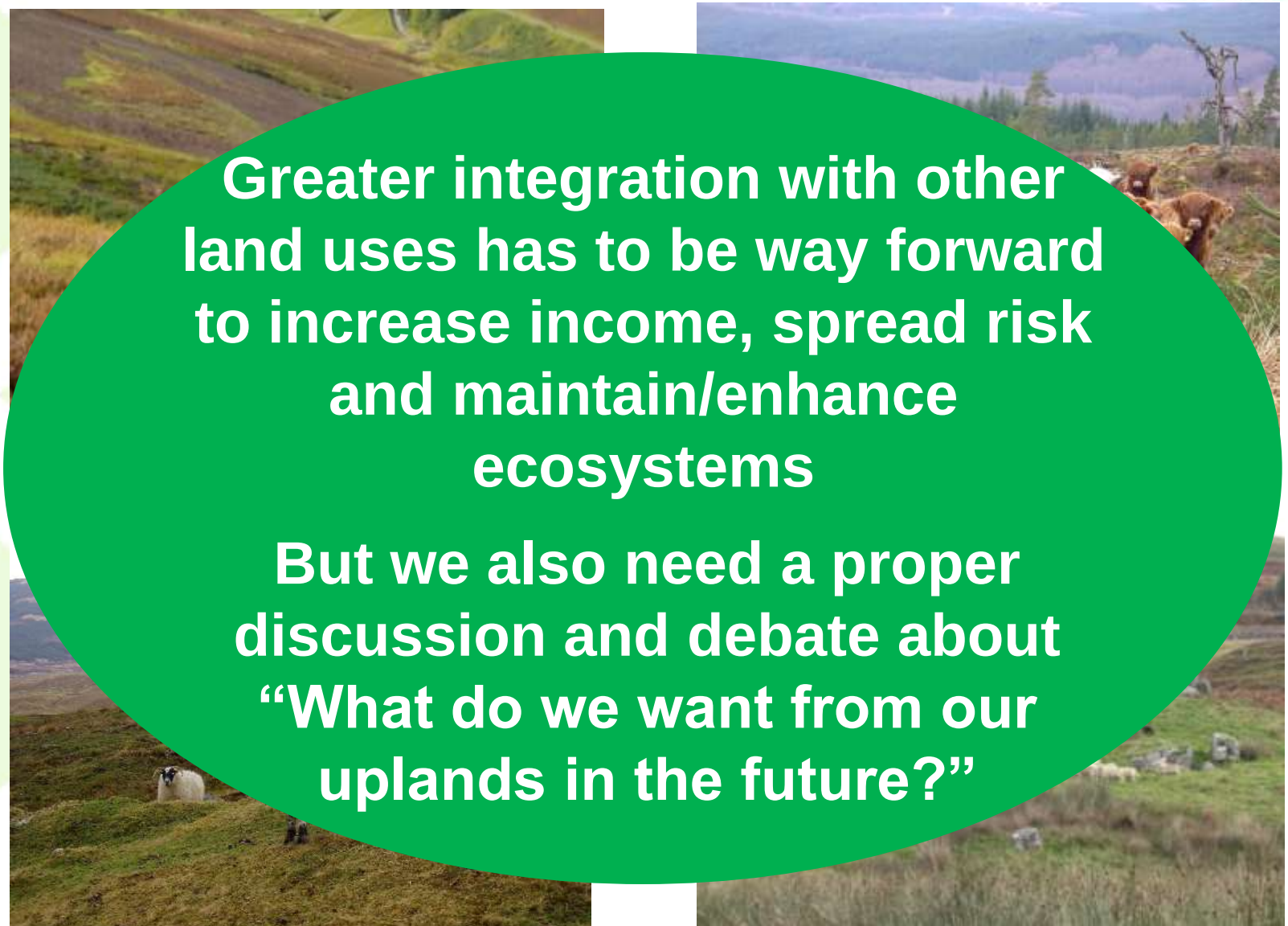
- Low productivity
- Blackloss
  - Nutrition
  - Predation
  - Disease
- Climate change






What future for hill farming & crofting?

What future for hill farming & crofting?



Greater integration with other land uses has to be way forward to increase income, spread risk and maintain/enhance ecosystems

But we also need a proper discussion and debate about "What do we want from our uplands in the future?"

SRUC

Leading the way in Agriculture and Rural Research, Education and Consulting