European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)

Fourth Report by the United Kingdom under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Supporting documentation for the
conservation status assessment for the habitat:

H6520 - Mountain hay meadows

SCOTLAND

IMPORTANT NOTE - PLEASE READ

- The information in this document is a country-level contribution to the UK Report on the conservation status of this habitat, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- The 2019 Article 17 UK Approach document provides details on how this supporting information was used to produce the UK Report.
- The UK Report on the conservation status of this habitat is provided in a separate document.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Explanatory notes (where provided) by the country are included at the end. These provide an audit trail of relevant supporting information.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was only relevant at UK-level (sections 10 Future prospects and 11 Conclusions).
- For technical reasons, the country-level future trends for Range, Area covered by habitat and Structure and functions are only available in a separate spreadsheet that contains all the country-level supporting information.
- The country-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK (Scotland information only)**
1.2 Habitat code	**6520 - Mountain hay meadows**

2. Maps

2.1 Year or period	1986-2011
2.3 Distribution map	Yes
2.3 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.4 Additional maps	No

BIOGEOGRAPHICAL LEVEL

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs	**Atlantic (ATL)**
3.2 Sources of information	basic data sources used for 2007, 2013 and 2018 reporting : SNH Lowland Grassland Database, containing data collected during NCC and SNH grassland surveys, 1986 - 2000, MacKintosh, J. 2005. Distribution and Extent of Unimproved Lowland Grassland National Vegetation Classification (NVC) Types in Scotland. Bot. J. Scotl. 56(2) 119-146, Dadds, N.J. and Averis, A.B.G. In press. Review of the extent and condiition of lowland grassland Priority BAP habitats and Annex 1 habitats. Scottish Natural Heritage Commissioned Report. SCM data. 2019 areas based on HABMoS measurements with some additional expert interpretation

4. Range

4.1 Surface area (in km²)		
4.2 Short-term trend Period	2007-2018	
4.3 Short-term trend Direction	Stable (0)	
4.4 Short-term trend Magnitude	a) Minimum	b) Maximum
4.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
4.6 Long-term trend Period		
4.7 Long-term trend Direction		
4.8 Long-term trend Magnitude	a) Minimum	b) Maximum
4.9 Long-term trend Method used		
4.10 Favourable reference range	a) Area (km²) b) Operator c) Unknown: No d) Method	
4.11 Change and reason for change in surface area of range	Improved knowledge/more accurate data Use of different method The change is mainly due to: Improved knowledge/more accurate data	
4.12 Additional information	No reported loss of sites since 2013 when habitat was last reported on. New potential sites have however been identified through the HABMoS project and whilst not ground truthed for the purpose of this reporting they have been included.	

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5. Area covered by habitat

5.1 Year or period	1983-2017		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value 0.56
5.3 Type of estimate	Best estimate		
5.4 Surface area Method used	Based mainly on extrapolation from a limited amount of data		
5.5 Short-term trend Period	2007-2018		
5.6 Short-term trend Direction	Decreasing (-)		
5.7 Short-term trend Magnitude	a) Minimum 0.09	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used	Based mainly on expert opinion with very limited data		
5.9 Long-term trend Period	1993-2017		
5.10 Long-term trend Direction	Decreasing (-)		
5.11 Long-term trend Magnitude	a) Minimum 0.18	b) Maximum	c) Confidence interval
5.12 Long-term trend Method used	Based mainly on extrapolation from a limited amount of data		
5.13 Favourable reference area	a) Area (km²) b) Operator c) Unknown No d) Method		
5.14 Change and reason for change in surface area of range	Improved knowledge/more accurate data Use of different method The change is mainly due to: Improved knowledge/more accurate data		
5.15 Additional information	The rate of loss of habitat are is based on the sample survey carried out in 2010-2011 recording losses from the previous 25 year period. The survey recorded losses of 18.86% for that period. Assuming a steady rate of loss and no change in rate of loss since the sample survey it is estimated that the rate of loss continues at 9% for a 12 year period. This rate of loss is however offset in the figures provided for area as new potential sites have been identified by the HABMoS project. The HABMoS mapping is based on an analysis of all available existing survey data.		

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 0.08	Maximum 0.08
	b) Area in not-good condition (km²)	Minimum 0.03	Maximum 0.03
	c) Area where condition is not known (km²)	Minimum 0.45	Maximum 0.45
6.2 Condition of habitat Method used	Based mainly on expert opinion with very limited data		
6.3 Short-term trend of habitat area in good condition Period	2007-2018		
6.4 Short-term trend of habitat area in good condition Direction	Stable (0)		

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6.5 Short-term trend of habitat area in good condition Method used	Based mainly on expert opinion with very limited data	
6.6 Typical species	Has the list of typical species changed in comparison to the previous reporting period?	No
6.7 Typical species Method used		
6.8 Additional information		

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Mowing or cutting of grasslands (A08)	H
Extensive grazing or undergrazing by livestock (A10)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	H
Modification of hydrological flow (K04)	H
Increases or changes in precipitation due to climate change (N03)	M
Mixed source air pollution, air-borne pollutants (J03)	H

Threat	Ranking
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Mowing or cutting of grasslands (A08)	H
Extensive grazing or undergrazing by livestock (A10)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	H
Modification of hydrological flow (K04)	H
Increases or changes in precipitation due to climate change (N03)	M
Mixed source air pollution, air-borne pollutants (J03)	H

7.2 Sources of information	
7.3 Additional information	This habitat is frequently on river banks such as the Dee and flood prevention etc has seen the loss of about 50% of this habitat from known sites in the river corridor.

8. Conservation measures

8.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken
8.2 Main purpose of the measures taken	Restore the habitat of the species (related to 'Habitat for the species')	
8.3 Location of the measures taken	Only outside Natura 2000	
8.4 Response to the measures	Medium-term results (within the next two reporting periods, 2019-2030)	

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8.5 List of main conservation measures

Reinstate appropriate agricultural practices to address abandonment, including mowing, grazing, burning or equivalent measures (CA04)
Prevent conversion of (semi-) natural habitats into forests and of (semi-)natural forests into intensive forest plantation (CB01)
Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land (CA01)
Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production (CA09)
Management, control or eradication of established invasive alien species of Union concern (CI02)

8.6 Additional information

Measures only applied to one unfavourable SSSI feature. Presence of measures in wider countryside sites unknown. N derposition critical load reported to be High for this habitat but no site specific measures in place to address this.

9. Future prospects

9.1 Future prospects of parameters

a) Range
b) Area
c) Structure and functions

9.2 Additional information

A loss of 18.86% was recorded by the sample survey of 2010-11. In addition 75% of non designated sites where habitat remained was found in an unfavourable condition. This habitat often occurs as small fragments which make the application process for AECS a disproportonate burden. Nitrogen impact is assessed as high for this habitat and therfore the trend will be very negative.

10. Conclusions

10.1. Range

10.2. Area

10.3. Specific structure and functions (incl. typical species)

10.4. Future prospects

10.5 Overall assessment of Conservation Status

10.6 Overall trend in Conservation Status

10.7 Change and reasons for change in conservation status and conservation status trend

a) Overall assessment of conservation status

No change

The change is mainly due to:

b) Overall trend in conservation status

No change

The change is mainly due to:

10.8 Additional information

11. Natura 2000 (pSCIs, SCIs, SACs) coverage for Annex I habitat types

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11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km² in biogeographical/ marine region)	a) Minimum b) Maximum c) Best single value
11.2 Type of estimate	
11.3 Surface area of the habitat type inside the network Method used	
11.4 Short-term trend of habitat area in good condition within the network Direction	
11.5 Short-term trend of habitat area in good condition within network Method used	
11.6 Additional information	No Natura sites

12. Complementary information

12.1 Justification of % thresholds for trends	
12.2 Other relevant information	

Distribution Map

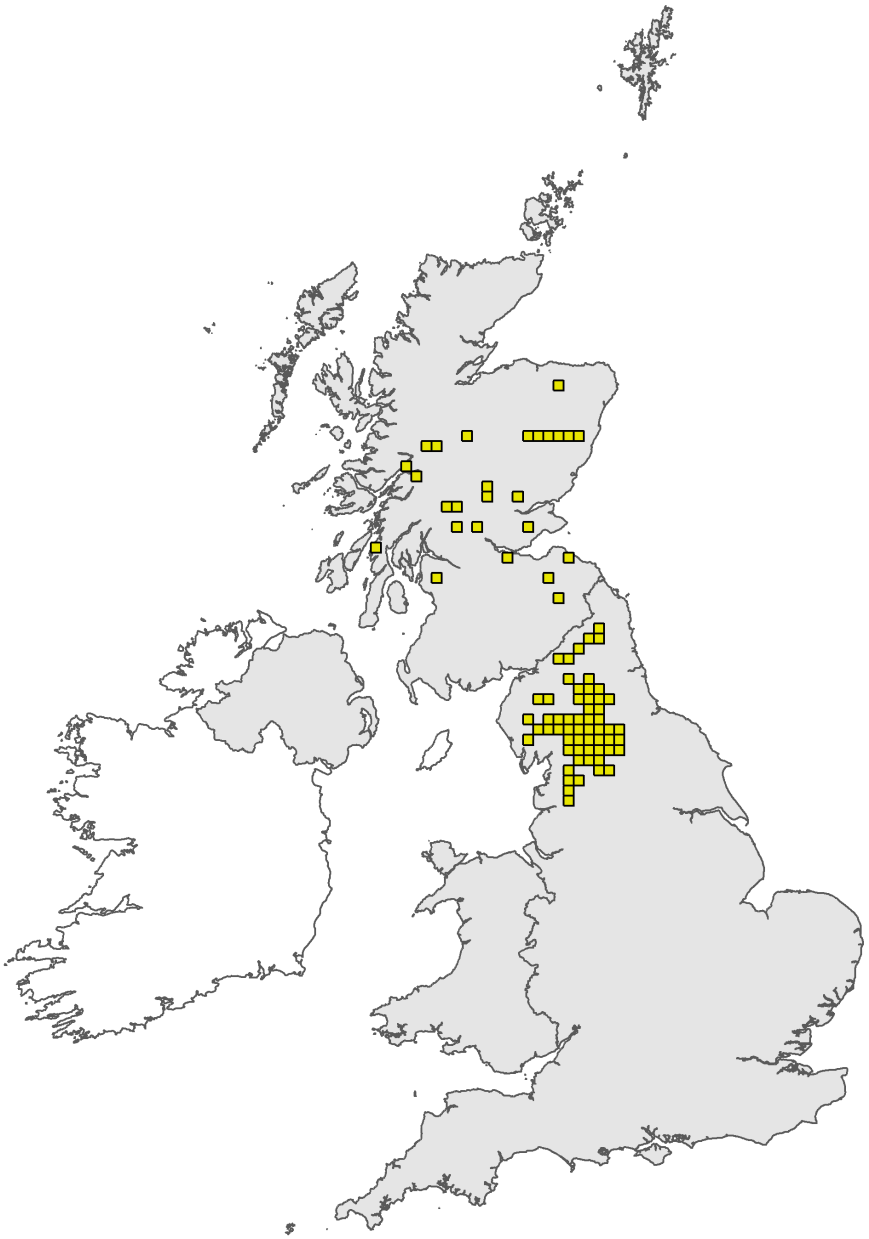

Figure 1: UK distribution map for H6520 - Mountain hay meadows. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available habitat records which are considered to be representative of the distribution within the current reporting period. For further details see the 2019 Article17 UK Approach document.

Range Map

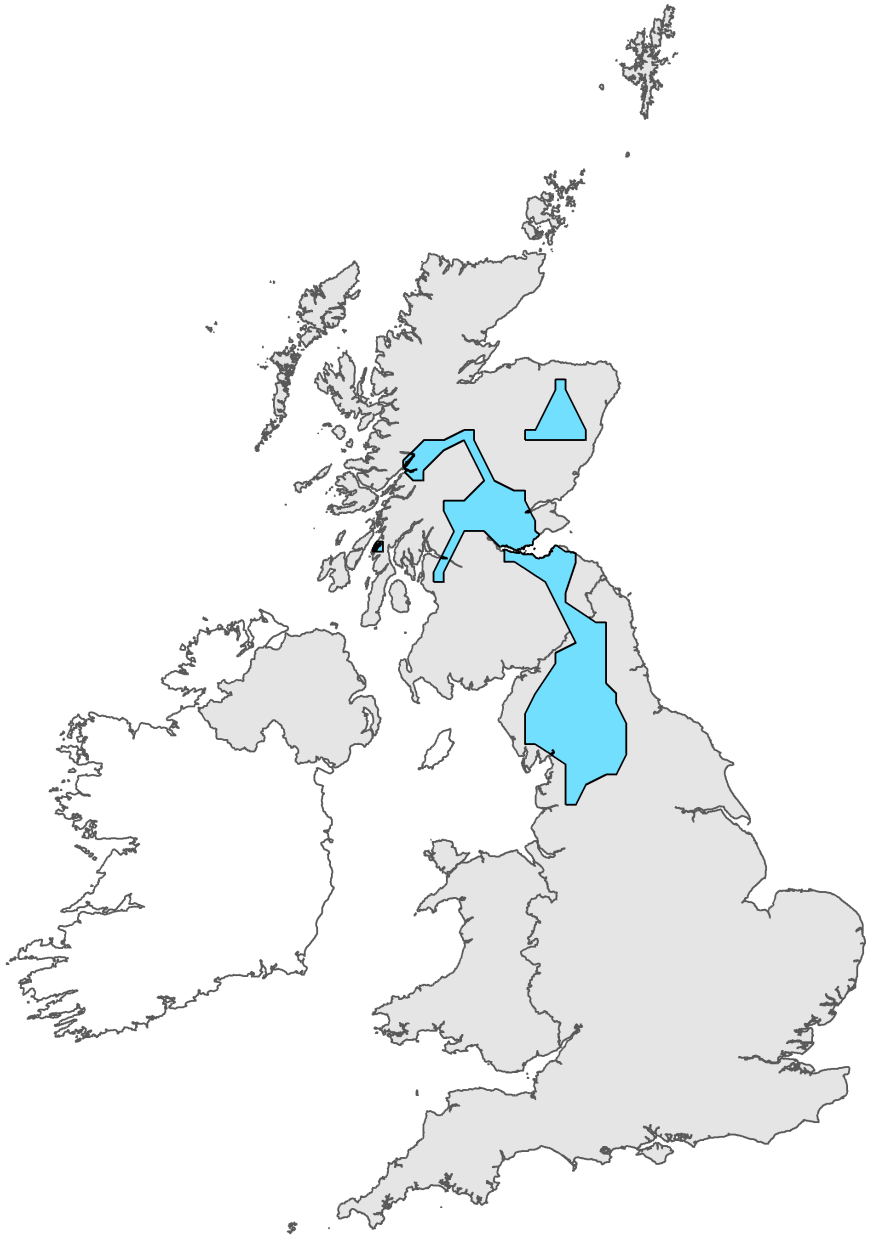

Figure 2: UK range map for H6520 - Mountain hay meadows. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this habitat was 25km. For further details see the 2019 Article 17 UK Approach document.