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 species:

S1065 - Marsh fritillary butterfly (*Euphydryas aurinia*)

ENGLAND

IMPORTANT NOTE - PLEASE READ

- The information in this document is a country-level contribution to the UK Report on the conservation status of this species, 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 species 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; (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species) and/or (iv) the field was only relevant at UK-level (sections 9 Future prospects and 10 Conclusions).
- For technical reasons, the country-level future trends for Range, Population and Habitat for the species 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 11 for Annex II, IV and V species (Annex B)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK (England information only)**
1.2 Species code	**1065**
1.3 Species scientific name	**Euphydryas aurinia**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Marsh fritillary butterfly

2. Maps

2.1 Sensitive species	No
2.2 Year or period	
2.3 Distribution map	Yes
2.4 Distribution map Method used	
2.5 Additional maps	No

3. Information related to Annex V Species (Art. 14)

3.1 Is the species taken in the wild/exploited?		No
3.2 Which of the measures in Art. 14 have been taken?	a) regulations regarding access to property	No
	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	No
	c) regulation of the periods and/or methods of taking specimens	No
	d) application of hunting and fishing rules which take account of the conservation of such populations	No
	e) establishment of a system of licences for taking specimens or of quotas	No
	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	No
	g) breeding in captivity of animal species as well as artificial propagation of plant species	No
	h) other measures	No

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

b) Statistics/ quantity taken	Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period					
	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
Min. (raw, ie. not rounded)						
Max. (raw, ie. not rounded)						
Unknown	No	No	No	No	No	No

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

BIOGEOGRAPHICAL LEVEL

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs

Atlantic (ATL)

4.2 Sources of information

United Kingdom Buttlerfly Monitoring Scheme Annual Report 2016, Botham et al, CEH 2016. http://www.ukbms.org/docs/reports/2016/Butterfly Ann Report 2016.pdf
The State of Britain's Butterflies 2015, Butterfly Conservation 2016. https://butterfly-conservation.org/files/soukb-2015.pdf

5. Range

5.1 Surface area (km²)

5.2 Short-term trend Period

5.3 Short-term trend Direction

Stable (0)

5.4 Short-term trend Magnitude

a) Minimum

b) Maximum

5.5 Short-term trend Method used

5.6 Long-term trend Period

5.7 Long-term trend Direction

5.8 Long-term trend Magnitude

a) Minimum

b) Maximum

5.9 Long-term trend Method used

5.10 Favourable reference range

a) Area (km²)
b) Operator
c) Unknown
d) Method

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

5.11 Change and reason for change in surface area of range	No change The change is mainly due to:
5.12 Additional information	Although there have been some losses and gains of individual colonies since 2010, overall there has not been a significant change in the range in surface area for this species.

6. Population

6.1 Year or period	2010-2016	
6.2 Population size (in reporting unit)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	
	c) Maximum	
	d) Best single value	542
6.3 Type of estimate	Best estimate	
6.4 Additional population size (using population unit other than reporting unit)	a) Unit	
	b) Minimum	
	c) Maximum	
	d) Best single value	
6.5 Type of estimate		
6.6 Population size Method used	Complete survey or a statistically robust estimate	
6.7 Short-term trend Period	2010-2016	
6.8 Short-term trend Direction	Stable (0)	
6.9 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.10 Short-term trend Method used	Complete survey or a statistically robust estimate	
6.11 Long-term trend Period		
6.12 Long-term trend Direction		
6.13 Long-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.14 Long-term trend Method used		
6.15 Favourable reference population (using the unit in 6.2 or 6.4)	a) Population size	
	b) Operator	
	c) Unknown	
	d) Method	
6.16 Change and reason for change in population size	No change The change is mainly due to:	

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

6.17 Additional information	There have been the usual fluctuations in all the monitored sites, but overall the trend over the period has been stable.

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (to maintain the species at FCS)?	Unknown
	b) Is there a sufficiently large area of occupied AND unoccupied habitat of suitable quality (to maintain the species at FCS)?	Unknown
7.2 Sufficiency of area and quality of occupied habitat Method used	Based mainly on extrapolation from a limited amount of data	
7.3 Short-term trend Period	2010-2016	
7.4 Short-term trend Direction	Stable (0)	
7.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
7.6 Long-term trend Period		
7.7 Long-term trend Direction		
7.8 Long-term trend Method used		
7.9 Additional information	The area and quality of occupied habitat is OK but there are still formerly occupied sites where the quality is insufficient at present to allow recolonisation. The extent of such habitat is not known.	

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Conversion into agricultural land (excluding drainage and burning) (A01)	M
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	M
Mowing or cutting of grasslands (A08)	M

Threat	Ranking
Conversion into agricultural land (excluding drainage and burning) (A01)	M
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	M
Mowing or cutting of grasslands (A08)	M

8.2 Sources of information	
8.3 Additional information	The main pressure/ threat to marsh fritillary is the cessation of suitable management to both maintain the current extent of jhabitat and popiulations, and to redstore these in areas where it previously occurred. In general, conservation measures for this species are working well and these pressures/ threats are listed as medium to reflect this; but it is important that this is maintained in the future.

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

9. Conservation measures

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

9.5 List of main conservation measures

Reinstate appropriate agricultural practices to address abandonment, including mowing, grazing, burning or equivalent measures (CA04)

Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land (CA01)

9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters	a) Range b) Population c) Habitat of the species
10.2 Additional information	

11. Conclusions

11.1. Range	
11.2. Population	
11.3. Habitat for the species	
11.4. Future prospects	
11.5 Overall assessment of Conservation Status	
11.6 Overall trend in Conservation Status	
11.7 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:
11.8 Additional information	

12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)	a) Unit b) Minimum c) Maximum d) Best single value
12.2 Type of estimate	
12.3 Population size inside the network Method used	
12.4 Short-term trend of population size within the network Direction	
12.5 Short-term trend of population size within the network Method used	
12.6 Additional information	

13. Complementary information

13.1 Justification of % thresholds for trends
13.2 Trans-boundary assessment
13.3 Other relevant Information

Distribution Map

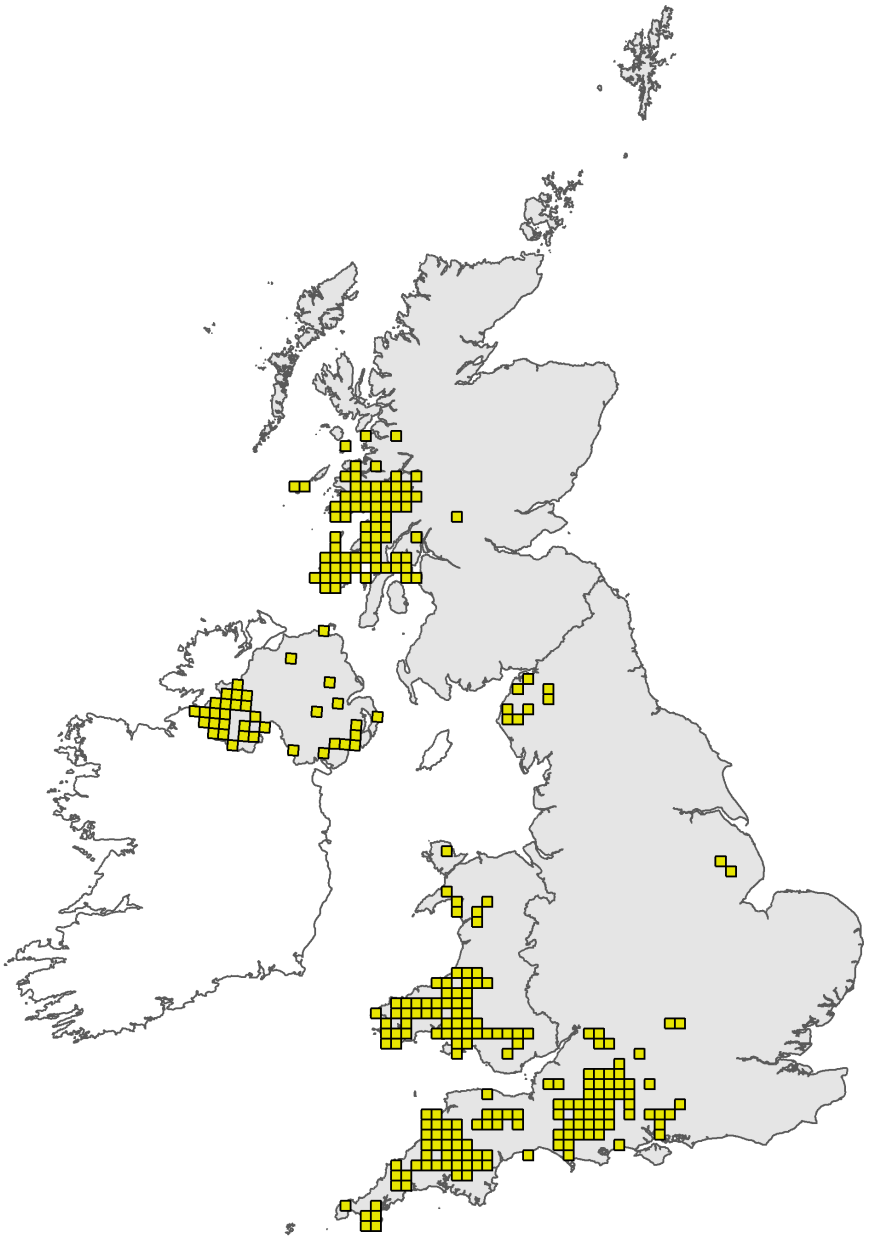

Figure 1: UK distribution map for S1065 - Marsh fritillary butterfly (*Euphydryas aurinia*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available species records within the current reporting period. For further details see the 2019 Article 17 UK Approach document.

Range Map

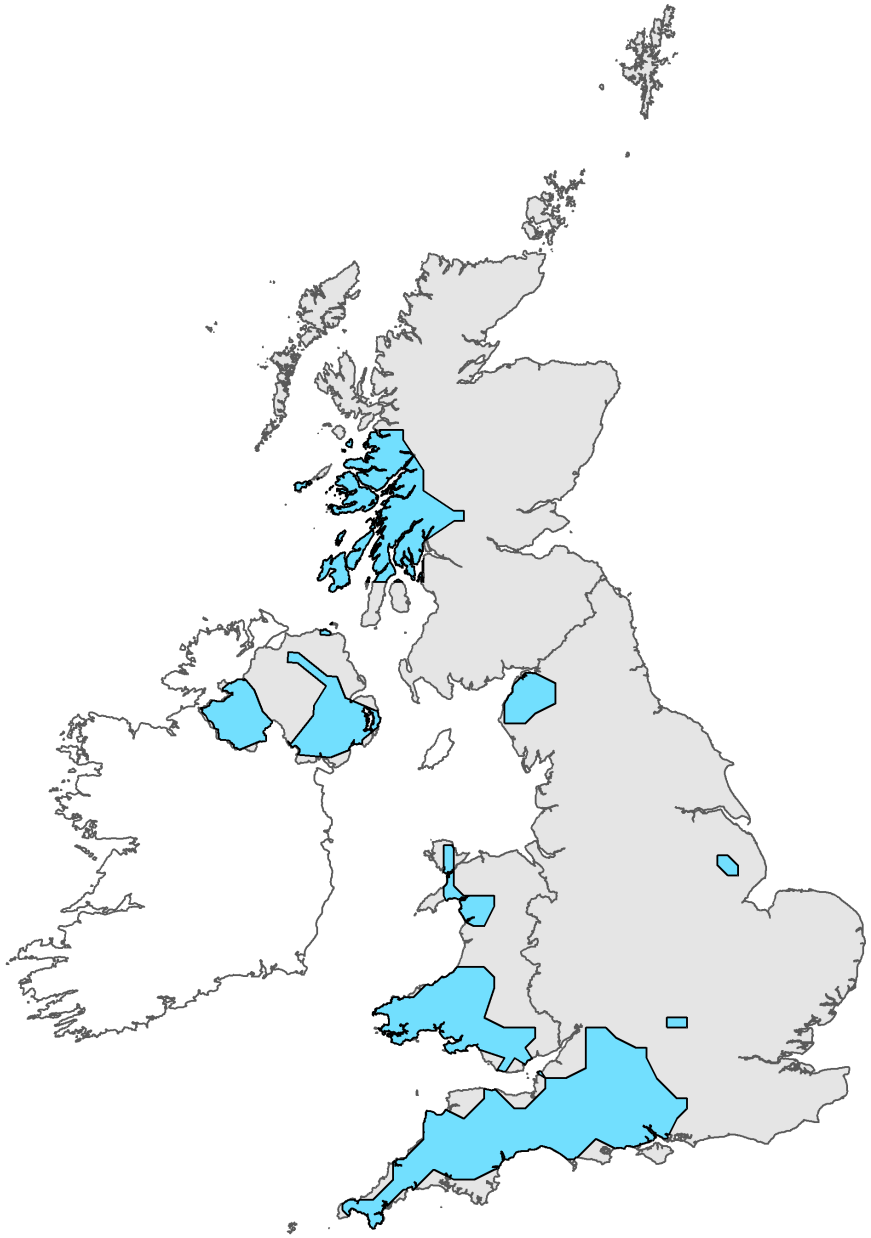

Figure 2: UK range map for S1065 - Marsh fritillary butterfly (*Euphydryas aurinia*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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 species was 20km. For further details see the 2019 Article 17 UK Approach document.

Explanatory Notes

Species name: Euphydryas aurinia (1065) Region code: ATL

Field label	Note
5.11 Change and reason for change in surface area of range	Although there have been some losses and gains of individyual colonies since 2010, overall there has not been a significant change in the range in surface area for this species.
6.16 Change and reason for change in population size	There have been the usual fluctuations in all the monitored sites, but overall the trend over the period has been stable.
7.1a Sufficiency of area and quality of occupied habitat - Are area and quality of occupied habitat sufficient (for long-term survival)?	A statistically robust estimate of populations has been made to produce the stable trend. The amount of suitable occupied habitat is assumed to be sufficient to support the present population but this is based on limited survey data and expert opinion. The suitability of unoccupied habitat is assumed to be insufficient but overall is unknown.
7.1b Sufficiency of area and quality of occupied habitat - Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?	The area and quality of occupied habitat is OK but there are still formerly occupied sites where the quality is insufficient at present to allow recolonisation. The extent of such habitat is not known.
7.9 Additional information	The area and quality of occupied habitat is OK but there are still formerly occupied sites where the quality is insufficient at present to allow recolonisation. The extent of such habitat is not known.
8. Main pressures and threats info	The main pressure/ threat to marsh fritillary is the cessation of suitable management to both maintain the current extent of habitat and populations, and to restore these in areas where it previously occurred. In general, conservation measures for this species are working well and these pressures/ threats are listed as medium to reflect this; but it is important that this is maintained in the future.