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

Conservation status assessment for the species:

S1357 - Pine marten (*Martes martes*)

UNITED KINGDOM

IMPORTANT NOTE - PLEASE READ

- The information in this document represents 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.
- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.
- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Maps showing the distribution and range of the species are included (where available).
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level reports.
- 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 not relevant to this species (section 12 Natura 2000 coverage for Annex II species).
- The UK-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**
1.2 Species code	**1357**
1.3 Species scientific name	**Martes martes**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Pine marten

2. Maps

2.1 Sensitive species	No
2.2 Year or period	1994-2017
2.3 Distribution map	Yes
2.4 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
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

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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

England
Balharry, D. (1993). Factors affecting the distribution and population density of pine martens (Martes martes l.) in Scotland. PhD, University of Aberdeen.
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Birks, J.D.S., Messenger, J.E. and Halliwell, E (2005). Diversity of densities used by pine martens Martes martes: a response to the scarcity of arboreal cavities? Mammal Review 35: 313-320
Caryl, F.M. (2008). Pine marten diet and habitat use within a managed coniferous forest, PhD, University of Stirling.
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Croose, E., Birks, J.D.S., and Schofield, H.W. (2013). Expansion zone survey of pine marten (Martes martes) distribution in Scotland. Scottish Natural Heritage Commissioned Report, No.520
Croose, E., Birks, J.D.S., Schofield, H.W. and O'Reilly, C. (2014). Distribution of the pine marten (Martes martes) in southern Scotalnd in 2013. Scottish Natural Heritage Commissioned Report, No.740
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Vincent Wildlife Trust (2018). Bringing the Pine Marten back from the brink leaflet. Www.vwt.org.uk/wp-content/uploads/2018/01/BTFB-Leaflet-web.pdf
Scotland
Birks. J.D.S., Messenger, J.E. & Halliwell, E. 2005. Diversity of den sites used by pine martens Martes martes: a response to the scarcity of arboreal cavities? Mammal Review 35: 313-320 http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2907.2005.00068.x/abstract.
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5. Range

5.1 Surface area (km²)	97496	
5.2 Short-term trend Period	2013-2018	
5.3 Short-term trend Direction	Increasing (+)	
5.4 Short-term trend Magnitude	a) Minimum	b) Maximum
5.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
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)	65998
	b) Operator	
	c) Unknown	
	d) Method	The FRR is the same as in 2013. The value is considered to be large enough to support a viable population and no lower than the range estimate when the Habitats Directive came into force in the UK. For further information see the 2019 Article 17 UK Approach document. The current range surface area has been calculated using the method outlined in Mathews et al. (2018) and is based on presence data collected between 1995-2016. Areas

that contain very isolated records may not have been included in the area of distribution. The new, more robust method of calculating range has reduced the estimated range size for this species since 2013. This does not represent a real reduction in range. Current range is above the FRR.

5.11 Change and reason for change in surface area of range	Genuine change Improved knowledge/more accurate data Use of different method The change is mainly due to: Genuine change
5.12 Additional information	The range surface area has been taken from Mathews et al. (2018) for Great Britain and is based on presence data collected between 1995-2016. Northern Ireland data have been added to produce the UK range surface area. Areas that contain very isolated records may not have been included in the area of distribution. There has been substantial and sustained increase in the range of pine martens in Scotland, where the largest population occurs, since the 1990s, as docmented in Croose et al. (2013, 2014). The current range is above the FRR value and is considered to be large enough to support a viable population.

6. Population

6.1 Year or period	1994-2018
6.2 Population size (in reporting unit)	a) Unit: number of individuals (i) b) Minimum: 2123 c) Maximum: 9620 d) Best single value
6.3 Type of estimate	95% confidence interval
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	Based mainly on extrapolation from a limited amount of data
6.7 Short-term trend Period	2007-2018
6.8 Short-term trend Direction	Increasing (+)
6.9 Short-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval

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6.10 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
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	Approximately equal to (≈)
	c) Unknown	
	d) Method	The FRP has changed since 2013. An FRP operator has been used because it has not been possible to calculate the exact FRP. The current population is considered to be viable and is no less that when the Habitats Directive came into force in the UK. For further details see the 2019 Article 17 UK Approach document. The confidence limits for the population estimate are extremely wide and methodologies have changed. A best single value for the population has not been provided because of the level of uncertainty around the population estimate. Instead the lower and upper confidence intervals provide minimum and maximum limits to the estimate.
6.16 Change and reason for change in population size	Genuine change Improved knowledge/more accurate data	
	The change is mainly due to:	Genuine change
6.17 Additional information	Estimates of population size for GB have been taken from Mathews et. al. (2018) and are considered to be more robust than the estimates used in the 2013 Article 17 report. Northern Ireland data have been added to the GB estimate to obtain a UK population estimate. Although there has been a change in methodology, the current upper confidence limit for the population estimate represents a significant increase in population size, which appears to reflect a genuine increase in range. The population is expected to increase as the range increases.	

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (for long-term survival)?	Yes
	b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?	
7.2 Sufficiency of area and quality of occupied habitat Method used	Based mainly on extrapolation from a limited amount of data	

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7.3 Short-term trend Period	1995-2018
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	There is ample available habitat for pine martens in Scotland, where the largest population occurs, as demonstrated by the progressive expansion of the species south and eastwards since the 1990s - see Croose et. al., (2013, 2014). In other parts of the UK, where there are smaller populations, habitat availability and quality are less certain. The trend in available habitat is assessed as stable but could be increasing.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Logging without replanting or natural regrowth (B05)	H
Removal of dead and dying trees, including debris (B07)	M
Clear-cutting, removal of all trees (B09)	H
Forest management reducing old growth forests (B15)	M
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	H
Illegal shooting/killing (G10)	H
Poisoning of animals (excluding lead poisoning) (G13)	M
Interspecific relations (competition, predation, parasitism, pathogens) (L06)	M

Threat	Ranking
Logging without replanting or natural regrowth (B05)	H
Clear-cutting, removal of all trees (B09)	H
Forest management reducing old growth forests (B15)	M
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	H
Illegal shooting/killing (G10)	H
Poisoning of animals (excluding lead poisoning) (G13)	M
Interspecific relations (competition, predation, parasitism, pathogens) (L06)	M

8.2 Sources of information

8.3 Additional information

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9. Conservation measures

9.1 Status of measures	a) Are measures needed?	No
	b) Indicate the status of measures	
9.2 Main purpose of the measures taken		
9.3 Location of the measures taken		
9.4 Response to the measures		
9.5 List of main conservation measures		
9.6 Additional information		

10. Future prospects

10.1 Future prospects of parameters	a) Range	Good
	b) Population	Good
	c) Habitat of the species	Good
10.2 Additional information	Future trend in Range is Positive - increasing <=1% (one percent or less) per year on average; Future trend in Population is Positive - increasing <=1% (one percent or less) per year on average; and Future trend in Habitat for the species is Overall stable. For further information on how future trends inform the Future Prospects conclusion see the 2019 Article 17 UK Approach document.	

11. Conclusions

11.1. Range	Favourable (FV)
11.2. Population	Favourable (FV)
11.3. Habitat for the species	Favourable (FV)
11.4. Future prospects	Favourable (FV)
11.5 Overall assessment of Conservation Status	Favourable (FV)
11.6 Overall trend in Conservation Status	Improving (+)
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	Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is increasing; and (ii) the current Range surface area is greater than the Favourable Reference Range.

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Conclusion on Population reached because: (i) the short-term trend direction in Population size is increasing; and (ii) the current Population size is approximately equal to the Favourable Reference Population.

Conclusion on Habitat for the species reached because: (i) the area of occupied habitat is sufficiently large and (ii) the habitat quality is suitable for the long-term survival of the species; and (iii) the short-term trend in area of habitat is stable and the quality of habitat is stable.

Conclusion on Future Prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Population are good; and (iii) the Future prospects for Habitat for the species are good.

Overall assessment of Conservation Status is Favourable because all of the conclusions are Favourable.

Overall trend in Conservation Status is based on the combination of the short-term trends for Range – increasing, Population – increasing, and Habitat for the species – stable.

Overall assessment of Conservation Status has not changed since 2013.

Overall trend in conservation status was not reported for this species in 2013. However, from the information available the overall trend would have been increasing in 2013 and so there has been no change since the last reporting round.

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

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	

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13.3 Other relevant Information

Distribution Map

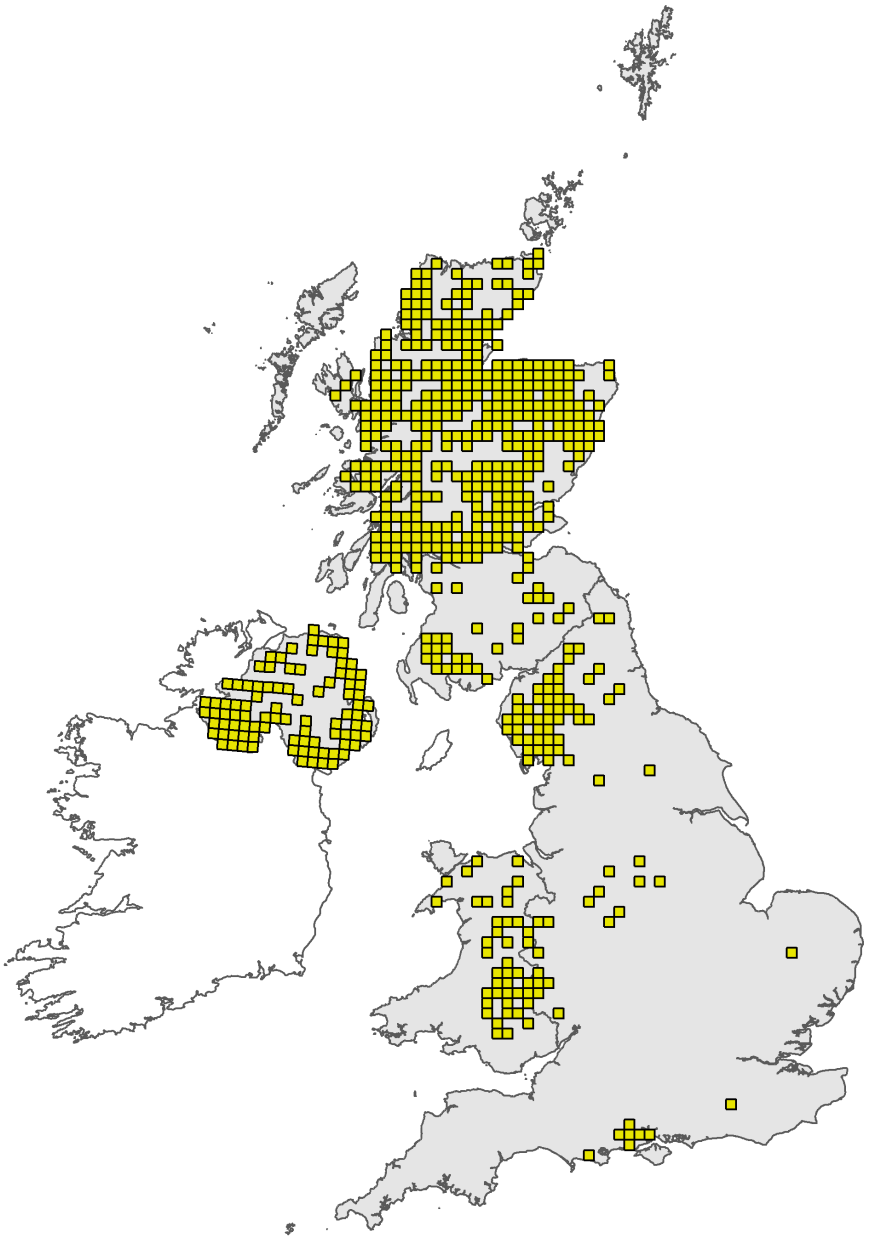

Figure 1: UK distribution map for S1357 - Pine marten (*Martes martes*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

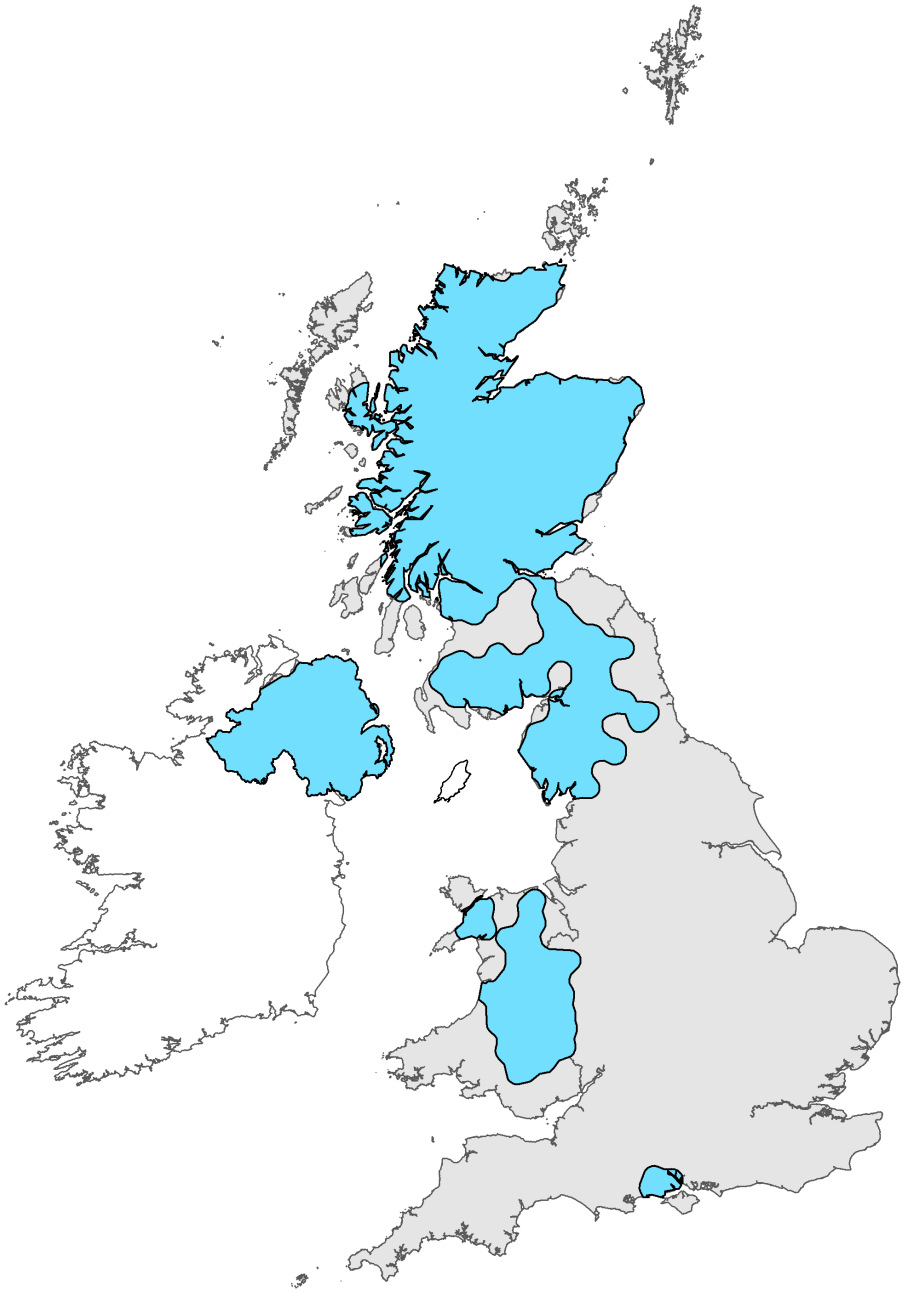

Figure 2: UK range map for S1357 - Pine marten (*Martes martes*).Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by The Mammal Society applying a range mapping tool as outlined in Matthews et al. (2018), 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: Martes martes (1357) Region code: ATL

Field label	Note
5.3 Short term trend; Direction	The trend in range is based on comparing current range with range in 2013. See 2019 Article 17 UK Approach document for further details.