# 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:

## S1357 - Pine marten (*Martes martes*)

# NORTHERN IRELAND

# 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 (Northern Ireland information only)** |
| 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 | Department of Agriculture, Enironment and Rurual Affairs (DAERA) (2018) Woodland Register, https://www.daera-ni.gov.uk/publications/woodland-register-by-county |

JNCC, UK priority species pages - Martes Martes Version 2 (2010) JNCC, http://jncc.defra.gov.uk/_speciespages/2405.pdf

O'Mahony, D., Turner, P. and O'Reilly, C. (2012). Population status of pine marten in an isolated refuge: the Mourne Mountains. A report to the Peoples Trust for Endangered Species and Northern Ireland Environment Agency.

O'Mahony, D.T., Turner, P. and O' Reilly, C. (2015). Pine Marten (Martes martes) abundance in an insular mountainous region using non-invasive techniques. European Journal of Wildlife Research (2015) 61: 103-110

O'Mahony, D.T., Powell, C., Power, J., Hannify, R., Turner, P. and O' Reilly, C. (2017). National pine marten population assessment 2016. Irish Wildlife Manuals, No. 97. National Parks and Wildlife Service, Department of the Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Ireland.

Tosh, D., Preston, S. J. , and McDonald, R. A. (2007) The Status of Pine Martens Martes martes (L.) in Northern Ireland, 1850-2004. Irish Naturalists' Journal Vol 28, No 11, pp 433-439.

Tosh, D.G. & Twining, J.P. (2017) A camera trap study of the pine marten population of the Ring of Gullion, Ring of Gullion Landscape Partnership, Co. Armagh, Northern Ireland, https://www.ringofgullion.org/wp-content/uploads/2018/05/RoG-Camera-trap-study-of-pine-marten-population-without-maps-Feb18.pdf

Tosh, D. (2005) An assessment of the conservation status of the pine marten (Martes martes) in Northern Ireland.

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

Cooper, A., McCann, T. and Rogers, D. (2009) Northern Ireland Countryside Survey 2007: Broad Habitat Change 1998-2007. Northern Ireland Environment Agency. Research and Development Series No. 09/06. Web address; https://www.daera-ni.gov.uk/sites/default/files/publications/doe/natural-report-broad-habitat-change-1998-2007.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)<br>b) Operator<br>c) Unknown<br>d) Method | |
| 5.11 Change and reason for change in surface area of range | No change<br><br>The change is mainly due to: | |
| 5.12 Additional information | | |

## 6. Population

| | | |
|---|---|---|
| 6.1 Year or period | 1994-2018 | |
| 6.2 Population size (in reporting unit) | a) Unit | number of individuals (i) |
| | b) Minimum | 523 |
| | c) Maximum | 720 |
| | d) Best single value | |
| 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 | Based mainly on extrapolation from a limited amount of data | |
| 6.7 Short-term trend Period | 2007-2017 | |
| 6.8 Short-term trend Direction | Increasing (+) | |

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| | | |
|---|---|---|
| 6.9 Short-term trend Magnitude | a) Minimum<br>b) Maximum<br>c) Confidence interval | |
| 6.10 Short-term trend Method used | Based mainly on expert opinion with very limited data | |
| 6.11 Long-term trend Period | | |
| 6.12 Long-term trend Direction | | |
| 6.13 Long-term trend Magnitude | a) Minimum<br>b) Maximum<br>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<br>b) Operator<br>c) Unknown<br>d) Method | |
| 6.16 Change and reason for change in population size | Genuine change<br><br>The change is mainly due to: Genuine change | |
| 6.17 Additional information | | |

## 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 | Insufficient or no data available | |
| 7.3 Short-term trend Period | 2007-2017 | |
| 7.4 Short-term trend Direction | Increasing (+) | |
| 7.5 Short-term trend Method used | Complete survey or a statistically robust estimate | |
| 7.6 Long-term trend Period | | |
| 7.7 Long-term trend Direction | | |
| 7.8 Long-term trend Method used | | |
| 7.9 Additional information | | |

## 8. Main pressures and threats

8.1 Characterisation of pressures/threats

| Pressure | Ranking |
|---|---|
| Conversion to other types of forests including monocultures (B02) | H |
| Logging without replanting or natural regrowth (B05) | H |

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| | |
|---|---|
| Logging (excluding clear cutting) of individual trees (B06) | M |
| Removal of dead and dying trees, including debris (B07) | H |
| Clear-cutting, removal of all trees (B09) | H |
| Other forestry activities, excluding those relating to agro-forestry (B29) | M |
| Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01) | H |
| Illegal shooting/killing (G10) | M |
| Poisoning of animals (excluding lead poisoning) (G13) | M |

| Threat | Ranking |
|---|---|
| Conversion to other types of forests including monocultures (B02) | H |
| Logging without replanting or natural regrowth (B05) | H |
| Logging (excluding clear cutting) of individual trees (B06) | M |
| Removal of dead and dying trees, including debris (B07) | M |
| Clear-cutting, removal of all trees (B09) | H |
| Other forestry activities, excluding those relating to agro-forestry (B29) | M |
| Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01) | H |
| Illegal shooting/killing (G10) | M |
| Poisoning of animals (excluding lead poisoning) (G13) | M |

8.2 Sources of information

8.3 Additional information

# 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 | Maintain the current range, population and/or 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 | |

9.6 Additional information

# 10. Future prospects

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| | |
|---|---|
| 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

| | |
|---|---|
| 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 | |

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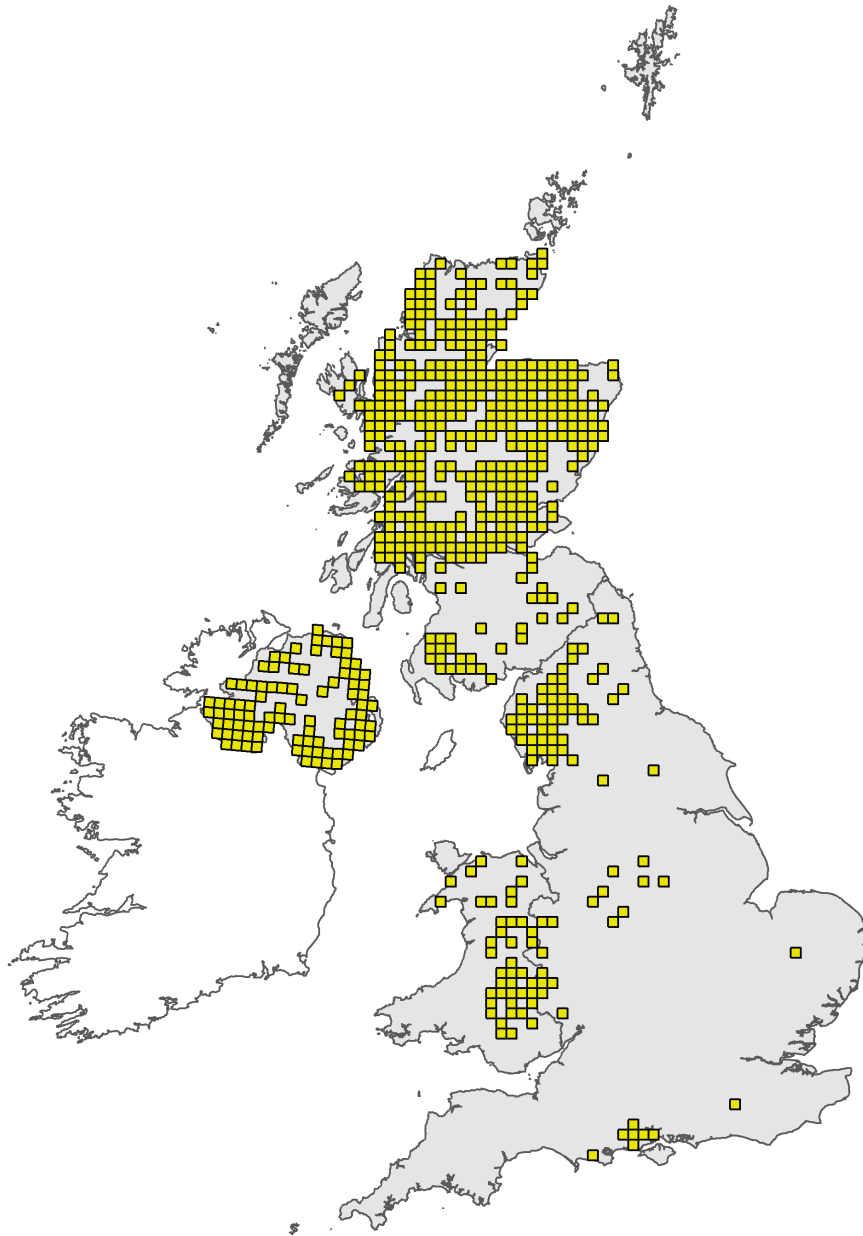
# Distribution Map



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.
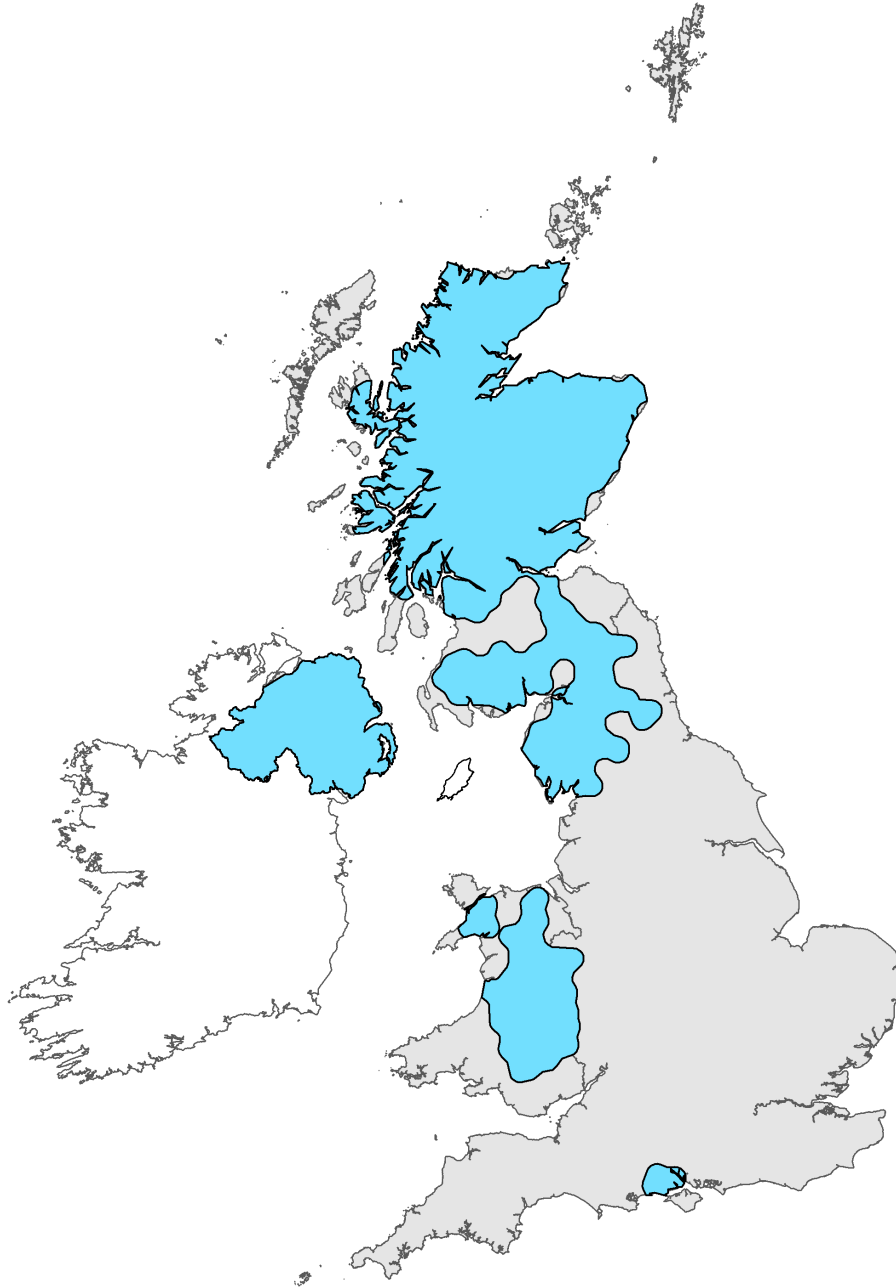
# Range Map



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)

| Field label | Note |
|---|---|
| 2.2 Year or Period | Range and population based upon data from 1994 to 2018 to maximise the amount of data available. |

### Species name: Martes martes (1357) Region code: ATL

| Field label | Note |
|---|---|
| 5.3 Short term trend; Direction | Pine Marten was once widespread in NI but habitat loss and persecution by gamekeepers and fur trappers in the nineteenth century greatly reduced the range of the species (Tosh, et al., 2007). The short-term trend direction for the range has been assessed as 'Stable'. Anecdotal evidence would suggest that the species has extended its range eastwards over the last few years, with an increase in signs and sightings. This may be simply the result of the species increasing in numbers and filling in gaps in its former range. Without systematic monitoring in place, it is difficult to be certain. |
| 5.11 Change and reason for change in surface area of range | Assessment of 'no' change in the surface area of this species' range - see 5.3 above. |
| 6.6 Population size; Method used | The minimum and maximum population estimates for this species were derived from several sources: the NWPS 2016 report 'National Pine Marten Population Assessment'; the population study carried out by Tosh and Twining (2017); and Forest Service data (see Woodland Register in Species Sources section). It is thought that the Forest Service figures for woodland area probably exaggerate the amount of 'functional' area utilised by pine marten as they include small, isolated patches. Three population estimates were calculated based on an estimated All-Ireland population and estimated densities. They are as follows: 1. Based on the '3043' population estimate from the National Pine Marten Population Assessment: o Total Woodland Area (All-Ireland) = 6539.8 km2 o Total Woodland Area (NI) = 1125.6 km2 o Based on these numbers, the Woodland Area of NI is 17.2% of Ireland's total o No. of Pine Marten in All-Ireland Population Assessment = 3043 ....... 3043 x 17.2% = 523.396 = 523 Pine Marten 2. Based on the 0.64 / Km2 population density produced in the National Pine Marten Population Assessment: o Total Woodland Area (All-Ireland) = 6539.8 km2 o Total Woodland Area (NI) = 1125.6 km2 o Density = 0.64 / km2  ....... 0.64 x 1125.6 km2 = 720.384 => 720 Pine Marten3. Based on the 0.53 / Km2 population density produced in Tosh & Twining Study: o Total Woodland Area (All-Ireland) = 6539.8 km2 o Total Woodland Area (NI) = 1125.6 km2 o Density = 0.53 / km2  ....... 0.53 x 1125.6 km2 = 596.568 => 597 Pine Marten Population estimate from the 2013 Report was 320 individuals. |
| 6.8 Short term trend; Direction | Although there is no systematic survey to accurately estimate population trend, anecdotal evidence (signs and sightings) would suggest that the population of Pine Marten has increased in the recent past. Evidence assessed as Based mainly on expert opinion with very limited data due to lack of systematic survey. |
| 6.16 Change and reason for change in population size | Although there is no systematic evidence to confirm this, we have assessed that there has been a genuine change in population size, based upon anecdotal evidence (signs and sightings). |
| 7.1 Sufficiency of area and quality of occupied habitat | Pine marten are most likely to be found in coniferous and mixed woodland. It is difficult to assess whether these habitats are suffciently extensive enough in NI, or perhaps more importantly whether they are sufficiently well-connected, to support a viable population of Pine Marten - hence 7.2 reported as Insufficient or no data available. |

| | |
|---|---|
| 7.2 Sufficiency of area and quality of occupied habitat; Method used | Pine marten are most likely to be found in coniferous and mixed woodland. It is difficult to assess whether these habitats are sufficiently extensive enough in NI, or perhaps more importantly whether they are sufficiently well-connected, to support a viable population of Pine Marten - hence 7.2 reported as Insufficient or no data available. |
| 7.4 Short term trend; Direction | NI Countryside Survey (Cooper et al, 2009) has shown that woodland cover in NI is increasing - hence habitat for the species is increasing. |
| 7.5 Short term trend; Method used | NI Countryside Survey based upon random sample of squares across NI. |
| 8.1 Characterisation of pressures/ threats | Pine marten are most likely to be found in coniferous and mixed woodland - hence many pressures and threats linked to woodland management practices, in addition to deaths caused by road trafic, unlawful killing (Species is protected in NI), etc - i.e. - B02: Conversion to other types of forests including monocultures; B05: Logging without replanting or natural regrowth; B06: Logging (excluding clear cutting) of individual trees; B07: Removal of dead and dying trees, including debris; B09: Clear-cutting, removal of all trees; B29: Other forestry activities, excluding those relating to agro-forestry ; E01: Roads, paths railroads and related infrastructure (e.g. bridges, viaducts, tunnels); G10: Illegal shooting/killing; G13: Poisoning of animals (excluding lead poisoning). . |
| 10.1 Future prospects of parameters | The future prospects for range have been reported as 'Stable' - anecdotal evidence suggests that the species is becoming more frequent in the east, where it was formerly scarce. The same anecdotal evidence would suggest that population has been increasing. In addition, NI Countryside Survey has shown that woodland cover in NI is increasing, so the habitat for the species is also increasing. |