

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

Third Report by the United Kingdom under
Article 17

on the implementation of the Directive
from January 2007 to December 2012
Conservation status assessment for

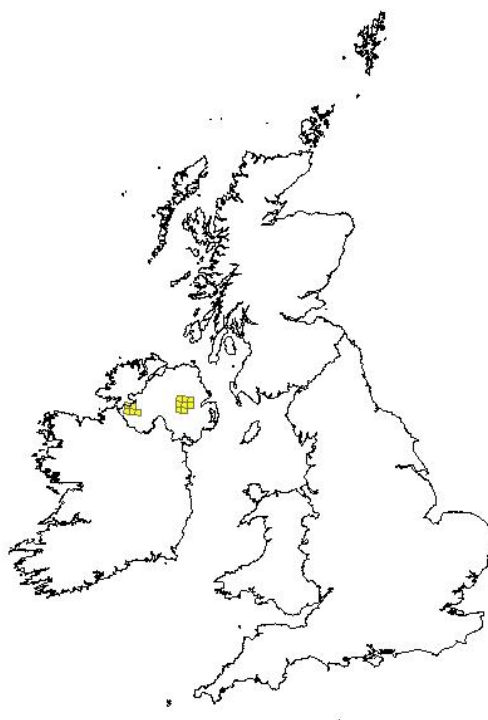
Species:

S5076 - Pollan (*Coregonus autumnalis pollan*)

Reporting format on the 'main results of the surveillance under Article 11' for Annex II, IV & V species

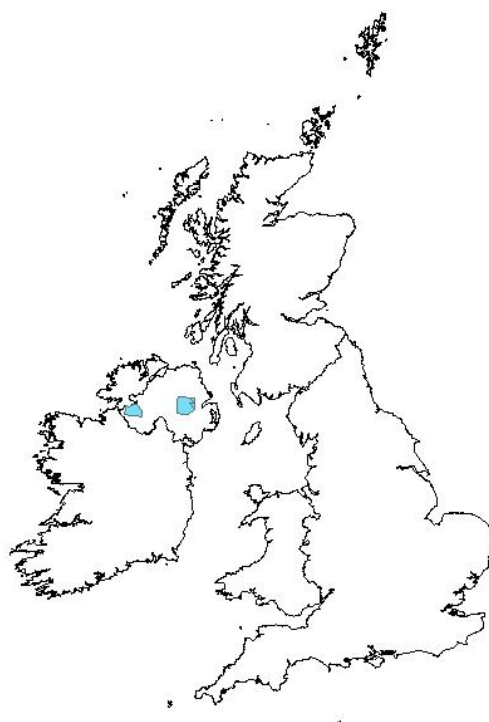
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S5076
	0.2.2 Species scientific name	<i>Coregonus autumnalis pollan</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

1.1 Maps			
1.1.1 Distribution map	True	Sensitive	False
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period.		



1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling		
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information		
1.1.3 Year or period	2010-2012		
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.		

1.1.4 Additional distribution map Optional	False
1.1.5 Range map	True The range map was produced using by applying the alpha hull range tool to the distribution map presented in 1.1.4. The alpha value for this species was 25km. For further details see the 2013 Article 17 UK Approach document.



2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>Bailey RS (1978) Problems in the management of short lived pelagic fish as exemplified by North Sea sprat. ICES Symposium on the basis of pelagic fish stock management, no 33 (mimeo).</p> <p>Carter, C. & Griffiths, D. (2001). A study of environmental conditions in south-east Lough Neagh prior to the relocation of sewage outfalls. Report to the Environment & Heritage Service, Department of the Environment (Northern Ireland).</p> <p>Dabrowski, K.R. (1985). Energy budget of coregonid (<i>Coregonus</i> spp.) fish growth, metabolism and reproduction. <i>Oikos</i> 45, 358-364.</p> <p>Ferguson, A. 1974 The genetic relationships of the coregonid fishes of Britain and Ireland indicated by electrophoretic analysis of tissue proteins. <i>Journal of Fish Biology</i> 6, 311-15.</p> <p>Ferguson, A., Himberg, K.-J.M. and Svardson, G. 1978 Systematics of the Irish pollan <i>Coregonus pollan</i> Thompson: an electrophoretic comparison with other holarctic <i>Coregoninae</i>. <i>Journal of Fish Biology</i> 12, 221-33.</p> <p>Foy, R.H., Smith, R.V., Jordan, C., & Lennox, S.D. (1995). Upward trend in soluble phosphorous loadings to Lough Neagh</p>

	<p>despite phosphorus reduction at sewage treatment works. <i>Water Research</i> 29, 1051-1063.</p> <p>Harrod, C. (2001). The ecology of a threatened fish, the pollan (<i>Coregonus autumnalis</i>) in Lough Neagh, Northern Ireland. D. Phil. Thesis. University of Ulster.</p> <p>Harrod, C., Griffiths, D., McCarthy, T.K. & Rosell, R. S. (2001). The Irish pollan, <i>Coregonus autumnalis</i>: options for its conservation. <i>Journal of Fish Biology</i> 59 (Supplement A), 339-355.</p> <p>Harrod, C., Griffiths, D., Rosell, R. S. & McCarthy, T.K. (2002) Current status of the pollan (<i>Coregonus autumnalis</i> Pallas 1776) in Ireland. <i>Arch. Hydrobiol. Spec. Issues Advanc. Limnol.</i> 57: 627-638.</p> <p>Helminen, H., Sarvala, J., & Karjalainen, J. (1997). Patterns in vendace recruitment in Lake Pyhäjärvi, southwest Finland. <i>Journal of Fish Biology</i> 51 (Supplement A), 303-316.</p> <p>Inger R, McDonald R, Rogowski D, Andrew L. Jackson A, Parnell A, Preston SJ, Harrod C, Goodwin C, Griffiths D, Dick JTA, Elwood RW, Newton J & Bearhop S (2010) Do non-native invasive fish support elevated lamprey populations? <i>Journal of Applied Ecology</i> 2010, 47, 121-129</p> <p>Ireland. <i>Biology and Environment: Proceedings of the Royal Irish Academy</i> 97B, 163-171.</p> <p>Karjalainen, J., Auvinen, H., Helminen, H., Marjomäki, T.J., Niva, T., Sarvala, J., & Viljanen, M. (2000). Unpredictability of fish recruitment: interannual variation in young-of-the-year abundance. <i>Journal of Fish Biology</i> 56, 837-857.</p> <p>King, J.L., Marnell, F., Kingston, N., Rosell, R., Boylan, P., Caffrey, J.M., FitzPatrick, Ú., Gargan, P.G., Kelly, F.L., O'Grady, M.F., Poole, R., Roche, W.K. & Cassidy, D. (2011) Ireland Red List No. 5: Amphibians, Reptiles & Freshwater Fish. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.</p> <p>Rosell, R.S. (1994). Changes in fish populations in Lower Lough Erne: a comparison of 1972-3 and 1991-2 gill net survey data. <i>Biology and Environment: Proceedings of the Royal Irish Academy</i> 97B, 163-171.</p> <p>Rosell, R.S. (1997). The status of pollan <i>Coregonus autumnalis</i> pollan Thompson in Lough Erne, Northern</p> <p>Rosell, R.S. 1992 The coarse fish of the Erne system: comparison of 1971 and 1991 gill net survey data. In R.P. Briggs and D. Roberts (eds), <i>The Erne system: sustainable use of a biological resource</i>, 37-49. <i>Proceedings of the Institute of Biology (NI Branch) Conference, Enniskillen (October 1992)</i>.</p> <p>Sandlund, O.T., Jonsson, B., Naesje, T.F., & Aass, P. (1991). Year-class fluctuations in vendace, <i>Coregonus albula</i> (Linnaeus): Who's got the upper hand in intraspecific competition. <i>Journal of Fish Biology</i> 38, 873-885.</p> <p>Wilson, J.P.F. (1983). Gear selectivity, mortality rate and fluctuations in abundance of the biology of the pollan, <i>Coregonus autumnalis</i> pollan Thompson in Lough Neagh, Ireland. <i>Proceedings of the Royal Irish Academy</i> 83B, 301-307.</p> <p>Wilson, J.P.F. (1993). The fish of Lough Neagh: Part D. Investigations on pollan (<i>Coregonus autumnalis</i> pollan Thompson). In <i>Lough Neagh: The ecology of a multipurpose water resource</i> (eds R.B. Wood & R.V. Smith), pp. 439-450.</p>
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	<p>Dordrecht: Kluwer Academic Publishers. Winfield, I.J. And Wood, R.B. 1990 Conservation of the Irish pollan <i>Coregonus autumnalis</i> pollan Thompson in Lough Neagh, Northern Ireland. Journal of Fish Biology 37 suppl. A, 259-60. Winfield, I.J., Tobin, C.M., & Montgomery, C.R. (1993). The fish of Lough Neagh: Part E. Ecological studies of the fish community. In Lough Neagh: The ecology of a multipurpose water resource (eds R.B. Wood & R.V. Smith), pp. 451-471. Dordrecht: Kluwer Academic Publishers.</p> <p>UK distribution map data sources</p> <p>Campbell/AFDI Emailed to JNCC (LH) by Kyle Hunter 18/10/2012 R.S Rosell/AFBI Emailed to JNCC (LH) by Kyle Hunter 18/10/2012 Wales LRC Priority & Protected Species layer. Bat roosts database, Pembrokeshire WWBIC. Sent to JNCC 21/08/2012</p> <p>UK Distribution Map data sources</p> <p>Campbell/AFDI Emailed to JNCC (LH) by Kyle Hunter 18/10/2012 R.S Rosell/AFBI Emailed to JNCC (LH) by Kyle Hunter 18/10/2012 Wales LRC Priority & Protected Species layer. Bat roosts database, Pembrokeshire WWBIC. Sent to JNCC 21/08/2012</p>
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2.3 Range	
2.3.1 Surface area Range	<p>1352</p> <p>The surface area of the range was calculated from the map presented in 1.1.5. For further details see the 2013 Article 17 UK Approach document.</p>
2.3.2 Method used Surface area of Range	<p>Estimate based on partial data with some extrapolation and/or modelling</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>
2.3.3 Short-term trend Period	<p>2001-2012</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>
2.3.4 Short term trend Trend direction	<p>stable</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>
2.3.5 Short-term trend Magnitude Optional	<p>a) Minimum</p>

	b) Maximum	
2.3.6 Long-term trend Period Optional	1989-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.7 Long-term trend Trend direction Optional	stable	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	1352
	The current range has been set as the FRV since this is believed to be large enough to support a viable population and is no smaller than the surface area of range when the Habitats Directive came into force in the UK.	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	False
	d) Method used to set FRR	The current range has been set as the FRV since this is believed to be large enough to support a viable population and is no smaller than the surface area of range when the Habitats Directive came into force in the UK. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
	The current range has been set as the FRV since this is believed to be large enough to support a viable population and is no smaller than the surface area of range when the Habitats Directive came into force in the UK. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.10 Reason for change Is the difference between the reported value in 2.3.1 and the previous reporting round	a) Genuine change?	False
	This species was not reported in 2007 so no comparison is possible.	

mainly due to...	b) Improved knowledge/more accurate data?	False
	This species was not reported in 2007 so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
	This species was not reported in 2007 so no comparison is possible.	

2.4 Population		
2.4.1 Population size estimation (using individuals or agreed exceptions where possible)	a) Unit	
	b) Minimum	
	c) Maximum	
2.4.2 Population size estimation (using population unit other than individuals) Optional (<i>if 2.4.1 filled in</i>)	a) Unit	number of localities
	b) Minimum	2
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Maximum	2
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	Known lacustrine population
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	b) Method to convert data	
	c) Problems encountered to provide population size estimation	Extreme variations in annual recruitment have been observed in many coregonid stocks.
2.4.4 Year or period	2007-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.5 Method used Population size	Estimate based on partial data with some extrapolation and/or modelling	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	

2.4.6 Short-term trend Period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.7 Short-term trend Trend direction	stable	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.8 Short-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.9 Short-term trend Method used	Estimate based on partial data with some extrapolation and/or modelling	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.10 Long-term trend – Period Optional	1989-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.11 Long-term trend Trend direction Optional	stable	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.12 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used Optional	Estimate based on partial data with some extrapolation and/or modelling	
	For further details see the 2013 Article 17 UK Approach document and	

	relevant country-level reporting information	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	2
	The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK.	
	b) Operator	
	c) FRP is unknown (indicated by "true")	False
	d) Method used to set FRP	The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
2.4.15 Reason for change Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	a) Genuine change?	False
	This species was not reported in 2007 so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	This species was not reported in 2007 so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
	This species was not reported in 2007 so no comparison is possible.	

2.5 Habitat for the species

2.5.1 Area estimation	492
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species.	

2.5.2 Year or period	2007-2012	
2.5.3 Method used Habitat for the species	Estimate based on partial data with some extrapolation and/or modelling For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.4 Quality of the habitat	a) Habitat quality	Moderate
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Assessment method	Expert opinion and published data on trophic status of populated waters
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
2.5.5 Short-term trend Period	2001-2012	
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
2.5.6 Short-term trend Trend direction	stable	
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
2.5.7 Long-term trend Period	1989-2012	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.8 Long-term trend Trend direction	stable	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.9 Area of suitable habitat for the species	a) Value in km²	492
	b) Absence of data indicated as '0'	
2.5.10 Reason for change Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	a) Genuine change?	False
	This species was not reported in 2007 so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	This species was not reported in 2007 so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
	This species was not reported in 2007 so no comparison is possible.	

2.6 Main pressures

a) Pressure	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
A02: modification of cultivation practices	H	NP
A08: Fertilisation	H	NP
E01: Urbanised areas, human habitation	H	NP
I01: invasive non-native species	H	
F02: Fishing and harvesting aquatic resources	M	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	NP
K03: Interspecific faunal relations	M	
M01: Changes in abiotic conditions	M	

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.6.1 Method used – Pressures	mainly based on expert judgement and other data
	Expert opinion and published data on trophic status of populated waters and existing pressures.

2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
A02: modification of cultivation practices	H	NP
A08: Fertilisation	H	NP
E01: Urbanised areas, human habitation	H	NP
M01: Changes in abiotic conditions	H	
F02: Fishing and harvesting aquatic resources	M	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	NP

I01: invasive non-native species	M	

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.7.1 Method used – Threats**expert opinion**

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.8 Complementary information**2.8.1 Justification of % thresholds for trends****2.8.2 Other relevant information****2.8.3 Trans-boundary assessment****2.9 Conclusions (*assessment of conservation status at end of reporting period*)****2.9.1 Range****a) Conclusion****Favourable**

Range has been assessed as Favourable because range is equal to the FRV and the short term trend is stable.

b) Qualifier**2.9.2 Population****a) Conclusion****Favourable**

The population has been assessed as Favourable because population is equal to the FRV and the short term trend is stable.

b) Qualifier**2.9.3 Habitat for the species****a) Conclusion****Favourable**

Habitat quality is moderate and trend is stable. Range and population are both favourable, which suggests that habitat is not a major problem for this species.

b) Qualifier**2.9.4 Future prospects****a) Conclusion****Inadequate**

Future prospects is assessed as Inadequate on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species:

Range future prospects: Inadequate

	<p>Population future prospects: Inadequate</p> <p>Habitat future prospects: Inadequate</p> <p>Overall future prospects: Inadequate</p> <p>Although both populations are currently stable, the stock levels in one population (Lough Erne) remain very low elevating the risk of a population crash, particularly if threats increase in the future, eg climate change and pollution.</p>		
	<table border="1"> <tr> <td>b) Qualifier</td> <td>unknown</td> </tr> </table>	b) Qualifier	unknown
b) Qualifier	unknown		
	Future trends are unknown.		
2.9.5 Overall assessment of Conservation Status	Inadequate		
	The overall assessment is Inadequate because Future Prospects is assessed as Inadequate.		
2.9.6 Overall trend in Conservation Status	stable		
	On balance, the overall trend is stable.		

3 Natura 2000 coverage & conservation measures - Annex II species (only applies to species listed under Annex II of the Directive)

3.1 Population	
3.1.1 Population size Estimation of population size included in the SAC network	a) Unit
	b) Minimum
	c) Maximum
3.1.2 Method used	
3.1.3 Trend of population size within the network (short-term trend) Optional	

3.2 Conservation measures

Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.

3.2.1 Measure	3.2.2 Type					3.2.3 Ranking H = high importance M = medium importance L = low importance	3.2.4 Location where the measure is PRIMARILY applied			3.2.5 Broad evaluation of the measure					
	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off		a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect	e) Unknown	f) Not evaluated

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