

**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

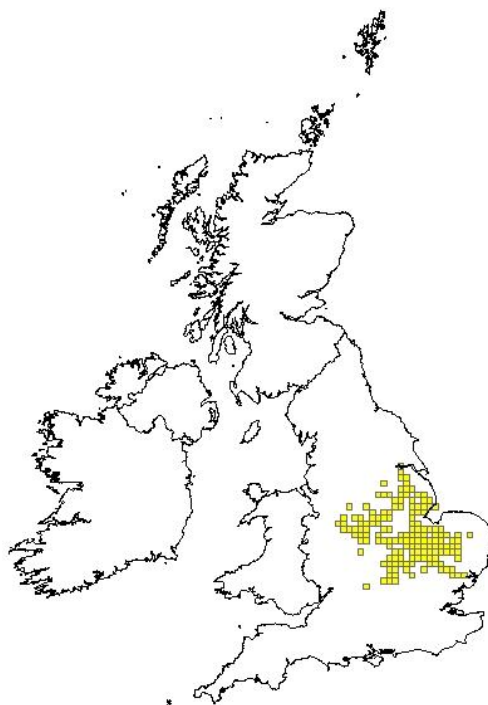
Species:

S1149 - Spined loach. (*Cobitis taenia*)

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

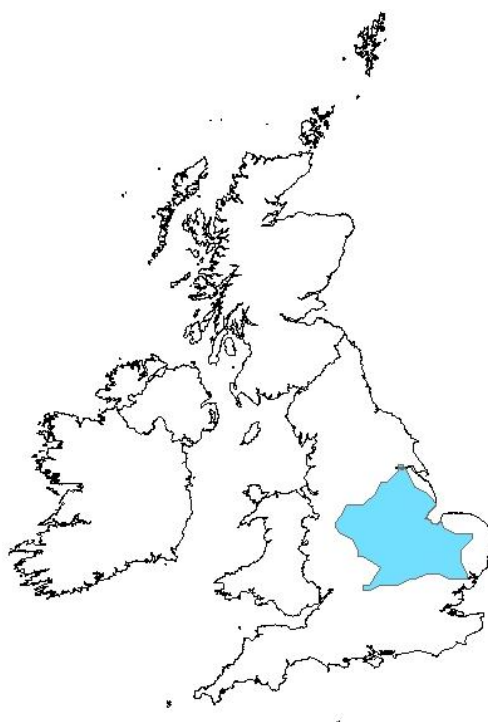
<i>Field name</i>	<i>Brief explanations</i>	
<b>0.2 Species</b>	<b>0.2.1 Species code</b>	<b>S1149</b>
	<b>0.2.2 Species scientific name</b>	<b><i>Cobitis taenia</i></b>
	<b>0.2.3 Alternative species scientific name</b> Optional	
	<b>0.2.4 Common name</b> Optional	

<b>1.1 Maps</b>			
<b>1.1.1 Distribution map</b>	<b>True</b>	<b>Sensitive</b>	<b>False</b>
	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.		



<b>1.1.2 Method used - map</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
<b>1.1.3 Year or period</b>	<b>1990-2011</b>
	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.

<b>1.1.4 Additional distribution map</b> Optional	<b>False</b>
<b>1.1.5 Range map</b>	<b>True</b> The range map was produced by applying the UK range mapping 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.



<b>2.1 Biogeographical region &amp; marine regions</b>	<b>ATL</b>
<b>2.2 Published sources</b>	<p><b>Chris Mainstone &amp; Alastair Burn (2011) Relationships between ecological objectives and associated decision-making under the Habitats and Water Framework Directives. Discussion paper, Natural England.</b></p> <p><b>DAVIES, C. E., SHELLEY, J., HARDING, P. T., MCLEAN, I. F. G., GARDINER, R. &amp; PEIRSON, G., eds. 2004. Freshwater fishes in Britain - the species and their distribution. Colchester: Harley Books</b></p> <p><b>Environment Agency (2012) Summary of outcomes of the Review of Consents on water-related SACs. Excel spreadsheet.</b></p> <p><b>Mainstone C.P. (2008) The role of specially designated wildlife sites in freshwater conservation - an English perspective. Freshwater Reviews, 1, 89-98.</b></p> <p><b>Mainstone, C.P. and Clarke, S.J. (2008) Managing multiple stressors on sites with special protection for freshwater wildlife - the concept of Limits of Liability. Freshwater Reviews, 1, 175-187.</b></p> <p><b>Mainstone, C.P. and Holmes, N.T. (2010) Embedding a strategic approach to river restoration in operational management processes - experiences in England. Aquatic Conservation:</b></p>

	<p><b>Marine and Freshwater Ecosystems. Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/aqc.1095</b></p> <p><b>Mainstone, C.P., Dils, R.M. and Withers, P.J.A. (2008). Controlling sediment and phosphorus transfer to receiving waters - A strategic management perspective for England and Wales. Journal of Hydrology, 350, 131-143.</b></p> <p><b>MAITLAND, P. S. &amp; CAMPBELL, R. N. 1992. Freshwater Fishes of the British Isles. London: HarperCollins</b></p> <p><b>MANN, R. H. K. 1996. Species Action Plan: spined loach <i>Cobitis taenia</i>. Report to English Nature in association with the Environment Agency</b></p> <p><b>Natural England (2012) England Catchment Sensitive Farming Initiative.</b></p> <p><b><a href="http://www.naturalengland.org.uk/ourwork/farming/csf/default.aspx">Http://www.naturalengland.org.uk/ourwork/farming/csf/default.aspx</a>.</b></p> <p><b>PERROW M.R. &amp; JOWITT A.J.D. 2000. On the trail of the spined loach: developing a conservation plan for a poorly known species. British Wildlife 11, 390-397.</b></p> <p><b>PERROW, M. R. &amp; JOWITT, A. J. D. 1997. The habitat and management requirements of spined loach <i>Cobitis taenia</i>. English Nature Research Report No 244</b></p> <p><b>PHILLIPS, R. &amp; Rix, M. 1985. A Guide to the Freshwater Fish of Britain, Ireland and Europe. Treasure Press, London.</b></p> <p><b>Wheeldon, J (2012) River Restoration Planning and implementation on River Sites of Special Scientific Interest in England. Internal Natural England paper.</b></p> <p><b>UK distribution map data sources</b></p> <p><b>NBN Gateway data: Bedfordshire and Luton Biodiversity Recording and Monitoring Centre GA000704 Bedfordshire Fish (BNHS) - 1800-2011</b></p> <p><b>NBN Gateway data: Biological Records Centre GA000174 Database for the Atlas of Freshwater Fishes</b></p> <p><b>NBN Gateway data: Environment Agency GA001129 Environment Agency Rare and Protected Species records v1</b></p> <p><b>NBN Gateway data: Norfolk Biodiversity Information Service GA000908 Norfolk Environment Agency Priority Species Records</b></p> <p>UK Distribution Map data sources</p> <p>NBN Gateway data: Bedfordshire and Luton Biodiversity Recording and Monitoring Centre GA000704 Bedfordshire Fish (BNHS) - 1800-2011</p> <p>NBN Gateway data: Biological Records Centre GA000174 Database for the Atlas of Freshwater Fishes</p> <p>NBN Gateway data: Environment Agency GA001129 Environment Agency Rare and Protected Species records v1</p> <p>NBN Gateway data: Norfolk Biodiversity Information Service GA000908 Norfolk Environment Agency Priority Species Records</p>
--	--

<b>2.3 Range</b>		
<b>2.3.1 Surface area Range</b>	<b>27201.75</b>	
	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.	
<b>2.3.2 Method used Surface area of Range</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.3.3 Short-term trend Period</b>	<b>2001-2012</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.3.4 Short term trend Trend direction</b>	<b>stable</b>	
	The short term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.3.5 Short-term trend Magnitude</b> Optional	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
<b>2.3.6 Long-term trend Period</b> Optional	<b>1989-2012</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.3.7 Long-term trend Trend direction</b> Optional	<b>stable</b>	
	The long term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.3.8 Long-term trend Magnitude</b> Optional	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
<b>2.3.9 Favourable reference range</b>	<b>a) Value in km<sup>2</sup></b>	<b>24536</b>
	The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. For	

	further details see the 2013 Article 17 UK Approach document.	
	<b>b) Operator for FRR</b>	
	<b>c) FRR is unknown (indicated by "true")</b>	<b>False</b>
	<b>d) Method used to set FRR</b>	<b>The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. The value is considered to be large enough to support a viable population and no lower than the range estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document.</b>
	The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. The value is considered to be large enough to support a viable population and no lower than the range estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document.	
<b>2.3.10 Reason for change</b>	<b>a) Genuine change?</b>	<b>False</b>
Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...	The slight increase in range is not thought to be genuine but as a result of better data.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>True</b>
	The slight increase in range is not thought to be genuine but as a result of better data.	
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>
	Use of a revised UK range mapping tool had little effect on the calculation for surface area of range.	

<b>2.4 Population</b>		
<b>2.4.1 Population size estimation</b> (using individuals or agreed exceptions where possible)	<b>a) Unit</b>	
	<b>b) Minimum</b>	
	<b>c) Maximum</b>	

<b>2.4.2 Population size estimation</b> (using population unit other than individuals) Optional ( <i>if 2.4.1 filled in</i> )	<b>a) Unit</b>	<b>number of map 1x1 km grid cells</b>
	<b>b) Minimum</b>	<b>531</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>c) Maximum</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.3 Additional information on population estimates / conversion</b> Optional	<b>a) Definition of "locality"</b>	
	<b>b) Method to convert data</b>	
	<b>c) Problems encountered to provide population size estimation</b>	
<b>2.4.4 Year or period</b>	<b>1990-2011</b>	
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
<b>2.4.5 Method used Population size</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>	
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
<b>2.4.6 Short-term trend Period</b>	<b>2001-2012</b>	
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
<b>2.4.7 Short-term trend Trend direction</b>	<b>stable</b>	
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
<b>2.4.8 Short-term trend Magnitude</b> Optional	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
	<b>c) Confidence interval</b>	

<b>2.4.9 Short-term trend Method used</b>	<b>Estimate based on expert opinion with no or minimal sampling</b> For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.10 Long-term trend – Period</b> Optional	<b>1989-2012</b> For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.11 Long-term trend Trend direction</b> Optional	<b>stable</b> For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.12 Long-term trend Magnitude</b> Optional	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
	<b>c) Confidence interval</b>	
<b>2.4.13 Long term trend Method used</b> Optional	<b>Estimate based on expert opinion with no or minimal sampling</b> For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.14 Favourable reference population</b>	<b>a) Number of individuals/agreed exceptions/other units</b>	
	<b>b) Operator</b>	
	<b>c) FRP is unknown (indicated by "true")</b>	<b>True</b>
	<b>d) Method used to set FRP</b>	<b>There is insufficient information available to estimate a FRV.</b>
		There is insufficient information available to estimate a FRV.
<b>2.4.15 Reason for change</b> Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	<b>a) Genuine change?</b>	<b>False</b>
		The population was unknown in 2007 so no comparison is possible.
	<b>b) Improved knowledge/more</b>	<b>False</b>



	<b>accurate data?</b>	
	The population was unknown in 2007 so no comparison is possible.	
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>
	The population was unknown in 2007 so no comparison is possible.	

<b>2.5 Habitat for the species</b>			
<b>2.5.1 Area estimation</b>	<p>The specific area of habitat occupied by this species in the UK is unknown.</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p> <p>There is thought to be a sufficient amount of habitat in the UK to support a viable population of the species.</p>		
<b>2.5.2 Year or period</b>	<p><b>N/A</b></p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>		
<b>2.5.3 Method used Habitat for the species</b>	<p><b>Absent data</b></p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>		
<b>2.5.4 Quality of the habitat</b>	<table border="1"> <tr> <td><b>a) Habitat quality</b></td> <td><b>Moderate</b></td> </tr> </table> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>	<b>a) Habitat quality</b>	<b>Moderate</b>
	<b>a) Habitat quality</b>	<b>Moderate</b>	
	<table border="1"> <tr> <td><b>b) Assessment method</b></td> <td><b>Condition assessment of SAC rivers, ecological status assessment of the wider river network under the Water Framework Directive. See Article 17 report on H3260 habitat.</b></td> </tr> </table> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>	<b>b) Assessment method</b>	<b>Condition assessment of SAC rivers, ecological status assessment of the wider river network under the Water Framework Directive. See Article 17 report on H3260 habitat.</b>
<b>b) Assessment method</b>	<b>Condition assessment of SAC rivers, ecological status assessment of the wider river network under the Water Framework Directive. See Article 17 report on H3260 habitat.</b>		
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.			
<b>2.5.5 Short-term trend Period</b>	<p><b>2001-2012</b></p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>		
<b>2.5.6 Short-term trend Trend direction</b>	<p><b>increase</b></p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>		
<b>2.5.7 Long-term trend Period</b>	<p><b>1989-2012</b></p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>		
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
<b>2.5.8 Long-term trend Trend direction</b>	<p><b>increase</b></p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>		
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		

	relevant country-level reporting information.	
<b>2.5.9 Area of suitable habitat for the species</b>	<b>a) Value in km<sup>2</sup></b>	
	<b>b) Absence of data indicated as '0'</b>	
<b>2.5.10 Reason for change</b> Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	<b>a) Genuine change?</b>	<b>False</b>
	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>False</b>
	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>
	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	

<b>2.6 Main pressures</b>		
<b>a) Pressure</b>	<b>b) Ranking</b>	<b>c) Pollution qualifier</b>
	H = high importance (max 5 entries) M = medium importance L = low importance	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	X
J02: human induced changes in hydraulic conditions	M	
J03: Other ecosystem modifications	M	
F02: Fishing and harvesting aquatic resources	L	

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

<b>2.6.1 Method used – Pressures</b>	<b>based exclusively or to a larger extent on real data from sites/occurrences or other data sources</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

<b>2.7 Threats</b>		
<b>a) Threat</b>	<b>b) Ranking</b>	<b>c) Pollution qualifier</b>
	H = high importance (max 5 entries) M = medium importance L = low importance	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	X
J02: human induced changes in hydraulic conditions	M	
J03: Other ecosystem modifications	M	
M01: Changes in abiotic conditions	M	
F02: Fishing and harvesting aquatic resources	L	

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 surface area of range is greater than the FRV and the short term trend is stable.

**b) Qualifier**

<b>2.9.2 Population</b>	<b>a) Conclusion</b>	<b>Unknown</b>
	Population has been assessed as unknown because it is unknown what the FRV is for population, although the short term trend is stable.	
	<b>b) Qualifier</b>	
<b>2.9.3 Habitat for the species</b>	<b>a) Conclusion</b>	<b>Favourable</b>
	Habitat for species has been assessed as Favourable because there is thought to be sufficient habitat to support a viable population, the habitat quality is moderate and the short term trend is increasing.	
	<b>b) Qualifier</b>	
<b>2.9.4 Future prospects</b>	<b>a) Conclusion</b>	<b>Favourable</b>
	<p>Future prospects is assessed as Favourable on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species:</p> <p>Range future prospects: Good</p> <p>Population future prospects: Unknown</p> <p>Habitat future prospects: Good</p> <p>Overall future prospects: Favourable.</p> <p>Although there are threats in the future at the same time there are conservation management activities and general trends in water quality have been improving in the UK so it seems likely that the situation is unlikely to get worse. However, future prospects for population has been assessed as unknown due to the current status of population being unknown.</p>	
	<b>b) Qualifier</b>	
<b>2.9.5 Overall assessment of Conservation Status</b>	<b>Favourable</b>	
	The overall assessment is Favourable because range, habitat for species and future prospects are Favourable.	
<b>2.9.6 Overall trend in Conservation Status</b>		

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

3.1 Population	
<b>3.1.1 Population size</b>  Estimation of population size included in the SAC network	<b>a) Unit</b> number of map 1x1 km grid cells
	<b>b) Minimum</b> 37
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
	<b>c) Maximum</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
<b>3.1.2 Method used</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>  For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
<b>3.1.3 Trend of population size within the network</b> (short-term trend)  Optional	<b>stable</b>  For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

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
4.0: Other wetland-related measures		Y	Y	Y	Y	M	Y				Y	Y			
4.1: Restoring/improving water quality	Y	Y	Y	Y		M			Y		Y	Y			

4.2: Restoring/im proving the hydrological regime		Y	Y	Y	Y	M		Y				Y	Y			
4.3: Managing water abstraction	Y				Y	M		Y				Y	Y			

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