



UK priority species pages – Version 2

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SPECIES PAGES FOR 2007 UK BAP PRIORITY SPECIES

(see endnotes for an explanation of the various components of this compilation).

Coregonus albula (Linnaeus, 1758)

Vendace

1 General information

Level 1	Fish (excluding purely marine species)
Level 2	bony fish
On 1997 UK BAP list	Species Action Plan

2 UK BAP criteriaⁱ

1. International threat	2. International responsibility (2a) + moderate decline in UK (2b)	3. Marked decline in the UK	4. Other important factor(s)
False	True	True	True

3 Evidence for Criteriaⁱⁱ

Criterion 1	
Criterion 2a	Last published European Status is Data Deficient. No Red List in existence for fish in UK but clearly under threat.
Criterion 2b	Only two natural populations out of four remain.
Criterion 3	Only two natural populations out of four remain.
Criterion 4	Extremely restricted distribution. Existing Priority species factors responsible for its decline are still occurring 4i, 4iv, 4v

4 Distribution by Country

England	Scotland	Wales	Northern Ireland	International Waters
Y	Y	N	N	

5 Distribution Information

Distribution data source	Stage 1 information
Distribution data notes	all sites known; extinct in some
number of sites (where less than or equal to 10)	2
Units used for number of sites	Site(s) / population(s)

6 Actions identified by expertsⁱⁱⁱ

Action number	Action text	Reporting category
1	progress the objectives of the current UK BAP programme for vendace	Species-specific management action
2	monitor populations in all UK sites using standard protocol	Monitoring/survey
3	establish new sites using parental stock from Derwentwater	Species-specific management action
4	investigate the impact of climate change on natural and translocated populations of vendace	Species-specific research
5	increase public awareness of the species and its conservation issues.	Species-specific awareness raising

7 Signpost to Priority Habitat^{iv}

Priority Habitat Name
Stding Open Water and Canals: Mesotrophic Lakes
Stding Open Water: Oligotrophic and Dystrophic Lakes

8 Additional information from specialists^v

Attribute	Value
NBN current scientific name	Coregonus albula
NBN common name	Vendace
classification level 1	Fish (excluding purely marine species)
classification level 2	bony fish
Latest UK Population/extent Estimate	Two remaining populations, Bassenthwaite and Derwentwater. In serious decline in Bassenthwaite, but reasonably stable in Derwentwater. Translocated to three sites (2 Scotland, 1 England) current status unconfirmed.
Units of measurement	Exact number of populations known
Start date (year)	1960
Starting estimate	4
End date (year)	2006
Ending estimate	2
Proportion left	0.5
Additional comments/ information	Only two extant populations in existence, Bassenthwaite and Derwentwater. Whereas the Bassenthwaite population is considered to be under considerable threat, the Derwentwater population is considered to be in stable condition.
Global or European IUCN category if known	DD
fraction of European countries where taxon is	Denmark, Germany, Austria, Russia, Estonia,

Red-listed (where	Latvia, Belarus, Baltic Sea.
Crit1 satisfied Yes/No/ Unknown	unknown
Additional comments/ information including confidence in assessm	Last published European Status is Data Deficient. No Red List in existence for fish in UK but clearly under threat. Only two natural populations out of four remain.
Crit2 satisfied Yes/No/ Unknown	yes
Crit3 satisfied Yes/No/ Unknown	yes
Comments on UK decline and confidence in assessment	Only two extant populations in existence, Bassenthwaite and Derwentwater. Whereas the Bassenthwaite population is considered to be under considerable threat, the Derwentwater population is considered to be in stable condition.
Factor	Extremely restricted distribution. Existing Priority species factors responsible for its decline are still occurring 4i, 4iv, 4v
Crit4 satisfied (Yes/ No/ Unknown)	yes
1st source	Davies et al. (2004)
2nd source	Maitland (2004)
3rd source	Maitland & Lyle (1996); Winfield et al (1994)
Other sources	Environment Agency; English Nature; Scottish Natural Heritage
Quality of data	virtually complete and of high quality
Information gaps	Fully collated UK data and contextual European and Global information on fish distribution and current status.

9 Additional information for species listed under the Habitats Directive^{vi}

Attribute	Value
Conclusions - overall assessment	(U2-) - Bad and deteriorating
Conclusions - range	(U2) - Bad
Conclusions - population	(U2-) - Bad and deteriorating
Conclusions - habitat	(U1-) - Inadequate and deteriorating
Conclusions - future prospects	(U1) - Inadequate
Published sources and/or websites	<p>DAVIES, C.E, SHELLEY, J, HARDING, P.T, MCLEAN, I.F.G, GARDINER, R & PEIRSON, G (eds.) 2004. Freshwater fishes in Britain. The species and their distribution. Harley Books, Colchester</p> <p>MAITLAND, P.S. 2004. Keys to the Freshwater Fish of Britain and Ireland with notes on their distribution and ecology. Freshwater Biological Association , Scientific Publication No. 62, 245pp.</p> <p>MAITLAND, P.S., LYLE, A.A. & WINFIELD, I.J. 2003. Survey of vendace in Daer Reservoir and Loch Skene. English Nature Research Report 554</p> <p>WINFIELD, I.J., FLETCHER, J.M. & CRAGG-HINE, D. 1994. Status of Rare Fish: A Literature Review of Freshwater Fish in the UK. National Rivers Authority R&D Report No. 18.</p> <p>WINFIELD, I. J., FLETCHER, J. M. & JAMES, J. B. 2006. The Urban Waste Water Treatment Directive: Monitoring the vendace populations of Bassenthwaite Lake and Derwent Water, 2005. Report to Environment Agency, North West Region. LA/C01752/16. 46 pp.</p> <p>Map Data Source</p> <p>Biological Records Centre - Database for the Atlas of Freshwater Fishes (via the National Biodiversity Network Gateway)</p>
surface area of range in km2	500
surface area of range in km2 EU	500
Date of range determination	1994

Quality of data concerning range	Moderate
Range trend	Unknown (X)
Range trend magnitude (%)	Not applicable
Range trend period	1994-2006
Range trend reasons 0 - Unknown	False
Range trend reasons 1 - Improved knowledge/more accurate data	False
Range trend reasons 2 - Climate change	False
Range trend reasons 3 - Direct human influence	False
Range trend reasons 4 - Indirect anthropo or zoogenic influence	False
Range trend reasons 5 - Natural processes	False
Range trend reasons 6 - Other (specify)	False
Reasons for reported trend in range specify	Not applicable
Population_min	1418
Population_min EU	1418
Population_max	43601
Population_max EU	43601
Population units	Individuals
Population date	2006
Population method	2 - Extrapolation from surveys of part of the population
Population quality	Moderate
Population trend	Decreasing (-)
Population magnitude (%)	Unknown
Population period	1994-2006
Pop trend reasons 0 - Unknown	False
Pop trend reasons 1 - Improved knowledge/more accurate data	False
Pop trend reasons 2 - Climate change	False
Pop trend reasons 3 - Direct human influence	True
Pop trend reasons 4 - Indirect anthropo or zoogenic influence	False
Pop trend reasons 5 - Natural processes	False
Pop trend reasons 6 - Other (specify)	False
Surface area of the habitat in km2	10.63
Surface area of the habitat in km2 EU	10.63
Date of area estimation	2006
Quality of data on habitat area	Moderate
Habitat trend	Stable (=)
Habitat trend period	1994-2006
Hab trend reasons 0 Unknown	False

Hab trend reasons 1 Improved knowledge	False
Hab trend reasons 2 Climate change	False
Hab trend reasons 3 Direct human influence	False
Hab trend reasons 4 Indirect anthropo or zoogenic influence	False
Hab trend reasons 5 Natural processes	False
Hab trend reasons 6 Other (specify)	False
Reasons for reported trend in Hab specify	Not applicable
Justification of % thresholds for trends	Not applicable
Future prospects	Poor prospects_Species likely to struggle unless conditions change
Favourable reference range operator	more than
Habitat name	This species is found in good quality standing water habitat; that is, clean well-oxygenated spawning substrate containing coarse boulder/cobble/pebble/sand substrates. It also requires an abundant supply of zooplankton and macroinvertebrate prey items.
Other relevent information	Favourable Reference Population reported as >600 See audit trail documents for further information.

10 Species designations^{vii}

Abbreviation	Reporting Category	Designation	Designation description	Year	Source	Comment
HabReg:Sch3	The Conservation of Habitats and Species Regulations 2010	Schedule 3	Schedule 3: Animals which may not be taken or killed in certain ways	1994	The Conservation of Habitats and Species Regulations 2010	
Bern:A3	Bern Convention	Appendix 3	Special protection through 'appropriate and necessary legislative and administrative measures', of the listed wild fauna species.	1982	Bern Convention	natural range includes GB
HabDir:A5	Habitats Directive	Annex 5	Animal and plant species of Community interest whose taking in the wild and exploitation may be subject to management measures.	1992	Habitats Directive	
England NERC S.41	Biodiversity Lists - England	England NERC S.41	Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when	2008	Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (section 41)	Geographic constraint=Listing is for England only

			performing any of its functions with a view to conserving biodiversity.		and Wales (section 42)	
Scottish Biodiversity List	Biodiversity Lists - Scotland	Scottish Biodiversity List	<p>The Scottish Biodiversity List is a list of flora, fauna and habitats considered by the Scottish Ministers to be of principal importance for biodiversity conservation. The development of the list has been a collaborative effort involving a great many stakeholders overseen by scientists from the Scottish Biodiversity Forum. Completion of the list is the first time such a stocktake has been done in Scotland.</p> <p>The Scottish Biodiversity List is a tool for public bodies and others doing their Biodiversity Duty. The publication of the Scottish Biodiversity List satisfies the</p>	2005	Scottish Biodiversity List of species of principal importance for biodiversity conservation	Geographic constraint=Listing is for Scotland only

			requirements of Section 2(4) of The Nature Conservation (Scotland) Act 2004.			
BAP:2007	Biodiversity Action Plan UK list of priority species	Priority Species	The UK List of Priority Species and Habitats contains 1150 species and 65 habitats that have been listed as priorities for conservation action under the UK Biodiversity Action Plan (UK BAP).	2007	UK list of Priority Habitats and Species	status on former BAP list: Species Action Plan
RedList_Global_post2001:EN	Global Red list status	Endangered	A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.	2008	The IUCN Red List of Threatened Species (2008)	
WACA:Sch5_sect9.1(kill/injuring)	Wildlife and Countryside Act 1981	Schedule 5 Section 9.1 (killing/injuring)	Section 9.1. Animals which are protected from intentional killing or injuring.	1988	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	
WACA:Sch5_sect9.1(taking)	Wildlife and	Schedule 5	Section 9.1 Animals	1988	Wildlife and	

	Countryside Act 1981	Section 9.1 (taking)	which are protected from taking.		Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	
WACA:Sch5_sect9.2	Wildlife and Countryside Act 1981	Schedule 5 Section 9.2	Section 9.2 Animals which are protected from being possessed or controlled (live or dead).	1988	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	
WACA:Sch5_sect9.4a	Wildlife and Countryside Act 1981	Schedule 5 Section 9.4a	Section 9.4 Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.	1988	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	
WACA:Sch5_sect9.4b	Wildlife and Countryside Act 1981	Schedule 5 Section 9.4b	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.	1988	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	
WACA:Sch5Sect9.4c	Wildlife and Countryside Act 1981	Schedule 5 Section 9.4c	Animals which are protected from their access to any structure or place which they use for shelter or protection	2007	Wildlife and Countryside Act Schedules 1,5 and 8 (protected	Geographic constraint=Does not apply to Scotland

			being obstructed.		birds, animals and plants)	
WACA:Sch5_sect9.5a	Wildlife and Countryside Act 1981	Schedule 5 Section 9.5a	Section 9.5 Animals which are protected from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.	1988	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	
WACA:Sch5_sect9.5b	Wildlife and Countryside Act 1981	Schedule 5 Section 9.5b	Section 9.5 Animals which are protected from being published or advertised as being for sale.	1988	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	

UK BAP 2008 reporting^{viii}

(nb this only applies to species on the original 1997 UK BAP priority species list)

11 General status

Country	Attribute	Value
England		
	Date	2008
	Status unknown	No
	Value	1
	Units	Site(s) / population(s)
	Accuracy	Sample or full survey
	Adequate data	Yes
	Data on NBN	Unknown
	Refer to LBAP data	No
	Data source / comments	See UK section above.
	Edits made by reporting group	
Scotland		
	Date	2003
	Status unknown	No
	Value	1
	Units	Site(s) / population(s)
	Accuracy	Sample or full survey
	Adequate data	Yes
	Data on NBN	Unknown
	Refer to LBAP data	No

	Data source / comments	See UK section above.
	Edits made by reporting group	
UK		
	Date	2008
	Status unknown	No
	Value	2
	Units	Site(s) / population(s)
	Accuracy	Sample or full survey
	Adequate data	Yes
	Data on NBN	Unknown
	Refer to LBAP data	No
	Data source / comments	WINFIELD, I.J., FLETCHER, J.M., LYLE, A.A. (2008): Assessment of the vendace refuge population of Loch Skeen. Final Report. Report to Scottish Natural Heritage. WINFIELD, I.J., FLETCHER, J.M., JAMES, J.B. (2008): Assessment of the vendace population of Bassenthwaite Lake including observations on vendace spawning grounds. Final Report. Report to Environment Agency North West Region, and Scottish Natural Heritage. WINFIELD, I.J., FLETCHER, J.M., JAMES, J.B. (2008): Monitoring of the fish populations of Bassenthwaite Lake and Derwent Water, 2007. Report to Environment Agency, North West Region. WINFIELD, I.J., et al. Conservation of the vendace (Coregonus albula), the UK's rarest freshwater fish. (Submitted). MAITLAND, P.S., LYLE, A.A. and WINFIELD, I.J. (2003) Survey of vendace in Daer Reservoir and Loch Skene. Report to English Nature.
	Edits made by reporting group	

8 Trends

Country	Attribute	Value
UK		
	Date	2008

	Status unknown	No
	Trend	Fluctuating - probably stable
	Accuracy	Sample or full survey
	Adequate data	Yes
	Data on NBN	Unknown
	Refer to LBAP data	No
	Edits made by reporting group	
Scotland		
	Date	2003
	Status unknown	No
	Trend	Increasing
	Accuracy	Sample or full survey
	Adequate data	Yes
	Data on NBN	Unknown
	Refer to LBAP data	No
	Data source / comments	New population in Loch Skeen established using stock from Bassenthwaite Lake, introduced in 1997 & 1999. Not yet known whether attempts to establish a population in Daer Reservoir (using Derwent Water stock) have been successful.
	Edits made by reporting group	
England		
	Date	2008
	Status unknown	No
	Trend	Declining (slowing)
	Accuracy	Sample or full survey
	Adequate data	Yes
	Data on NBN	Unknown
	Refer to LBAP	No

	data	
	Data source / comments	No physical specimens have been encountered in Bassenthwaite Lake since 2001 and estimates of population size have been based on hydroacoustic surveys. A study to acquire a robust assessment of the continued presence or otherwise of the vendace in Bassenthwaite Lake was undertaken in 2007/8. This study comprised underwater video, gill netting, the examination of ruffe for the presence of vendace eggs and an assessment of the condition of spawning grounds. No evidence of the continued presence of vendace at Bassenthwaite lake was obtained. Supported by evidence of the poor condition of the spawning grounds it has been concluded that vendace are likely to be locally extinct at this site. The Derwent Water population is considered to be in a satisfactory condition. Eggs from Derwent Water were introduced to Sprinkling Tarn in the fells above the lake in 2005 but it is not yet known whether this introduction has been successful.
	Edits made by reporting group	

9 Successes

Success text	Success category 1	Success category 2	England	NI	Scotland	Wales	Edits by reporting group
Attempts have been made to establish new populations in Daer Reservoir (Scotland / South Lanarkshire) and Sprinkling Tarn (England / Lake District) using a combination of eggs, fry and adult vendace. For a variety of reasons, including limited survey activity, size of water bodies and timescales it is too early to say whether populations have become established at either site.	Action plan process	Other	Yes	No	Yes	No	

<p>The most significant success has been the successful re-introduction of the species to Scotland. A self sustaining population (using Bassenthwaite Lake stock) has been established in Loch Skeen, an upland site near Moffat in Dumfries and Galloway. This site should provide some protection from climate change and could one day act as a source of fish from the Bassenthwaite Lake gene pool to re-introduce the species to a restored Bassenthwaite Lake.</p>	<p>Action plan process</p>	<p>Other</p>	<p>No</p>	<p>No</p>	<p>Yes</p>	<p>No</p>	
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10 Threats

Threat category 1	Threat category 2	England	NI	Scotland	Wales	Edits made by reporting group
Invasive/non-native species	Competition	Yes	No	No	No	
Pollution - freshwater	Sewage	Yes	No	No	No	
Pollution - freshwater	Agricultural (nutrient enrichment)	Yes	No	No	No	
Invasive/non-native species	Predation	Yes	No	No	No	

Habitat loss / degradation - agriculture	Overgrazing	Yes	No	No	No	
Global warming	Climate change	Yes	No	Yes	No	
Invasive/non-native species	Habitat degradation	Yes	No	No	No	

15 Constraints

Rank	Constraint category 1	Constraint category 2	Constraint summary	England	NI	Scotland	Wales	Solution category	Solution summary

2	Species and habitat management	Habitat quality declining	Bassenthwaite Lake has acquired high levels of silt over a considerable period of time. Recent heavy loadings seem linked to increased intensity of rainfall events and the impact on erosion rates. It has also been enriched by nutrients from catchment land use and effluent discharge from centres of population.	Yes	No	No	No	Management	Reintroducing vendace to this Lake is not considered a viable option until substantial restoration has occurred.
4	Species and habitat management	Other	Climate change presents major challenges for this species at all sites. For example increased temperature will reduce habitat for this cold water species whose native populations are/were located at relatively lowland sites.	Yes	No	Yes	No	Management	A true solution may be impossible to find. An appropriate response is to attempt to build climate change issues into the programme of actions intended to benefit this species as a whole. It must be recognised that populations at low altitudes are likely to be the first to suffer adverse effects.

11 State of Knowledge

State of knowledge category	Notes	Edits made by reporting group
Knowledge sufficient to effectively deliver the plan targets	For reference documents see Question 1 (Status)	

ENDNOTES

ⁱ An explanation of these criteria is included at Annex 3 of [UK Biodiversity Action Plan; Report on the Species and Habitat Review](#). BRIG (ed. Ant Maddock) 2007. This review was organised in two stages. Stage 1 looked at the scientific evidence for selecting the UK List of Priority Species and Habitats while stage 2 considered the conservation action needed for these species and habitats and provided signposts to the means of implementing action.

ⁱⁱ The information on evidence and the species distribution is as presented on the UK BAP website. Users can download a spreadsheet of the [Stage 1 species evidence](#) from the home page of the UK BAP website.

ⁱⁱⁱ Actions were assigned to each and every priority species by expert groups convened at Stage 2 of the Review process. These were subsequently categorised into “signpost categories”. This information is as shown on the UK BAP website See the link for [categorisation \(signposting\) of UK priority species](#).

^{iv} Where a species action is clearly linked to a BAP priority habitat, the name of the relevant habitat or habitats was identified by the stage 2 expert group.

^v This information has been derived from Stage 1 of the priority species review, and is presented in the “marine”, “terrestrial invertebrates” and “other terrestrial species” sheets within the spreadsheet of the [Stage 1 species evidence](#). The information presented here varies according to the taxonomic group. Please note that some of these data have been written for other Expert Group members and may not be of great value to a wider audience.

^{vi} This is only applicable to Species listed under the Annexes 2 4 and 5 of the Habitats Directive. The information presented here was collated by the UK Government in fulfilment of the requirement under Article 17 of the Habitats Directive. For further information see the [2nd UK Report](#) on the implementation of the Habitats Directive.

^{vii} Information on conservation designations has been extracted from JNCC’s collation of information on [species designations](#). The designations shown in version 2 of these pages are as at December 2010.

^{viii} As part of the 2008 UK BAP reporting round lead partners of national plans were asked to answer a number of specific questions. The data will be analysed and used for the UK and country level reports. All of the responses provided through BARS as part of the 2008 reporting exercise are available to [download](#). Note that in the December 2010 version of these pages (version 2) includes corrections to previously truncated text fields.