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:

S1261 - Sand lizard (*Lacerta agilis*)

ENGLAND

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.

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NATIONAL LEVEL

1. General information

1.1 Member State	**UK (England information only)**
1.2 Species code	**1261**
1.3 Species scientific name	**Lacerta agilis**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Sand lizard

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2013-2018
2.3 Distribution map	Yes
2.4 Distribution map Method used	Complete survey or a statistically robust estimate
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

ARNOLD, H.R. 1995. Atlas of amphibians and reptiles in Britain. ITE Research Publication No.10. HMSO, London.
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AMPHIBIAN AND REPTILE TRUST. 2017. Sand Lizard and Smooth Snake Species Action Plan for United Kingdom. May, 2017.
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BEEBEE, T.J.C. & ROWE, G. 2001. A genetic assessment of British populations of the sand lizard (Lacerta agilis). Herpetological Journal 11: 23-27.
CORBETT, K.F. 1988a. Distribution and status of the sand lizard Lacerta agilis agilis in Britain. Mertensiella 1: 92-99.
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CORBETT, K.F. and MOULTON, N. 1998. Sand lizard Species Recovery Programme project (1994-1997): final report. English Nature Research Reports No. 288, English Nature, Peterborough.
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GLEED-OWEN, C.P. 2004. Initial surveillance baseline datasets for the sand lizard Lacerta agilis, natterjack toad Bufo calamita and smooth snake Coronella austriaca in England. Report for English Nature, Peterborough.
GLEED-OWEN, C, BUCKLEY, J, CONEYBEER, J, GENT, T, MCCRACKEN, M, MOULTON, N, & WRIGHT, D. 2005. Costed plans and options for herpetofauna surveillance and monitoring. English Nature Research Report No. 663, English Nature, Peterborough.
LANGTON, T.E.S., BECKETT, C.L. & DUNSMORE, I. 1993. UK herpetofauna: a review of British herpetofauna populations in a wider context. Report 99F2AO69 to Joint Nature Conservation Committee. Joint Nature Conservation Committee, Peterborough.
Limburn, B. and Wilkinson, J.W., 2016. The New Forest Smooth Snake Survey (NFSSS). Amphibian & Reptile Conservation, 2016.
The Amphibian & Reptile Conservation Trust: Rare Species Database and Reptile and Amphibian Dataset (2018)

5. Range

5.1 Surface area (km²)		
5.2 Short-term trend Period		
5.3 Short-term trend Direction	Increasing (+)	
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	Based mainly on extrapolation from a limited amount of data	
5.10 Favourable reference range	a) Area (km²) b) Operator c) Unknown d) Method	
5.11 Change and reason for change in surface area of range	Genuine change The change is mainly due to:	Genuine change
5.12 Additional information	Range has increased primarily as a result of the re-introduction programme.	

6. Population

6.1 Year or period	1989-2018

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6.2 Population size (in reporting unit)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	
	c) Maximum	
	d) Best single value	353
6.3 Type of estimate	Best estimate	
6.4 Additional population size (using population unit other than reporting unit)	a) Unit	number of localities (localities)
	b) Minimum	
	c) Maximum	
	d) Best single value	593
6.5 Type of estimate	Best estimate	
6.6 Population size Method used	Complete survey or a statistically robust estimate	
6.7 Short-term trend Period	2013-2018	
6.8 Short-term trend Direction	Stable (0)	
6.9 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.10 Short-term trend Method used	Complete survey or a statistically robust estimate	
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	
	c) Unknown	
	d) Method	
6.16 Change and reason for change in population size	No change	
	The change is mainly due to:	
6.17 Additional information	Although species populations and range have increased via re-introduction, 11% of sub-populations have declined due to fire, grazing, inappropriate levels or lack of habitat management. So overall population is more or less stable.	

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)?	No
	b) Is there a sufficiently large area of occupied AND unoccupied habitat of suitable quality (to maintain the species at FCS)?	No

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7.2 Sufficiency of area and quality of occupied habitat Method used	Complete survey or a statistically robust estimate
7.3 Short-term trend Period	2007-2018
7.4 Short-term trend Direction	Stable (0)
7.5 Short-term trend Method used	Complete survey or a statistically robust estimate
7.6 Long-term trend Period	1989-2018
7.7 Long-term trend Direction	Increasing (+)
7.8 Long-term trend Method used	Complete survey or a statistically robust estimate
7.9 Additional information	From 1994-2010 management on protected sites improved, tackling tree and scrub. From 2010 onwards increasing heather age management has often impacted species habitat and populations.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Intensive grazing or overgrazing by livestock (A09)	H
Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions) (F01)	H
Vandalism or arson (H04)	H
Other human intrusions and disturbance not mentioned above (H08)	H
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Other forestry activities, excluding those relating to agro-forestry (B29)	M
Sports, tourism and leisure activities (F07)	M
Creation or development of sports, tourism and leisure infrastructure (outside the urban or recreational areas) (F05)	M

Threat	Ranking
Intensive grazing or overgrazing by livestock (A09)	H
Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions) (F01)	H
Vandalism or arson (H04)	H
Other human intrusions and disturbance not mentioned above (H08)	H
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	H

Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Other forestry activities, excluding those relating to agro-forestry (B29)	M
Sports, tourism and leisure activities (F07)	M
Change of habitat location, size, and / or quality due to climate change (N05)	M
Creation or development of sports, tourism and leisure infrastructure (outside the urban or recreational areas) (F05)	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

Increase the population size and/or improve population dynamics (improve reproduction success, reduce mortality, improve age/sex structure) (related to 'Population')

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

- Adapt mowing, grazing and other equivalent agricultural activities (CA05)
- Manage conversion of land for construction and development of infrastructure (CF01)
- Reduce impact of other specific human actions (CH03)
- Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes (CL01)
- Prevent conversion of (semi-) natural habitats into forests and of (semi-)natural forests into intensive forest plantation (CB01)
- Adapt/change forest management and exploitation practices (CB05)
- Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities (CF02)
- Implement climate change adaptation measures (CN02)
- Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land (CA01)
- Reintroduce species from the directives (CS02)

9.6 Additional information

Re-introduction programme, habitat enhancement, protection and creation projects underway. Main purpose of measures often to exclude/reduce heather age management intensity (grazing, mowing, burning) on known sub-populations

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	Overall stable parameters are anticipated, consistent with this and previous reporting periods. Some sub-populations and habitats likely to decline due to fire and often inappropriate levels of heather management, combined with postive conservation efforts such as re-introduction and habitat restoration projects.

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

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Distribution Map

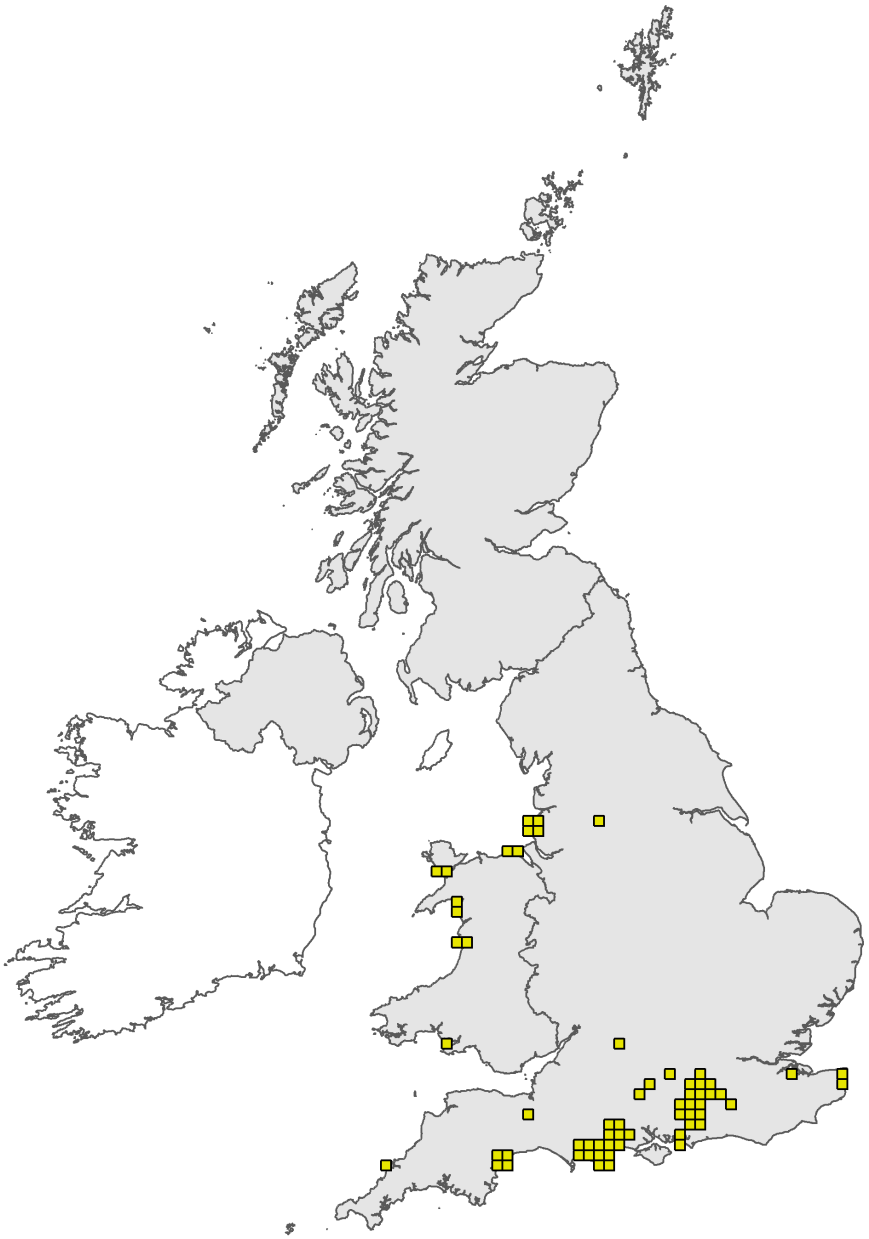

Figure 1: UK distribution map for S1261 - Sand lizard (*Lacerta agilis*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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 S1261 - Sand lizard (*Lacerta agilis*). 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 applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this species was 25km. For further details see the 2019 Article 17 UK Approach document.

Explanatory Notes

Species name: Lacerta agilis (1261) Region code: ATL

Field label	Note
5.3 Short term trend; Direction	Range has increased in the period between 2007-2018 (based mainly on an extrapolation from a limited amount of data).
6.2 Population size	This value is considered to be a reasonable proportion of known sand lizard occupied 1km squares surveyed during this reporting period, so is also a minimum value.
6.8 Short term trend; Direction	Population is considered broadly stable, gains have been made via the reintroduction programme and number of sub-populations has increased by one since the previous report however, some losses have been identified. It is estimated that 11% of sub-populations have seen a decline in population density, largely due to inappropriate habitat management or habitat loss.
6.10 Short term trend; Method used	CSM and Rapid Site Assessment combined with bespoke species surveys and monitoring.
6.12 Long term trend; Direction	Although species populations and range has increased, via re-introduction, 11% have declined due to fire, grazing, inappropriate levels or lack of habitat management.
6.15 Favourable reference population	Previously agreed via joint SAP, targets for 2030. Now listed within ARC SAP (2017).
7.1 Sufficiency of area and quality of occupied habitat	Habitat is considered sufficient for a viable population, but not enough to meet favourable conservation status in England. Large areas of potential habitat have insufficient height and structure for this species. GIS mapping of sub-populations, including common standard monitoring (CSM) and rapid site assessment (RSA) habitat assessments (ARC, 2018).