



Background Document for Iberian guillemot
(*Uria aalge*)



OSPAR Convention

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the “OSPAR Convention”) was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 September 1992. The Convention entered into force on 25 March 1998.

It has been ratified by Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Portugal, Sweden, Switzerland and the United Kingdom and approved by the European Union and Spain.

Convention OSPAR

La Convention pour la protection du milieu marin de l'Atlantique du Nord-Est, dite Convention OSPAR, a été ouverte à la signature à la réunion ministérielle des anciennes Commissions d'Oslo et de Paris, à Paris le 22 septembre 1992. La Convention est entrée en vigueur le 25 mars 1998.

La Convention a été ratifiée par l'Allemagne, la Belgique, le Danemark, la Finlande, la France, l'Irlande, l'Islande, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume-Uni de Grande Bretagne et d'Irlande du Nord, la Suède et la Suisse et approuvée par l'Union européenne et l'Espagne.

Acknowledgement

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Executive Summary

This background document on the Iberian guillemot – *Uria aalge* - has been developed by OSPAR as this species is included on the OSPAR List of threatened and/or declining species and habitats (OSPAR agreement 2008-6). The document provides a compilation of the reviews and assessments that have been prepared concerning this species since the agreement to include it in the OSPAR List in 2003. The original evaluation used to justify the inclusion of *Uria aalge* in the OSPAR List is followed by an assessment of the most recent information on its status (distribution, population, condition) and key threats prepared during 2012. Chapter 7 provides recommendations for the actions and measures that could be taken to improve the conservation status of the species. In agreeing to the publication of this document, Contracting Parties have indicated the need to further review these proposals. Publication of this background document does not, therefore, imply any formal endorsement of these proposals by the OSPAR Commission. On the basis of the further review of these proposals, OSPAR will continue its work to ensure the protection of *Uria aalge*, where necessary in cooperation with other organisations. This background document may be updated to reflect further developments or further information on the status of the species which becomes available.

Récapitulatif

Le présent document de fond sur le *Guillemot de Troïl* a été élaboré par OSPAR à la suite de l'inclusion de cette espèce dans la liste OSPAR des espèces et habitats menacés et/ou en déclin (Accord OSPAR 2008-6). Ce document comporte une compilation des revues et des évaluations concernant cette espèce qui ont été préparées depuis qu'il a été convenu de l'inclure dans la Liste OSPAR en 2003. L'évaluation d'origine permettant de justifier l'inclusion du *Guillemot de Troïl* dans la Liste OSPAR est suivie d'une évaluation des informations les plus récentes sur son statut (distribution, population, condition) et des menaces clés, préparée en 2012. Le chapitre 7 fournit des propositions d'actions et de mesures qui pourraient être prises afin d'améliorer l'état de conservation de l'espèce. En se mettant d'accord sur la publication de ce document, les Parties contractantes ont indiqué la nécessité de réviser de nouveau ces propositions. La publication de ce document ne signifie pas, par conséquent que la Commission OSPAR entérine ces propositions de manière formelle. A partir de la nouvelle révision de ces propositions, OSPAR poursuivra ses travaux afin de s'assurer de la protection du *Guillemot de Troïl*, le cas échéant en coopération avec d'autres organisations. Ce document de fond pourra être actualisé pour tenir compte de nouvelles avancées ou de nouvelles informations qui deviendront disponibles sur l'état de l'espèce

1. Background Information

Name of species

Uria aalge (*U.a.ibericus*/*U.a.albionis*) Iberian guillemot

The taxonomic status of the Iberian guillemot as a distinct subspecies of the common guillemot *Uria aalge* is unclear. *Uria aalge ibericus* was first proposed as a subspecies by Salomonsen in the 1930s, but was retracted by him in his later works as not being a sufficiently distinct form to merit subspecific recognition (ICES, 2002). The subspecies “*ibericus*” was supported by Bernis (1949) and subsequently accepted by the standard text on these birds of the 1960s and early 1970s (Tuck, 1960). This taxonomic treatment has not been followed in more recent definitive texts such as del Hoyo *et al.* (1996) or Cramp (1985), or in major monograph on the auks (Gaston & Jones, 1998), which all recognise only three subspecies of the common guillemot, *Uria aalge*, *albionis*, and *hyperborea*. ICES (2002) reports that most experts considered that it is not a separate subspecies. This background document therefore considers the Iberian population to belong to the common guillemot, *Uria aalge*.

Ecology and breeding biology

Uria aalge has a large global population and wide distribution, breeding on coastal cliffs and islands across sub-arctic and temperate regions of the North Atlantic and North Pacific Oceans. Outside the breeding season birds remain at sea within the breeding range area and slightly southwards of it.

It is a pursuit-diving species, reaching maximum depths of 200 m, and foraging mainly during daylight. Adults feed largely on schooling pelagic fish species during the breeding season, and apparently in winter too. Birds primarily forage over continental shelf areas. During the breeding season they can travel up to 200 km from the colony, although mean foraging range is ca. 25 km.



Image 1. Common Guillemot, © Michael Finn.

2. Original Evaluation against the Texel-Faial selection criteria

List of OSPAR Regions and Dinter biogeographic zones where the species occurs

OSPAR Region IV

Dinter biogeographic zones: 6, Current breeding range mainly in Lusitanian cool. Distribution pattern in the winter might include Lusitanian Warm, South, North and Boreal.

List of OSPAR Regions and Dinter biogeographic zones where the species is under threat and/or in decline

OSPAR Region IV, zone 6.

Original evaluation against the Texel-Faial criteria for which the species was included on the OSPAR List

U.a.ibericus was nominated for inclusion on the OSPAR List by one Contracting Party, with particular reference to the regional importance, rarity and a decline criterion, with information also provided on threats, and was first listed by OSPAR in 2003.

- i. **Global/regional importance.** In terms of its global distribution, the (Iberian) guillemot is only found in Region IV of the OSPAR Maritime Area, well isolated from other breeding common guillemot populations, the closest being found in Brittany. At the time of listing, breeding birds were found on the coast of NW Spain and Berlengas islets off the central Portuguese coast;
- ii. **Rarity.** At the time of listing, the number of breeding pairs of the (Iberian) guillemot in Region IV had been variously quoted as about 100 individuals, or a maximum of 40 pairs (websites of the European Environment Agency and of the World Conservation Monitoring Centre respectively) but it was not clear how recent those figures were, and no indication was available for the source of those figures;
- iii. **Decline.** At the time of listing, (Iberian) guillemot numbers had declined drastically in OSPAR Region IV, and the species was thought to be virtually extinct in Iberia;
- iv. **Sensitivity.** This species was considered to be sensitive to disturbance, predation and oil pollution – particularly the impact of the *Prestige* tanker disaster;
- iv. **Threats.** The original listing noted that the species faced threats such as oil pollution and incidental bycatch in fisheries throughout Region IV. Colonies in the extreme south of the species' breeding range (France – Iberia) had suffered decline and were thought to be extinct, apparently as a result of combined impacts of egg collecting (in the past), capture of unfledged young to keep as pets (Berlengas) taking of adult birds for food, shooting (off northern coasts of Spain), by-catch in fishing nets, oil spills, global warming and predation at the breeding colonies by introduced mammals, large gulls, and other birds (Bárcena *et al.*, 1984).

3. Current status of the species

Distribution in OSPAR maritime area

The last breeding events confirmed and published were in Cape Vilán (W Galicia) in 2007, involving 2 pairs (Alcalde & Docampo, 2009).

There is no information available on the winter movements of the Iberian population, as Iberian birds are indistinguishable from other populations when seen at sea. However, the species is common along the Cantabrian coast and off Galicia in Spain, and off the Portuguese coast, mostly along the north coast of Portugal, on a vast area that stretches from Peniche to the Galician border, with the maximum concentrations along the Aveiro-Porto-Minho N-S gradient. Guillemots are mostly observed in this area during the January-March period, with small peaks also during November and December. Recent work by Birdlife on marine IBAs (Important Bird Areas) and marine management research projects in Portugal and Spain have allowed refinement of these patterns.

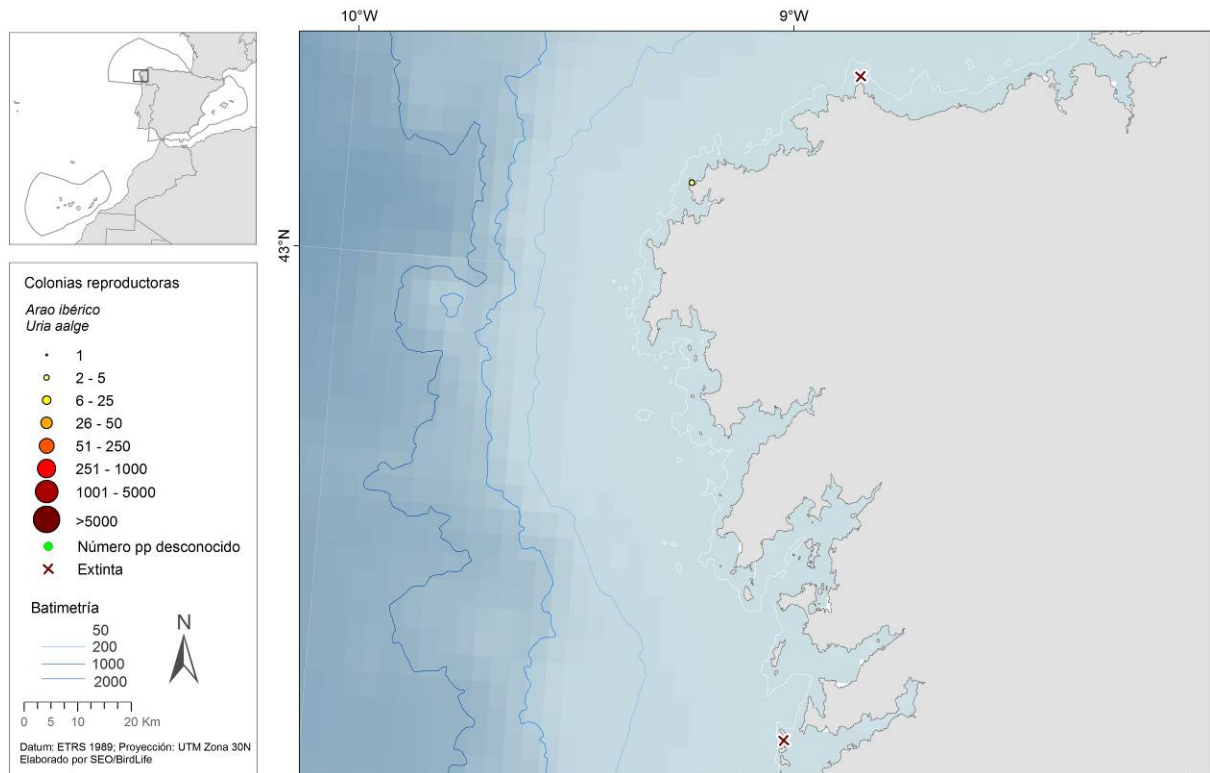


Figure 1: Distribution map of the Iberian guillemot, which illustrates the location of the last breeding colonies of the species on the Spanish coast. The species is currently restricted to the Cabo Vilán breeding site . It disappeared from Sisargas islands (northern colony in the map, shown by a cross) in 2005, and from Cíes islands (southern cross) in 1988 (Spanish marine Strategies; SEO/Birdlife in MAGRAMA, 2012).

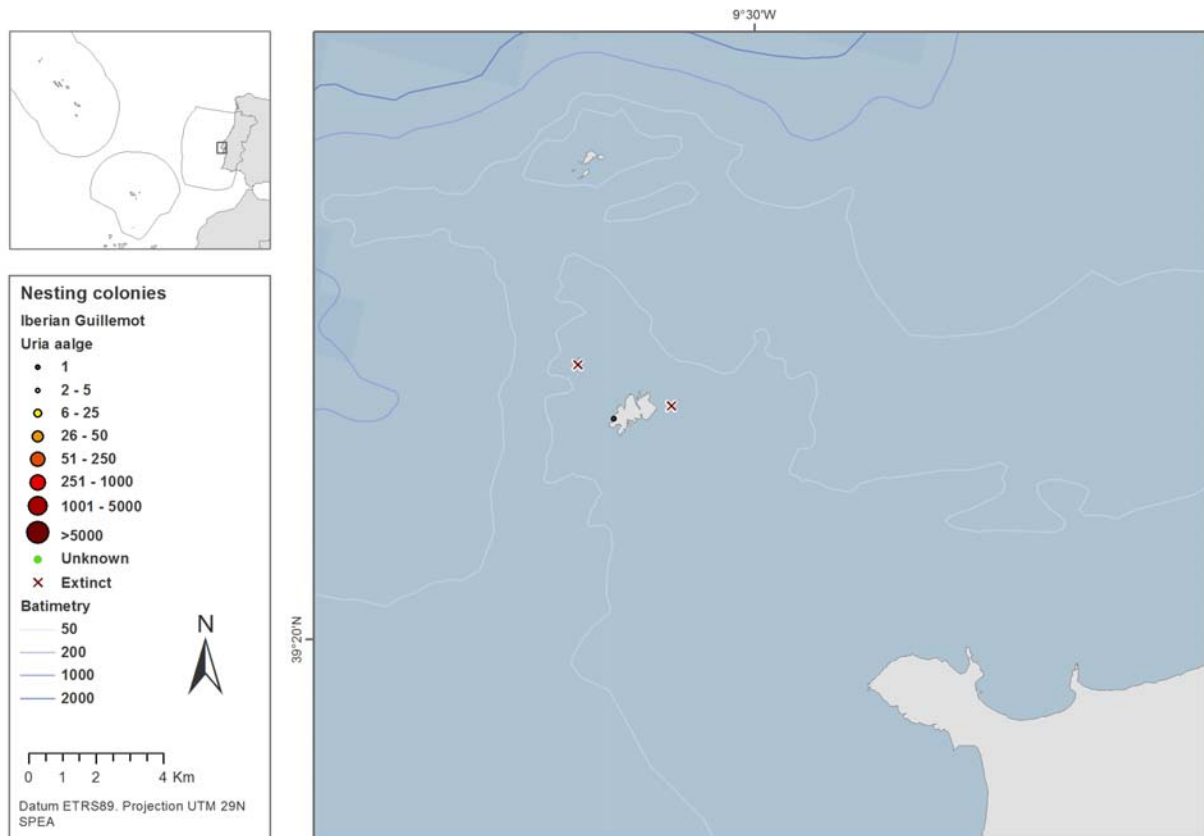


Figure 2: Distribution map of the Iberian guillemot, which illustrates the location of the last breeding colonies of the species on the Portuguese coast. The species is currently restricted to Berlengas Archipelago breeding site . It disappeared from Estelas islets (western colony in the map shown by a cross) and Velha islet (eastern colony in the map, see cross) during the 1990s, (Catry *et al.* 2010).

Population (current/trends/future prospects)

Historically, in Atlantic Iberia the common guillemot was a relatively common seabird with *ca.* 8000 breeding pairs estimated in seven major colonies between 1940 and 1960 (Munilla *et al.*, 2007).

In Portugal, the breeding population at the Berlengas archipelago once exceeded 12 000 breeding individuals (Lockley 1952). However, since the 1960s the whole Iberian population of this species has suffered a drastic decline, dropping to only a few hundred pairs in 1981 (an estimated 70-200 pairs for the Berlengas islets by 1978 (Teixeira, 1983; and then further to the current situation where it is considered as virtually extinct in the Iberian region (Munilla *et al.*, 2007; Catry *et al.*, 2010). Berlengas Natural Reserve wardens do observe potential breeders during the breeding season (March-April). In 2012 only one individual was observed by SPEA staff during field work in the archipelago (Oliveira, *pers. obs.* 2012), but breeding has not been confirmed since 2002 (Alcalde & Docampo 2009). There are older breeding records in mainland Portugal, namely in Cape São Vicente, (the SW tip of the country) in 1939 (Coverley, 1945). Although not breeding, isolated individuals were seen in this former colony as late as 1983 (Palma, *pers. obs.*).

In Spain, the breeding population has been restricted to Galicia from at least the second half of the 20th century onwards, with about 10 colonies (and about 3000 breeding pairs) still present in the 1960s-1970s but decreasing to only 3 colonies from 1982 onwards, with only a few tens of breeding pairs at most in the early 1990s. The last breeding event confirmed in Cies islands was in 1987, and then the species became relegated to Cabo Vilán and Sisargas Islands. The last straw came with the

'Prestige' oil spill, in November 2002 (SEO/BirdLife, 2003), shortly after which no breeding activity was confirmed, although individuals were still seen in Sisargas (until 2004) and Cabo Vilán. In the latter, breeding was confirmed for 2 pairs in 2006 and 2007.



Image 2. Photo from Berlingas colony in late 1970s (from Catry et al 2010)

The Iberian (breeding) population of this species is not expected to recover without addressing the threats such as bycatch from gillnet fisheries.

The Prestige oil spill in November 2002

On November 13, 2002, the Prestige oil tanker, with 77 000 tons of fuel, broke up and sank off the Galician coast, spilling its oil which severely affected the coastline between North Portugal and France over the following months, with Galicia's western coast particularly heavily impacted. In a few days, the oil reached the coastline and the first birds were washed ashore.

Live animals, mainly birds but also turtles, were treated, while dead animals were collected, counted and analysed by local authorities and NGOs. The bird collection by volunteers was organised by SEO/Birdlife, in cooperation with two international experts, Kees Camphuysen (NL) and Martin Heubeck (UK). As a result, 566 birds, 301 of which were originally found in Galicia, were released along Spain's Cantabrian-Atlantic coastline after rehabilitation.

From November 16th, 2002 to August 31st, 2003 a total of 23 181 birds (6,121 live birds), made up of 90 species, were collected on the Portuguese, Spanish and French coastlines. More than 50% of them were found in Galicia. The species most affected were common guillemot (51% of the total), razorbill *Alca torda* (17%) and the puffin *Fratercula arctica* (17%). Total bird mortality was estimated to be between 115 000 and 300 000.

More information:

http://www.interspill.org/previous-events/2006/pdf/wildlife_response_doc.pdf

<http://webs.uvigo.es/avelando/prestige/>

Condition (current/trends/future prospects)

Little information is available on current condition of *U.aalge* populations throughout the Iberian region.

Limitations in knowledge

There are relatively reliable data describing the declines of this species throughout the Iberian region since the 1960s. The sharpest decline, in the 1960s (33.3% annually) coincided with the introduction of synthetic fishing nets, whereas climate conditions stayed relatively constant, and thus bycatch is considered the main factor behind the crash of the species (Munilla *et al.*, 2007).

Most of the boat-based surveys carried along the Portuguese and Spanish coastline during the 2004-2012 period were not specifically designed to assess the at-sea distribution of this species and the birds are difficult to observe during the breeding period, therefore regular monitoring of breeding sites and breeding events would be advisable. Boat-surveys along the Atlantic Iberian coastline during the winter, focusing on historically well-known breeding sites and surroundings, would also be highly advisable to learn more about distribution patterns in the winter period. Plane surveys could also be useful, but observers are not always able to identify down to the species level when counting alcid.

4. Evaluation of threats and impacts

Munilla *et al.* (2007) identified gillnet bycatch, particularly after the spread of synthetic fishing nets, as the main factor causing the observed large-scale decline in Iberian guillemot populations. This threat is also referred to by Teixeira (1984), and according to Catry *et al.* (2010) local fishermen at Berlengas have always linked the continuous decline of this species with a steady increase of the local gillnet fisheries. . Assessing the contribution of this threat to guillemot declines in Atlantic Iberian waters is difficult as only recently have there been any organised attempts to monitor the interactions between seabirds and fisheries.

Despite the fact that the diet of this species has never been studied in the Iberian region, Catry *et al.* (2010) refers to reduced prey availability (again linked to an increase of the fishing effort), and climate change as relevant threats (see also Huntley *et al.* 2007), however Catry *et al.* (2010) warns against assumptions that climate change-induced reductions in prey availability have caused guillemot declines in the Iberian region, as their analysis indicated that food availability and SST conditions were good over the worst period of observed guillemot declines (1960 – 1974), and interaction with human activities (especially fisheries) seems the most likely key impact (Munilla *et al.* 2007).

Marine pollution (mainly oil-pollution) is also implicated in the decline of guillemots in the Iberian region (Madrño *et al.*, 2004). For instance, Munilla *et al.* (2011) estimated that as a consequence of the Prestige oil spill ca. 42 000 guillemots (95% CI 25 000 – 80 000) died in Galicia alone, which likely affected birds from the local population in addition to others from northern populations. Predation by yellow-legged gulls *Larus cachinnans* is also cited as a potential threat at Berlengas, but this is yet to be scientifically proven. In Spain, there is little evidence regarding avian predation (Madrño *et al.* 2004). Terrestrial predators do not seem to be a problem given the inaccessibility of the breeding sites, though American mink have recently caused severe damage to breeding populations of shag in Galicia. Human removal of eggs and shooting at sea may have been important threats in the past, but are no longer considered as threats to the species (Madrño *et al.*, 2004).

5. Existing management measures

The Iberian Guillemot is listed in Annex 1 of the EU Birds Directive and is subject to special conservation measures concerning its habitat in order to ensure its survival and reproduction in its area of distribution. The European Union *Action Plan for reducing incidental catches of seabirds in*

fishing gears (COM(2012)665 final) also aims to minimise and where possible eliminate the incidental catches of seabirds by EU vessels operating in EU and non-EU waters, and highlights the need to mitigate gill-nets as a priority.

In Portugal, the common guillemot is considered as a priority species under the Berlengas SPA management recommendations, a non-legal binding document written in 2011. Its remaining population should be monitored and its interactions with fisheries assessed in order to mitigate any potential negative interactions. To date, this management plan lacks sufficient political and financial support and therefore is not being implemented fully. In Spain, the land component of the unique breeding colony is currently a SPA, and the surrounding marine area has also been proposed as SPA following the marine IBA inventory presented by SEO/BirdLife (Arcos et al., 2009), although final designation is still pending. However, management plans for these sites have not been produced yet. There is a background document for producing a seabird recovery plan in Galicia (Munilla & Velando, 2008), focusing on the Iberian guillemot, the shag *Phalacrocorax aristotelis* and the black-legged kittiwake *Rissa tridactyla*, but the plan itself has not been approved yet. The species has also been incorporated as an evaluation element in the Marine Strategy for the North Atlantic Marine Demarcation in Spain (MAGRAMA, 2012). Bycatch is the main issue to be addressed, and preliminary efforts to this aim have included questionnaires to fishermen and specific workshops with the fishing sector in Galicia, organised by SEO/BirdLife within the frame of Interreg FAME Project. However, political and financial support will be necessary to fully address the problem.

6. Conclusion on overall status

In Portugal, no known breeding areas for *U.aalge* remain, although historically the Iberian guillemot was a relatively common seabird in the region, with a large breeding population at the Berlengas archipelago of over 6 000 breeding pairs (Lockley, 1952). Declines since the 1960s reduced the population on the Berlengas islets to an estimated 70 – 200 pairs by 1978 (Teixeira, 1984), followed by further deterioration to the current situation where it is considered locally extinct (Catry et al., 2010). The species was also once a common breeder along the North West coast of Spain, but was subject to a severe decline in the second half of the 20th century that drove the population from a few thousand pairs in several colonies to just a few tens of pairs in only two colonies. After the ‘Prestige’ oil spill, breeding has only been confirmed at two sites, Sisargas Islands (up to 2004) and Cabo Vilan (at least till 2007, when 2 breeding pairs were observed, though birds were observed there up to 2012).

The biggest decline occurred during the 1960s (33% annual decline), and was associated with the introduction of synthetic fishing nets. Bycatch does still pose a problem for the species, and current efforts are directed at addressing this threat, notably in the implementation of the EU seabird action plan. Oil pollution is also a major threat in the area, since wrecks have been reported “regularly”. Hunting and egg collection were considered a problem in the past, but nowadays have been virtually eradicated. Nor does predation seem to be a relevant problem. However, any stochastic event could be relevant given the few birds left, and management plans should be developed and enforced at least at the last breeding site recorded, where intensive monitoring programmes are also necessary. It is also necessary to complete the process of designation of the marine SPAs around the breeding sites, and to develop and enforce management plans there.

7. What action should be taken at an OSPAR level?

Action/measures that OSPAR could take, subject to OSPAR agreement

OSPAR Actions

Awareness raising: OSPAR should work with relevant Contracting Parties (see Table 1 below) to raise

awareness of status and threats to the species among both management authorities and general public¹

Monitoring and assessment: OSPAR should work with relevant Contracting Parties to facilitate development of a monitoring and assessment strategy for *U.aalge* in the Iberian region, involving relevant regional authorities, in liaison with national contacts. This strategy should take into account:

- (i) to ensure resources for monitoring breeding sites and assessing potential local threats inland, e.g. predators and disturbance;
- (ii) the need to monitor interactions with fishing activities (particularly gill netting) in that region;
- iii) the need to carry out a beached bird coastal survey with detailed necropsies to assess causes of mortality.

Further research: OSPAR should emphasise to relevant scientific funding bodies the following research needs with respect to *U. aalge*:

- a. further research to determine status and distribution of this species along Iberian coast; and
- b. further research into causes of decline/threats in the Iberian region.

Actions/measures for relevant Contracting Parties

OSPAR should recommend that relevant Contracting Parties undertake the following actions and measures, and establish a mechanism by which Contracting Parties report back on the implementation of these actions and measures, and the implementation of the monitoring and assessment strategy, so that progress can be evaluated in conjunction with future assessment of the status of the species:

- a. Monitoring and Assessment: develop and implement the above monitoring and assessment strategy in the OSPAR Area;
- b. Since present population size is well below the estimated minimum viable population in the Iberian region, management options should include the facilitation of recruitment to both existing and abandoned colonies of wintering immature birds (e.g. by means of decoys) and addressing the main threats, especially bycatch, to re-establish the Iberian population for this species.

¹ This could perhaps best be achieved, at least initially, through a brochure and accompanying web site that lists all OSPAR Listed features, the threats they face, and recommended conservation actions.

Brief summary of proposed monitoring system

OSPAR could play an important role in helping to promote and coordinate the collection of information on the numbers, distribution and activities of *U.aalge* and the identification of the key threats. Relevant Contracting Parties (Spain and Portugal) should be tasked to report to OSPAR on:

- Monitoring of distribution along the Iberian coast;
- Birds killed from bycatch (compiled from fisheries statistics) and reported killed due to oil pollution;

Further data collection where resources allow, covering diet, feeding ecology, and additional research into the threats facing this species in the Iberian region as well as information on beached birds and causes of mortality.

Table 1: Summary of key threats and existing protection for *Uria aalge* (Iberian population)

<p>Key threats</p>	<p>Gillnet fishery bycatch</p> <p>Oil pollution</p> <p>Climate change</p>	
<p>Relevant Contracting Parties</p>	<p>Spain, Portugal</p>	
<p>Other responsible authorities</p>	<p>Berlengas Natural Reserve authority (Instituto de Conservação da Natureza e Florestas - ICNF), Fisheries Directorate General (Portugal)</p> <p>Recreational fishermen association (Portugal)</p> <p>INIAP/IPIMAR</p> <p>Xunta de Galicia (Galician regional government)</p> <p>Ministerio de Agricultura, Alimentación y Medio Ambiente (MAGRAMA), Spain</p>	
<p>Already protected?</p> <p>Measures adequate?</p>	<p>Represented within the SPA network (priority species under the Berlengas SPA management recommendations)</p> <p>Unique breeding site currently declared as SPA inland site, and pending of declaration marine counterpart (process started). Also pending of approval recovery plan for Galicia.</p>	<p>Insufficient knowledge about interactions with fishing activities mean that further monitoring is needed and mitigation measures need to be tested before threats from fisheries are properly addressed.</p> <p>Due to lack of monitoring, it is difficult to ascertain whether predation by yellow-legged gulls still occurs and whether that is a major threat to the species breeding success. Predation by mink could also be a threat.</p> <p>Assessing the real implications of temperature increases in the Portuguese continental platform is an urgent need. Sardine populations are thought to be on the decline due to ocean warming, but it is still not clear if this is part of a cyclic period or a human-related effect. Prey availability for the common guillemot could therefore be challenged by climate change, but monitoring for a sufficient length of time is needed before reaching further conclusions.</p>

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Annex 1: Overview of data and information provided by Contracting Parties

Contracting Party	Feature occurs in CP's Maritime Area*	OSPAR nominated Contact Point (in bold), or other contributor providing information	Contribution made to the assessment (e.g. data/information provided)
<i>Belgium</i>			
<i>Denmark</i>			
<i>European Commission</i>			
<i>France</i>			
<i>Germany</i>			
<i>Iceland</i>			
<i>Ireland</i>			
<i>Netherlands</i>			
<i>Norway</i>			
<i>Portugal</i>	Yes	Ivan Ramirez, BirdLife International Ivan.Ramirez@birdlife.org	Key references, and information on population size and distribution, as well as threats programmes provided.
<i>Spain</i>	Yes	Jose Manuel Arcos, SEO/BirdLife jmarcos@seo.org	Key references, and information on population size and distribution, as well as threats programmes provided.
<i>Sweden</i>			
<i>UK</i>			

Summaries of country-specific information provided

Portugal. There are no known breeding areas for *U.aalge* remaining in Portugal though historically the common guillemot was a common seabird in the region, with a large breeding population at the Berlengas archipelago of over 6000 breeding pairs (Lockley, 1952). Declines since the 1960s reduced the population on the Berlengas islets to an estimated 70 – 200 pairs by 1978 (Teixeira, 1984), and then reduced further to the current situation where it is considered locally extinct (Catry *et al.*, 2010). Potential breeders are observed on the Berlengas during March - April but breeding has not been confirmed. Beyond these breeding sites, there is just one further confirmed breeding record, namely in Cape São Vicente in 1939 (Coverley, 1945). The (non-breeding) distribution of this species along the continental Portuguese coast is relatively well known with most records obtained along the north coast of Portugal, on a vast area that stretches from Peniche to the Galician border, with the maximum

concentrations along the Aveiro-Porto-Minho N-S gradient. Guillemots are mostly observed in this area during the Jan-March period, with small peaks also during November and December.

Spain The Iberian guillemot was once a common breeder along the NW coast of Spain, but was subject to a severe decline that in the second half of the 20th century drove the population from a few thousand pairs in several colonies to just a few tens in only two colonies. After the 'Prestige' oil spill, breeding has only been confirmed at two sites, namely Sisargas Islands (up to 2004) and Cabo Vilan (at least till 2007, when 2 breeding pairs were observed). The major decline occurred during the 1960s (33% annual decline), and was associated with the introduction of synthetic fishing nets. Bycatch does still pose a problem for the species, and current efforts are directed at addressing this threat. Oil pollution is also a major threat in the area, since wrecks have been reported "regularly". Hunting and egg collection was considered a problem in the past, but nowadays has been virtually eradicated. Nor does predation seem to be a relevant problem. However, any stochastic event could be relevant given the few birds left, and management plans should be developed and enforced at least at the last breeding site recorded, where intensive monitoring programmes are also necessary. It is also necessary to complete the process of designation of the marine SPAs around the breeding sites, and to develop and enforce management plans there.



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