

Balearic Shearwater *Puffinus mauretanicus*

Background

The Species Action Plan for the Balearic Shearwater in Europe (Aguilar 1999) was adopted in 1999 by the Ornithological Committee and endorsed by the Bern Convention. This review evaluates the implementation of the Species Action Plan from 2000 to 2010 in the European range states of the species. It covers the entire breeding population of the species on the Balearic Islands, Spain, the only country where the species breeds, as well as non-breeding populations in Portugal, UK and France. Replies to the evaluation questionnaire were received from national and regional (in the case of Spain) experts from all range states.

General overview

Progress in the overall implementation of the action plan is good but further work is still needed (overall IS=2.2). The SAP has been most successfully implemented in France, but has received the least work in the UK.

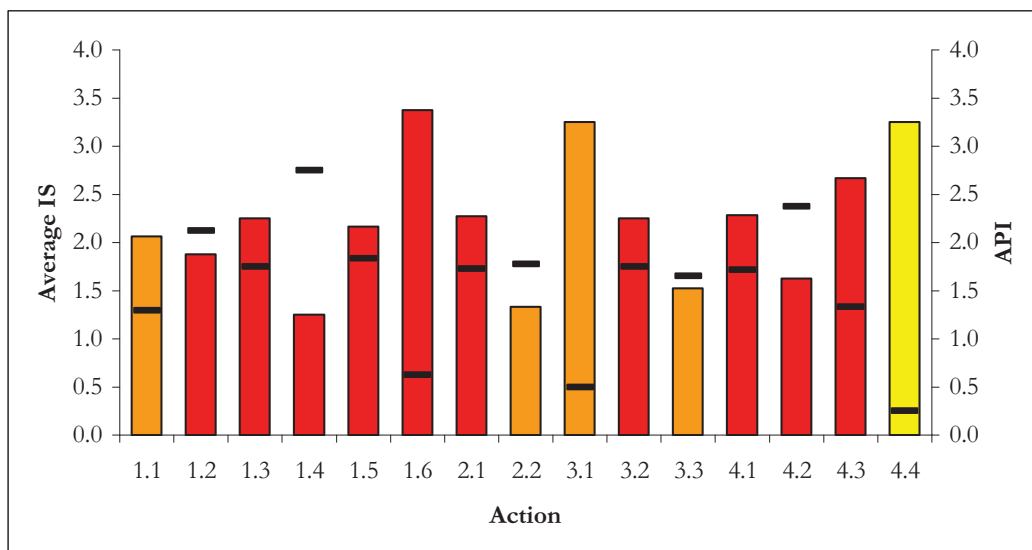


Figure iii Average implementation score (IS) and Action Priority Index (API) for each action listed in the Balearic shearwater species action plan. Colours represent Priority Score.

Status review

The breeding population of the Balearic shearwater was last estimated at 3,193 breeding pairs, in 2009 (CMA-Govern de les Illes Balears & Skua, unpublished data - 2010; see Table 1). However, absolute figures and their use to infer population trends should be taken with caution, as breeding sites are most often inaccessible, and therefore their census relies on indirect methods that are subject to strong biases and inaccuracy.

Table 12 Population estimate and trend by country

Country	Breeding population at the time of the 1999 SAP (pairs)	Year	Current population (pairs)	Year	Migrating and/or wintering numbers	Year	Breeding trend	Reference
France	0	1997	0	1960-2010	1,000 - 6,000 ind.	2000-2009	Stable	
Portugal	0	1997	0	0	1,100 - 4,300 ind.	2004-2008	-	
Spain	3,300 pairs	1997	3193 pairs	1991-2010	20,000 - >30,000 ind.	2003-2009	Fluctuating	31
UK	0	1997	0		145 - 5,200 ind.	2007-2009	-	

Objective(s)

In the short term, to warrant the viability of the Balearic shearwater populations. In the medium to long term, to restore their numbers and distribution to former status and to increase the knowledge about the species' biology.

Evaluation

It is unknown whether the short term target set in the action plan has been met as the way this target is formulated it is not easily quantifiable with the available population data.

The unique existing population viability analysis (PVA) was conducted by Oro *et al.* (2004). Taking the demographic information available from two predator-free colonies of Mallorca, and assuming a breeding population of 2000 breeding pairs, these authors estimated a declining trend for the species ($\lambda=0.952$), with a 7.4% rate of decline, that would result in a mean extinction time of 40.4 years (i.e. less than 3 generations, 54 years). The main parameter explaining this trend was adult survival (estimated at 0.78), whereas breeding productivity would need to improve over normal values for a Procellariiform to reach a value of $\lambda \geq 0$ (Louzao *et al.* 2006a).

As stated above, these data have to be taken with caution given the low number of study sites (Tavecchia *et al.* 2007). However, demographic information came from predator-free colonies (or with only rats, in one of them), and should be taken as conservative. The lack of predators also suggests that the source of mortality for the birds breeding in these colonies should come from the sea, likely fishing bycatch (Oro *et al.* 2004, Arcos *et al.* 2008).

It is important to conduct new PVAs taking into account the new information on population figures (both for the breeding population and for the global population out of surveys at sea). Accurate monitoring of a handful of representative sites is also necessary

³¹ Conselleria de Medi Ambient, 2005

to update demographic parameters and to make the estimates more representative of the whole population.

The medium to long term targets have not been met as species numbers and distribution have not been restored to former status. It is assumed that 'former status' refers to a population size and distribution that would result in the species being reclassified on the IUCN Red List from 'Critically Endangered' to 'Near Threatened'. The species was upgraded from 'Near Threatened' to 'Critically Endangered' in 2000, and so population size and distribution estimates from before 2000 should be used as the target. It should be noted, however, that there have been discrepancies in breeding and non-breeding population estimates. The knowledge about the species' biology is still incomplete [in order to understand its implications on the population trend] although some progress has been made.

Conservation and Legal Status

The Global IUCN Red List Category of the Balearic shearwater is Critically Endangered under criteria A4b,c,d,e based on its tiny effective breeding range (<100 km², restricted to the Balearic Islands) and a small population which is undergoing an extremely rapid population decline (-7.4% per year), that could lead to its extinction in less than 3 generations (BirdLife International 2009).

The species is listed as Critically Endangered (SPEC 1) under criteria A4b,c,e;B2a+b(ii,iii,iv,v) in the European IUCN Red List (BirdLife International, 2004), and is listed in Annex I of the EU Council Directive on the Conservation of Wild Birds (79/409/EEC, 'Birds Directive'), Appendix II of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), Annex II of the Mediterranean SPA-BD and OSPAR. The species is also candidate to ACAP.

The species is legally protected across all of its range.

The new taxonomic status of the species is included in reviews of international conventions.

Overview of past and current threats

The main threats for the Balearic shearwater are those that directly affect adult survival, both in the breeding grounds and at sea. Predation by carnivores (breeding colonies) and fishing bycatch (at sea) have been identified as the two main threats. Acute pollution (e.g. oil spills) also poses a serious potential threat, as the highly gregarious behaviour of this shearwater at sea could result in mass mortality in the case of overlap with an event of acute pollution (e.g. oil spill). Other threats affecting breeding performance/ adult survival are reduced food availability (through overexploitation/reduction of fish stocks), predation by rats, breeding habitat degradation and background chemical pollution. Inland harvesting for food used to be an important threat influencing both survival and productivity, but is no longer considered relevant.

Table 3 reviews the past and current threats to the Balearic shearwater.

Table 13 Table of importance of Balearic shearwater threats by country. The current level of importance of threats listed in 1999 SAP and newly identified threats are listed for each country. The original importance level of the threats as listed in the 1999 SAP is included in brackets. Blank boxes indicate no response.

Country	Threats identified in 1999										Newly identified threats in 2010						
	Lack of food resources (high)	Lack of protection of breeding colonies (high)	Predation by other introduced mammals (high)	Oil spills (Potentially high)	Illegal exploitation for human consumption (low/locally high)	Predation by rats (low/medium)	Human disturbances (low)	Accidental catches (low)	Pollution (unknown)	Competition with other species (unknown)	Predation and kleptoparasitism by Yellow-legged Gull (unknown)	Lack of nesting habitat (unknown)	Windfarms	Toxic algae in feeding areas	Artificial light pollution	Predation by Peregrine Falcons	Longer displacements in search of food
France	High	N/A	N/A	Medium	Low	N/A	Low	High	Low	High	Low						
Portugal	High	High	High	High		High		Medium									
Spain (national)	High	High	High	High	Low	Low	Low	Crit/High	Low	N/A	Low	Low	Unknown				
Spain - Catalonia	Critical	High	High	High	Low	High	Low	Medium	N/A	Low	Medium					Medium	
Spain - Balearics	Low	Low	Critical	Low	Low	Crit/High	Low	High	N/A	Low	N/A				Local		
UK	High	Critical	Critical	Medium	Low	Medium	Low	High	Low	Low	Low	Low			Local		Local

Assessment of the implementation

National and regional species action plans

Only Spain has a national species action plan which was adopted in July 2005. However, more work needs to be carried out to ensure its effective implementation.

The species will be included in the Catalan Catalogue of Endangered Species under the category 'Extinction Endangered'. The legal regulation is at its final stages prior to the official publication and will mean the need of the establishment of a regional level recovery plan of the species covering all the aspects mentioned in the European SAP plus more local regulations. There are no species action plans in Portugal or the UK.

Species conservation

A recovery plan for the species is in place in the Balearic Islands³².

The preparation and implementation of management plans at protected sites is a high priority action, relevant only in Spain and Portugal, which has received little implementation.

On the Balearic Islands, all areas with colonies are protected from tourist development, but adjacent areas can still be developed and so disturbance remains a problem. There has been some progress in preparing and implementing management plans at protected sites in the Balearic Islands, however, there are still gaps in the plans' coverage and further work is needed to restore coastal habitats and small islands, reduce predation (through eradication campaigns) at breeding sites, and (to a lesser extent) prevent disturbance.

The eradication of alien species to prevent predation has been fairly well implemented in Spain, however more work is needed, particularly on Menorca and Formentera where predation by carnivores (cat, genet and marten) poses a serious threat. A lesser threat is posed by predation from rats, and so far eradication efforts at Balearic shearwater colonies have proven unsuccessful. Rodent eradication in the Balearic Islands in the short term has been very positive for vegetation and invertebrate restoration, but again there has been no positive response in Balearic Shearwater colonies. Currently there is no common strategy in place for dealing with alien invasive species and work is carried out using a site by site approach only. There is also no monitoring system in place for assessing the effectiveness of eradication efforts, and very little information is published on the recovery of the ecosystem.

Prevention of human disturbance is a medium priority action, only relevant in Spain, and has received barely any work. Balearic shearwater colonies are difficult to access and so are relatively protected from human disturbance by virtue of this, so targeted wardening of colonies has not been carried out at all.

The increasing of breeding numbers and breeding sites by artificial nests, adequate management of existing nests, and fledgling translocation and is a low to medium priority, only relevant in the Balearic Islands, and has thus received very little work.

³² <http://boib.caib.es/pdf/2004097/mp5.pdf>

In addition to management plans at terrestrial sites, the development and implementation of management plans for marine sites is pending and should be urgently addressed.

Site conservation

The designation of Balearic shearwater breeding colonies and key sites as protected areas is a high priority action and overall, this has been well implemented - 21 SPAs in the EU cover between 90-100% of the potential breeding population, also largely protected under national law (50-90%).

All breeding sites are currently protected as (terrestrial) SPAs, with the unique exception of the colony of Punta Prima in Formentera, where new information has revealed that the main colony (50 pp.) lays just outside the SPA (and IBA) (a priority action in the SAP and under the Barcelona Convention).

The management plans for these SPAs are still pending, and some colonies receive little conservation attention.

Regarding measures to protect the marine environment, the designation of sites at sea is far from sufficient (BirdLife International 2010). Portugal and Spain have recently concluded their marine Important Bird Area (IBA) inventories (Ramírez *et al.* 2009, Arcos *et al.* 2009 respectively), identifying 22 (>36,000 km²) and 3 (almost 4,000 km²) marine IBAs respectively for the Balearic shearwater. Portugal has no marine SPAs for this species yet.

Within Spain, a few small sites have already been designated as marine SPAs by some Regional Governments (with 0-10% of the population found in marine IBAs or marine SPAs). The Spanish Government has adopted the marine IBA inventory as the model for the designation of marine SPAs, and has already initiated the designation process, starting by those sites relevant for the Balearic shearwater during the breeding season (16 sites in the Mediterranean). Within Catalonia, the network of marine IBAs is sufficiently developed to cover nearly 100% of the non-breeding population³³. In the UK, the species is sparsely distributed during the winter and so only 0-10% of the national population occurs in marine IBAs and marine SPAs. Finally, France declared an ambitious network of marine SPAs in 2008, while huge marine IBAs were also proposed, with up to 55,000 km² claimed for the Balearic shearwater (Deceuninck & Micol 2008, BirdLife International 2010). This has resulted in 50-90% of the French population occurring in both terrestrial and marine IBAs and SPAs, covering most of the known main staging areas in French coastal waters.

Neither marine SPAs nor other forms of legal protection have yet been designated elsewhere (BirdLife International 2010).

³³ Catalonia has ensured the protection of 83.104 ha of sea areas within the Natura 2000 network³³: The main Catalan islands are also protected as Natural Parks (Cap de Creus and Medes islands -Montgri-Baix Ter).

Table 14 Coverage of the key national populations with protected areas.

Country	% of national population included in IBAs	% of national population included in SPAs	% of national population included in protected areas	% of national population included in Marine IBAs	% of national population included in Marine protected areas
France	50-90%	50-90%	50-90%	50-90%	50-90%
Portugal	N/A	N/A	N/A	1100 - 4300	N/A
Spain	50-90%	50-90%	10-50%	0-10%	0-10%
Spain - Catalonia	90-100%	90-100%	50-90%	100	50-90%
Spain - Balearic Islands	100%	100%	46%	N/A	N/A
UK	0-10%	0-10%	0-10%	0-10%	0-10%

Habitat conservation

Development of national coastal strategies

National coastal strategy development has been well implemented in the Balearic Islands, Catalonia and France, particularly regarding the protection of important coastal habitats such as islets and cliffs.

Prevention of oil spills and chemical pollution at sea

With the exception of France and Spain (particularly Catalonia), the prevention of oil spills and chemical pollution at sea has received little work, despite being a high priority, and so is an area for which further work is needed. In the Balearic Islands, coastal contamination is not closely monitored and the effects of contaminants on seabirds are unknown. In addition, the Balearic Government does not regulate maritime traffic (only coastal traffic). Oil pollution can be a local problem in some areas (Bay of Palma), whereas in others the relatively low traffic and milder sea conditions appear to minimise the risk of pollution. In the last ten years, there have been two incidences of grounded ferries on islands near colonies (Eivissa), although the threat was minimized due to the time of the year (winter) and the small amount of fuel dispersed. The location of Balearic shearwater colonies should be taken in consideration in the design of a general prevention strategy to avoid oil spills.

In Catalonia, a civil protection plan to avoid accidental contamination of sea waters³⁴ has been implemented. In Portugal, work has been carried out by NGOs to develop an action plan for avoiding oil spills, but nothing has been implemented yet.

Fisheries policy

Following the adoption of the European Community Plan of Action for reducing incidental catch of seabirds in fisheries targeted meetings have been organized with Portuguese politicians and the national Fisheries Commission to discuss the urgent need to adopt a national Plan of Action for seabirds and for reducing bycatch.

There is no specific way to ensure the protection of the Balearic shearwater from becoming bycatch in Spain, although similar steps as in Portugal have been taken.

Overall, little work has been carried out to ensure EU fishery policies include considerations on seabirds, despite being a high priority for the species. This action is therefore a high priority for the future and should be urgently addressed.

Monitoring and Research

Overall, despite being a medium priority action, monitoring of the Balearic shearwater has been very well implemented, particularly in Spain and Portugal. National survey/monitoring programmes for the species exist in Spain, Portugal and the UK, and a long-running monitoring programmes exists in France. National monitoring programmes are conducted on breeding colonies (undertaken by the Balearic Government and through a 1998-2001 LIFE project³⁵), and non-breeding birds (at-sea counts, coastal surveys and wintering counts).

There are also monitoring programmes for the species in place in protected areas in Spain (including the Balearic Islands and Catalonia) and France (mostly in N. Brittany).

A key local initiative of Fundacion Migres monitors the migration of the Balearic shearwater through the Straits of Gibraltar.

The conducting of research on the feeding ecology of the species over its whole range is deemed a high priority, however, less work has been carried out on this than on species monitoring. This action is considered not relevant in France and the UK.

The majority of feeding ecology research has been carried out by Spain through the conducting of coastal and boat-based surveys, tracking, studies on interactions with fisheries, dietary assessment through isotopes and more.

Studies with direct application to the conservation and management of the species are of a medium priority have been implemented at a fairly low level. Research was conducted in Spain and Portugal (in 2004-2008) to identify the best sites for the Balearic shearwater

³⁴ <http://www.gencat.cat/interior/emergencies/plans/aigues/pla/camcat.pdf>

³⁵ LIFE project: LIFE B-4/3200/97/246

at sea (to become marine IBAs), accounting for activity around colonies (seaward extensions), foraging (areas of concentration at sea) and migration (migration corridors). Further work is now being carried out by Spain and Portugal to assess threats at sea and the development of appropriate management plans in marine IBAs.

A Spanish LIFE project³⁶ in 1998-2001 updated information on the species, included work on surveys, colony monitoring, assessment of threats, conservation and policy action, and raising awareness, at the breeding grounds and wider marine environment (Ruiz & Martí 2004). In Catalonia there is an ongoing project on quantifying the amount of potential predators to these species in coastal islets. Finally, the InterReg Project FAME began in 2010, lead by the RSPB with the involvement of the BirdLife partners of Ireland, UK, France, Spain and Portugal.

One limitation to monitoring and research of the species is the need to limit human disturbance.

Information exchange

The promotion of information exchange is a high priority that has received moderate implementation, mainly through the establishment of national Balearic shearwater project/ working groups in Spain, Portugal (including SPEA, the Portuguese Society for Wildlife and University of Minho), France and the UK (records collated by SeaWatch SW and supported by RSPB and BTO). However, there are still issues with the implementation and effectiveness of these working groups as the Spanish group has been inactive since 2005 and the French partner (LPO) has limited experience with the Balearic Shearwater.

The sharing of information between scientific, conservation officers and decision makers regarding the taxonomic status of the species has received a high level of implementation and requires no future work.

Public awareness and stakeholder involvement

The providing of information and increasing awareness of the species, its habitats and coastal biodiversity is a high priority action that has received moderate implementation overall, with the majority of work having been carried out in Spain and to a lesser extent, Portugal.

In Catalonia, environmental education actions have targeted increasing knowledge of the species and through the design of a t-shirt explaining the existence of Shearwaters and Storm-petrels in Catalonia. In Portugal, work has been carried out since 2008 (under the Species Guardians programme) producing awareness-raising materials about seabirds and bycatch, and promoting meetings with fishermen to gather information on impacts of fisheries on the species. In addition, SPEA has also carried out birdwatching activities, for the general public and volunteers, to encourage appreciation and knowledge of the species.

³⁶ LIFE project: LIFE97 NAT/E/004147

Awareness raising materials on the species and the impact of fisheries (bycatch) have also been produced and disseminated in Portugal.

Community financial support

Five LIFE³⁷ projects were implemented in Portugal (1) and Spain (3) during the period of 2000 – 2010 which benefitted the Balearic shearwater. The total budget was more than 20 million Euros, of which the European Union contribution was more than 11 million Euros. Details for all these projects can be obtained from the LIFE project database at: <http://ec.europa.eu/environment/life/project/Projects/index.cfm>

The species has also benefited from some other Community funding for projects including the Future of the Atlantic Marine Environment (FAME) project which is an EU funded project running from 2010-2013 in Spain and Portugal. In addition, there are smaller scale projects such as the Species Guardians Balearic shearwater project in Portugal, several research projects in Spain investigating effects of fisheries (DISCBIRD – EU funded), species demography and population dynamics, and conservation research on the species at the Cabrera National Park. Finally, in Catalonia the national government funds monitoring of the Balearic shearwater and recovery of injured sea birds.

Conclusions

Progress in the overall implementation of the action plan is rather good but more work is still needed (Average IS= 2.2). The most progress in implementing actions (where relevant) has been made in France and in the Balearic Islands and Catalonia. A scores table of the implementation of each action (including a break-down of all actions into measurable targets) for each country is provided in Appendix 1.

Based on the gaps further implementation of the following actions is needed:

- Development and implementation of EU fishery policies that account for the impacts of fisheries on Balearic shearwater populations and other seabirds, as well as implementation of and considerate fishing practices.
- Conducting of research on the population dynamics of the species and the impact of multi-predator presence in colonies.
- Promoting information exchange.
- Preparation and implementation of effective species management plans at all protected sites.
- Preventing oil spills and chemical pollutants at sea.

Taking into account the current prioritisation of old and new threats, priority work should be carried out on measures that stop the or reverse the population decline of the Balearic shearwater, and that maintain or improve the good environmental status of the current breeding colonies and main marine hotspots. This is to be achieved by implementing targeted actions that improve adult survival rate, maintaining or increasing breeding productivity, conserving of breeding and marine habitat, and filling of knowledge gaps. It is

³⁷ LIFE project codes: LIFE04/NAT/PT/000213; LIFE97/NAT/E/004147; LIFE B-4/3200/97/246; LIFE04/NAT/ES/000049; LIFE07/NAT/E/00732

also essential to be able to accurately quantify whether or not species action plan targets are met and so the setting up of a monitoring scheme that allows accurate assessment of the population trend of the species is also a priority future action.

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Appendix 1

Table 15 Implementation of the action plan in different countries³⁸. PS = Priority Score; Ave. IS = Average Implementation Score; API = Action Priority Index; National IS = National Implementation Score.

Action	Measure	PS	FR	PT	ES	ES-BI	ES-C	GB	Ave. IS	API
1.1	To develop national coastal strategies	2	2.5	1	2	2.8	2.5	1.5	2.1	1.3
	a. Coastal strategies implemented, including integrated planning and sustainable development and utilisation.	2	2	1	2	2.5	2	2	1.9	1.4
	b. Important coastal habitats including islets and cliffs safeguarded.	2	3	0	2	3	3	1	2.7	0.9
1.2	Prevent oil spills and chemical pollution of the sea	3	3.7	1	1.5	2	3	1	1.9	2.1
	a. Adequate policies for prevention of oil pollution implemented in main areas of concentration.	3	3	1	2	2	3	1	2.0	2.0
	b. National and international legislation on chemical pollution and industrial treatment enforced and action undertaken to avoid chemical/oil release from offshore and land-based sources.	3	4	1	1	2	3	1	1.8	2.3
	c. Incentives established for oil tanker companies who agree to avoid sensitive marine areas.	3	0	1	1	2	0	1	1.3	2.7
	d. Heavy fines imposed for cleaning of oil tankers outside specially designated areas.	3	4	1	2	2	0	1	1.7	2.3
1.3	To ensure the protection of the breeding habitat	3	4	0	2	2.5	0	0	2.3	1.8
	Adequate management of all breeding areas in place.	3	4	0	2	2.5	0	0	2.3	1.8
1.4	EU fishery policies should include considerations on seabirds, taking into account the impact on its populations	3	2	1	1	2	1	2	1.3	2.8
	EU fishery policies include considerations on seabirds, accounting for the impact on its populations.	3	2	1	1	2	1	2	1.3	2.8
1.5	To involve international conventions in the conservation of the Balearic Shearwater and its habitat	3	4	1	2	3.2	2.5	0	2.2	1.8
	a. All breeding colonies of BS and areas where the species congregates in the Mediterranean are protected under the Barcelona Convention.	3	4	0	2	3	2	0	2.3	1.7
	b. National Biodiversity Convention strategies promote conservation and sustainable management of coastal and island ecosystems.	3	4	1	2	3	3	0	2.3	1.8

³⁸ FR = France; PT = Portugal; ES = Spain (National); ES-BI = Spain – Balearic Islands; ES-C = Spain – Catalonia; UK = United Kingdom.

	c. National action plan for the species is drafted and implemented (according to Recommendation No.† of the Bern Convention).	3	0	1	2	3.5	0	0	2.2	1.8
1.6	The new taxonomic status of the species must be included in future reviews of international conventions	3	4	4	2	3.5	4	0	3.4	0.6
	The new taxonomic status of the BS included in reviews of international conventions.	3	4	4	2	3.5	4	0	3.4	0.6
2.1	To ensure adequate protection of breeding sites. All the IBAs and protected areas where Balearic Shearwater occurs should include specific measures for its effective conservation.	3	3.7	2.5	2	2.6	2	0	2.3	1.7
	a. All BS breeding colonies designated as protected areas.	3	4	0	3	3.5	0	0	3.3	0.8
	b. All IBAs identified for the BS are designated as Special Protected Areas (SPAs)..	3	3	3	2	3.5	4	0	3.1	0.9
	c. Management plans prepared and implemented at all protected sites, covering the needs of the species..	3	0	2	2	2	1	0	1.8	2.3
	d. Wardening and physical barriers are ensured in colonies where required to prevent human disturbance (e.g. Pitiusas)..	2	0	0	1	2	0	0	1.5	1.7
	e. Eradication campaigns in place against rats, feral cats and other alien species where necessary to prevent predation..	2	4	0	2	2	1	0	1.7	1.6
2.2	Increase breeding numbers and breeding sites	2	0	2	1	1	0	0	1.3	1.8
	a. Artificial nests or adequate management of existing nests in place to provide suitable habitat for new breeders.	2	0	0	1	0	0	0	1	2.0
	b. Artificial “social stimulation”, artificial nests and fledgling translocation implemented to establish new colonies.	1	0	0	0	0	0	0	0	0
	c. Considerate fishing practices which account for BS conservation implemented.	3	0	2	1	1	0	0	1.3	2.7
3.1	To continue the monitoring program. To continue with the existing monitoring program (survey and census) to know the current distribution, numbers and status of breeding and non-breeding birds.	2	1	4	2.5	3.5	3	2	3.3	0.5
	Existing monitoring program (survey and census) continued and current distribution, numbers and status of breeding and non-breeding birds determined.	2	1	4	2.5	3.5	3	2	3.3	0.5
3.2	To undertake research on feeding ecology over the whole species	3	0	1	2.5	2.5	3	0	2.3	1.8

References

- Aguilar, J.S. 1999. Species Action Plan for the Balearic Shearwater *Puffinus mauretanicus* in Europe. BirdLife International report to the European Commission, unpublished. (Document available at: http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/puffinus_puffinus_mauretanicus.pdf).
- Arcos, J.M., J. Bécares, B. Rodríguez y A. Ruiz. 2009. Áreas Importantes para la Conservación de las Aves marinas en España. LIFE04NAT/ES/000049-Sociedad Española de Ornitología (SEO/BirdLife). Madrid.
- BirdLife International 2009. *Puffinus mauretanicus*. In: IUCN 2010. IUCN Red List of Threatened Species. Version 2010.2. <www.iucnredlist.org>. Downloaded on 04 August 2010
- BirdLife International 2004. Birds in Europe: population estimates, trends and conservation status. BirdLife Int. Series N°12. Cambridge: BirdLife International.
- BirdLife International (2010). Marine IBAs in the European Union. BirdLife International, Brussels, Belgium. Version 1.1: June 2010. http://www.birdlife.org/eu/pdfs/Marine_IBA_EU_2010.pdf
- Conselleria de Medi Ambient, 2005. Census of breeding population of *Puffinus mauretanicus*. Skua SL-Conselleria de Medi Ambient. Unpublished report.
- Deceuninck, B. and Micol, T. 2008. Identification des sites prioritaires pour les oiseaux marins et les oiseaux d'eaux. Ligue pour la Protection des Oiseaux.
- Ramírez, I., P. Geraldès, A. Merinho, P. Amorim & V. Paiva. 2009. Áreas Marinhas Importantes para as Aves em Portugal. Projecto LIFE04NAT/PT/000213 – Sociedade Portuguesa Para o Estudo das Aves. Lisboa.
- Ruiz, A. and Martí, R. 2004. La Pardela Balear. SEO/BirdLife-Conselleria de Medi Ambient del Govern de les Illes Balears, Madrid, Spain.