

Eurasian Spoonbill (*Platalea leucorodia leucorodia*) – France



Photo: Pierre Dalous (WikiMedia Commons)

Conservation status	EU27: Secure
Protection status	BD: Annex I CMS: Appendix II Bern Convention: Annex II
Population (2008-12)	EU27: Breeding: 6,700 – 8,900 pairs FR: Breeding: 560 – 624 pairs
MS reported increases	AT, BE, DE, DK, ES, FR, IT, NL, PT, UK
Other MS	BG, HU, RO, SK

Summary: The species became endangered in Europe in the mid-20th century mainly due to pollution, shooting, disturbance and loss of breeding sites. Key measures have been taken since early 1980s in order to protect stopover and breeding sites. Recovery has been facilitated by the development of a major international conservation plan including measures such as targeted control of water levels, protecting flood plains and monitoring the development of vegetation and siltation. In France conservation measures have included wetland protection, restoration and management, supported by research, monitoring and awareness raising activities. Of particular importance has been the Grand Lieu LIFE Project, at a key site for the spoonbill, where restoration measures have included desilting and water quality improvements, with agreements reached with farmers to secure appropriate habitat management (e.g. extensive grazing). This has improved the habitat for waterbirds, including the Spoonbill, resulting in its breeding population increasing from some 20 to almost 200 pairs. As a result of such diverse measures in France and elsewhere in Europe, the majority of Eurasian Spoonbill populations are recovering (especially in north-west Europe, Hungary and the Netherlands) but some remain vulnerable.

Background

Status and EU occurrence

The Eurasian Spoonbill¹ (*Platalea leucorodia leucorodia*) has two distinct populations with different geographical wintering areas (Triplet et al, 2008):

- The Atlantic population: breeding in Western Europe and migrating along the Atlantic coast to mainly winter in Western Africa (some birds remaining in Europe).
- The Central and South-East Europe population: breeding in the Danube basin, northern Italy, Greece and the Black Sea region and wintering in East Maghreb or Sahelian humid zones across the Sahara (mainly within the interior delta of Niger and Lake Chad).

According to the EU Member States' Birds Directives Article 12 reporting data, the species' European population over the 2008-2012 period was 6,700-8,900 breeding pairs and 3,100-3,900 wintering individual birds (EEA/ETC-BD, undated). More recently the European breeding population has been estimated at 14,200 to 18,900 mature individuals (Wetlands International, 2017).

The species disappeared from France as a breeding bird in the 16th century. However, it started reappearing sporadically in France between 1973 and 1981 when the first breeding occurred in the Grand-Lieu Lake (Loire-Atlantique). It now occurs regularly in: Grand Lieu, the Brière, the Marquenterre, the wetlands of Erdre (Loire-Atlantique), the wetlands of Charente-Maritime, the wetlands of Orx, the Gironde, the protected area of Barthes de l'Adour (Landes), the Camargue and the nature reserve of the Somme Bay.

In 1995, the French population was estimated at 44-47 pairs among three different sites of Loire-Atlantique (Brière, Grand Lieu lake and wetlands of Erdre), and in 1997-98 around 50 to 60 pairs colonized new sites (Dubois et al, 2000). The breeding population in France was estimated at 108-115 pairs in 2000 and increased up to 956-1,037 pairs in 2014 (Marion, 2016).

¹ Birds Directive reporting code A607-A

Overall, according to Member States' reports, the species' EU population has increased over the short and long-term and its population status is considered to be secure (Annex 1; EEA/ETC-BD, undated). The Western Europe and Western Africa population has increased by 49-79% over the last decade and by 167-173% over the last three decades (BirdLife International, 2015). van Roomen et al (2015) have also highlighted large increases both in the long-term and the short-term based on breeding numbers of waterbird populations all along the East Atlantic Flyway. First, the EU population mainly increased in the Netherlands, France and Spain. Then, the species expanded in Europe and its population increased in the United Kingdom, Germany, Denmark and Portugal.

Ecological requirements

The Eurasian Spoonbill shows a preference for extensive shallow (less than 30 cm deep) wetlands with mud, clay or fine sand substrates, generally avoiding waters with rocky substrates, thick vegetation or swift currents. In Europe it inhabits either fresh, brackish or saline marshes, rivers, lakes and flooded areas, especially those with islands for nesting or dense emergent vegetation and scattered trees or shrubs. It may also frequent sheltered marine habitats during the winter such as deltas, estuaries, tidal creeks and coastal lagoons (Snow and Perrins, 1998).

Its diet consists of adult and larval insects (e.g. waterbeetles, dragonflies, caddisflies, locusts and flies), molluscs, crustaceans, worms, leeches, frogs, tadpoles and small fish (del Hoyo et al, 1992) up to 10-15 cm long (Hancock et al, 1992). While migrating, the Eurasian Spoonbill mainly feeds on shrimps in lagoons, especially in spring but small fish in freshwater wetlands are important during the autumn migration (Boileau and Plichon, 2002).

Pressures and threats

The main historical pressures on the species have been from habitat degradation or disappearance due to agricultural and hydroelectric developments (Triplet et al, 2008). More precisely:

- Feeding areas have been drained over the years, transformed into intensive agricultural zones and polluted by DDT (Dichlorodiphenyltrichloroethane) in the 1950-60s (Marion, 2017) or totally abandoned and overwhelmed by vegetation.
- Breeding sites have been destroyed or abandoned by the species due to residential development.
- Staging areas have been impacted by port and industrial projects.
- There are diverse cases of dramatic eutrophication of lakes caused by modifications to their hydrology and widespread pollution.
- Overfishing and water contamination due to agricultural activities have disturbed the whole aquatic ecosystem, which has in turned impacted the species.

In all cases, disturbance and water management (generally draining) are the key pressures that have affected the species (Triplet et al, 2008).

Pressures from local interest groups such as hunting associations and sections of the farming community can also hamper habitat restoration projects (Marion, 2017). Finally, a major threat exists on wintering sites because of the discovery of oil fields and unplanned development of road networks (for instance the Banc d'Arguin which has now become a protected site) (MEEDDAT, undated).

Poaching and collisions with overhead electricity cables are the main non-natural causes of death during migration (Triplet et al, 2008).

Drivers of improvements: actors, actions and their implementation approaches

Organisers, partners, supporters and other stakeholders

Since the 1990s, national and regional governments have been implementing conservation measures for the Eurasian Spoonbill. In France, the Grand Lieu LIFE Project that aimed to conserve the Grand Lieu Lake enabled the species to increase its population through water level management. This project was coordinated by Loïc Marion, through the SNPN (National Society of Nature Protection) thanks to the support of different stakeholders (former French ministers, the Water Agency, the CNRS (Center of National Scientific Research) and LIFE Programme aid (Marion, 2017).

In 1990, the association Vogelbescherming – BirdLife Netherlands, launched an important programme to protect stopover and wintering sites from Western Africa to the Netherlands. This first program managed to increase significantly the breeding population in the Netherlands. As this population was transiting through France during migration, it also helped to foster the recovery of the French population (MEEDDAT, undated).

The International Spoonbill Working Group was created in 1991, as an International Species Expert Group supporting the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA). The major focus of the group is now on the implementation of the 2008 *AEWA International Single Species Action Plan for the Conservation of the Eurasian Spoonbill* (Triplet et al, 2008).

Other organisations that have been involved include the Tour du Valat, a research institute for the conservation of Mediterranean wetlands, who developed a project ringing young Eurasian Spoonbills in the Camargue, and MilleSternes, an environmental education association, which aimed to increase public awareness of nature through educational photo exhibitions.

Contributions / relevance of strategic plans

An important element of the conservation of the Eurasian Spoonbill has been the development of conservation plans, which reviewed the major threats to the species and identified a comprehensive set of conservation measures. On an international level, there is a growing acceptance of the need to protect and restore the species' habitats, thus diverse sites have been given protected status along its flyways (such as the Banc d'Arguin in Mauritania).

At the European scale, the species recovery and recolonisation of sites was aided by the IUCN Management Plan which gave direction to the Management of Natural Reserves and Protected Areas in order to protect wetlands (Marion, 2017).

The 2008 *AEWA International Single Species Action Plan for the Conservation of the Eurasian Spoonbill* aimed to protect migrating and wintering sites globally, by detailing and prioritising specific measures per country (see below for France). The intention was that the identification of these measures would then help local actors (e.g. associations or institutes) to develop projects for the conservation of the species.

Measures taken and their effectiveness

The measures taken by France to help conserve the species are listed below.

Application of conservation measures for the Eurasian Spoonbill for 2008-2012 in France

Measure	Type	Ranking	Inside/outside N2k	Broad evaluation
6.1 - Establish protected areas/sites	Legal	High	Both	Enhance
4.0 - Other wetland-related measures	One Off	High	Both	Enhance
4.2 - Restoring/improving the hydrological regime	One Off	High	Both	Enhance

Source: French Article 12 report 2013 at <https://bd.eionet.europa.eu/article12/summary>

Since the 1980s, the creation of a network of protected areas in France, the Netherlands and in Spain has enabled an important increase in the number of breeding sites and a stable number of individuals for the French population, mainly localised in Loire-Atlantique, in western France. The creation and restoration of feeding and stopover zones in strategic sites in France (the Teich and the Moëze Nature Reserves) and in the Netherlands (Terschelling) has also been important. As a result, the breeding population increased by a factor of almost ten (Marion, 2016).

A particularly important project was the Grand Lieu LIFE Project (Annex 2), which aimed to conserve the Grand Lieu Lake by reversing the sedimentation and eutrophication that had occurred. From 1994 to 1999, major efforts were made to carry out this project, which ended up being successful. The resulting increase in spring water levels, improvement in water clarity, reduction of outbreaks of botulism and restoration of the lake's margins brought a very high increase in the number and variety of feeding and breeding birds, including the Eurasian Spoonbill (Marion, 2017). The specific measures achieved by the project were the acquisition of adjacent land to carry out restoration operations such as desilting and dredging in order to remove a silt bank that had built up at the lake's outlet. The mudbank was reducing the speed at which suspended sediments and nutrients were being discharged from the lake, thereby accelerating its eutrophication and sedimentation. The project included a series of scientific studies to monitor multiple parameters (oxygen levels, sedimentation rates in the lake, suspended sediments and pollutants and vegetation productivity) (Grand Lieu LIFE Project, 1994). In addition, to raise public awareness, in the 2000s the former hunting lodge of the Guerlain family was refurbished into a visitor center hosting educational exhibits on the fauna and flora of the lake. The central part of the Grand Lieu Lake is under the management plan of the Nature Reserve whereas the Coastal Conservatory focuses on land management agreements with farmers in the surrounding area. Land agreements for the wetlands are signed

with the farmers in order to ensure an appropriate management (extensive cattle breeding for instance) (Conservatoire du Littoral, 2015).

On an international scale, important conservation measures have been taken through the *AEWA International Single Species Action Plan for the Conservation of the Eurasian Spoonbill* (Triplet et al, 2008). For France, the most urgent conservation measures that were identified were:

- Restoring former feeding areas and breeding sites and maintaining the sites in good ecological conditions (in favourable hydrological conditions and water quality).
- Restoring wetlands for breeding, maintaining adequate water level at colonies and creating water supply systems (see below, in the Nature Reserve of Moëze-Oléron).
- Determining and monitoring breeding success and calculating the value needed in relation to survival rates.
- Determining and monitoring survival rates necessary to achieve the desired population growth through colour ringing and satellite tracking (see below, the Tour du Valat project).
- Reducing mortality caused by collisions with overhead power lines (see below, in Charente-Maritime).
- Reducing disturbance through information, education and surveillance and visitor management (see below, the MilleSternes exhibit).
- Identifying restricting factors for each breeding sub-population with a view to promoting further expansion of the breeding range and to creating an early warning system against potential threats.
- Identifying additional wintering and stop-over areas along the flyways.
- Identifying key mortality factors and hot spots.

Although all of these priority actions have been launched in France, their exact state of progress is unknown.

Wetland restoration and management of breeding colonies and feeding sites are in place in France, Spain, Croatia and Slovakia. For instance, a local hydrological restoration program of 25 ha of lagoons in Moëze-Oléron enabled the transiting population to increase in number from tens to hundreds. This program aimed at undertaking water engineering works in strategic areas in order to ensure water supplies and drainage in the basins (LPO, 2016).

Despite the conservation measures that were taken, and their successes, recolonisation of some sites was hampered by habitat fragmentation and wetland degradation. On the other hand, it was facilitated in the Camargue and Somme by escaped birds from collections (Marion, 2017).

The population of the species in Camargue is the sole Mediterranean colony in France and it is now constantly increasing. This was enabled by a local action plan coordinated by Tour du Valat, in line with identified conservation measures in the AEWA International Action Plan including the monitoring of individually marked birds. Between 2008 and 2017, 2,755 young birds were ringed and some individuals were equipped with high resolution GPS tracking system (Tour du Valat, 2008).

According to BirdLife International (2016), systematic monitoring occurs in most countries in Europe, including an international colour-ringing scheme. This colour-ringing scheme started in 1982 in the Wadden Sea Islands, but since 2002, the ring readers network have covered the entire flyway (16 countries, 120 persons) and produces approximately 5,000 sightings each year. The scheme has resulted in a better understanding of site utilisation and how to manage them. For instance, electric cables that posed a collision risk were identified and marked with red balls in Charente-Maritime (Overdijk, 2007).

Funding sources (current and long-term) and costs (one-off and ongoing)

The total costs of the conservation plans at a European level are unknown.

The LIFE Nature Programme has played an important role in the species recovery in France, especially through the LIFE Project Grand Lieu. Out of a total cost of €11 million, the EU contributed up to €4.4 million (Grand-Lieu LIFE Project, 1994).

Future actions:

The conservation status of the species in France now remains stable. However, the Eurasian Spoonbill is highly sensitive to disturbances on its habitat. Therefore, to guard against this risk BirdLife International (2016) recommends the establishment of stricter enforcement of protection measures, including non-intrusion zones around colonies. Furthermore, in 2006, a hunter shot a Eurasian Spoonbill in the Nature Reserve of Moëze-Oléron. This revealed that continued efforts must be carried out to raise public awareness of this protected species (Futura Planète, 2007).

Other measures recommended by Birdlife International (2016), include monitoring breeding, migrating, wintering numbers, age composition and ecological changes at key sites, and the sustainable management of wetland areas. Continued habitat management as well as colour-ringing actions (in order to study the migratory movements and collect demographic parameters of the species) are high priorities to increase the viability of the populations. Future actions should concentrate on those identified in the AEWA International Action Plan hand-in-hand with programs aiming at restoring wetland areas in France. For instance, synergies exist with the execution of the Ramsar Convention in France through a project of carrying out international counts of waterbirds (MEDDE, 2012).

Achievements

Impacts on the target species

The recovery of the species has been fostered by conservation measures of the species' habitat. For instance, thanks to the Grand Lieu LIFE Project, the number of breeding pairs of the species in the Grand-Lieu Lake increased from some 20 to almost 200 pairs. By maintaining the water level 20 centimeters higher (for a lake 1m deep), this project enabled a 30-40% decrease in macrophytes thus reducing the dramatic silting of the lake (Marion, 2017).

Due to political and lobbying from some farmers, the level of water in the Grand Lieu Lake has been lowered (10 centimeters) since the Grand Lieu LIFE Project. However, as Grand Lieu constituted the pioneer colony of Eurasian Spoonbills in France, this project drew European attention to this species in France (Marion, 2017).

However, the conservation measures taken to date were not the sole cause of the recovery of the species in France. The recovery may also have been helped by the arrival of the Louisiana crayfish (*Procambarus clarkia*) since 2007; despite being an invasive alien species, the crayfish constitutes an important source of food for the Eurasian Spoonbill. Furthermore, the presence of the alien species Sacred Ibis (*Threskiornis aethiopicus*) at Grand-Lieu and Brière also attracted spoonbills and facilitated their breeding in mixed colonies (Marion, 2006).

Other impacts (e.g. other habitats and species, ecosystem services, economic and social)

The Grand Lieu LIFE Project has enabled the rehabilitation of the whole ecosystem by increasing the surface of flood plains and duration of flooding. As a result of the conservation actions, the variety of birds feeding and breeding at the site increased spectacularly; for instance, several of the nine different species of breeding herons increased in the Grand Lieu Lake, including the pioneer French colony of Great White Egret (*Egretta alba*), which had reached 200 pairs in 2015.

The Pied Avocet (*Recurvirostra avosetta*) shares similar habitats with the Eurasian Spoonbill such as estuaries, tidal lagoons and Atlantic salt marshes. Hence, synergies exist with conservation projects that aimed to restore the avocet's habitat. Thus, from 2013 to 2018 the program for the Conservation of Colonial Charadriiformes, which aimed at creating networks of nesting habitats along the French Mediterranean coastline (LIFE 12 NAT/FR/000538), improved the Camargue by the creation or rehabilitation of islets, the installation of rafts and the restoration of hydrological conditions (Lucchesi, 2013).

Conclusions and lessons learnt

The key targeted conservation measures that led to the improvements

- The development of a species action plan with a coherent and coordinated programme of measures.
- Restoration or creation of feeding and stopover sites at key locations.
- Creation of lagoons and restoration of former salt marshes with improved water level management and quality.
- Raising of water levels in order to avoid the development of a dense aquatic vegetation.
- Oxygenation of water bodies in order to lower the risk of botulism.
- Desilting and dredging to reduce eutrophication and sedimentation in order to enhance water quality.
- Restoration of biological function of flood plains as a result of land acquisition.
- Conservation-minded management of breeding sites (forest at the edges of wetlands) avoiding forestry operations between March and August.
- Management of the contamination of catchment areas through incentive measures for farmers.
- Development of wetlands with different salinities to create suitable spring and autumn migration staging posts with abundant key food resources (i.e. shrimps in spring, and small fish in autumn).

- The establishment of a colour-ringing scheme to monitor and better understand the species' migration.

Conservation measures that have not been sufficiently effective

- The monitoring of the implementation of conservation plans and projects and their results in order to ensure their long-term enforcement.

Factors that supported the conservation measures

- Availability of funding that was specifically targeted towards the species conservation needs, in particular the LIFE Nature programme action grants.
- As an emblematic species of the wetlands, the Grand Lieu LIFE Project and other conservation measures helped to increase awareness on the need for the conservation of the Eurasian Spoonbill.
- Support from all stakeholders, especially from local and regional governments.

Factors that constrained conservation measures

- Increasing urbanisation and infrastructure development, habitat change and fragmentation.
- Fierce local opposition from the farming community and certain hunting associations.
- Limitations on political support resulting in restrictions on available funding for habitat conservation measures due to a reorganisation of the French administrative (which increased the voice of spatial planners and urban managers at the expense of environmentalists).

Examples of good practice, which could be applied to other species

- Development of protected areas and restoration of wetlands in order to minimise disturbance to nesting areas and to enhance food resources.
- Monitoring of water levels to ensure water quality and natural food chains.
- Engagement of major stakeholders in species conservation.
- Development of a programme of habitat conservation measures through management agreements with landowners.

Authorship

Prepared by Pauline Cristofini of Deloitte, as part of the European Commission study on identifying the drivers of successful implementation of the Birds and Habitats Directives (under contract ENV.F.1/FRA/2014/0063), carried out by the Institute for European Environmental Policy, BirdLife International, Deloitte, Denkstatt, Ecologic, ICF Consulting Services and PBL Netherlands Environmental Assessment Agency.

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Annex 1.a. Eurasian Spoonbill (*Platalea leucorodia leucorodia*) conservation status at Member State and EU levels (West Europe/ West Mediterranean & West Africa)

Increasing	+	Stable	0	Unknown	x	Decreasing	-	Fluctuating	F	Uncertain	U
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	Breeding population				Breeding range				Wintering population			
	Short-term		Long-term		Short-term		Long-term		Short-term		Long-term	
FR	2000-12	+	1981-2012	+	2000-12	+	1985-2013	+	2000-12	+	1982-2012	+
BE	2000-12	+	1980-2012	x	2000-2012	0	1980-2012	x		NA		NA
DE	1998-2008	+	1985-2009	+	1998-2009	+	1985-2009	+		NA		NA
DK	1999-2011	+	1980-2011	+	1999-2011	+	1980-2011	+		NA		NA
ES	1998-2009	+	1980-2009	+	1998-2009	+	1980-2009	+	2000-2010	+	1980-2009	+
NL	2002-11	+	1980-2011	+	1998-2012	+	1977-2012	+		NA		NA
PT	2001-12	+	1988-2012	+	2001-2012	+	1988-2012	+	2011-2012	+	1980-2012	+
UK	1996-2008	+	1995-2008	+	1989-2009	+	1970-2009	+		NA		NA
EU overall		+		+						+		+

Source: Member State Article 12 reports as compiled by ETC-BD on EIONET <https://bd.eionet.europa.eu/article12/summary>

Annex 1.b. Eurasian Spoonbill (*Platalea leucorodia leucorodia*) conservation status at Member State and EU levels (Central and South-East Europe/ Mediterranean and tropical Africa)

	Breeding population				Breeding range				Wintering population			
	Short-term		Long-term		Short-term		Long-term		Short-term		Long-term	
AT	2001-12	+	1980-2012	+	2001-12	0	1980-2012	0		NA		NA
BG	2000-12	F	1980-2012	F	2000-12	F	1980-2012	F		NA		NA
HU	2000-12	F	1980-2012	+	2001-2012	0	1980-2012	+		NA		NA
IT	2001-11	+	1989-2011	+	2002-13	+	1983-2013	x		NA		NA
RO	2000-12	x	1980-2012	x	2000-13	x	1980-2012	x	2000-2013	F	1980-2012	x
SK	2000-12	0	1980-2012	0	2000-12	0	1980-2012	0		NA		NA
EU overall		+		+						+		+

Source: Member State Article 12 reports as compiled by ETC-BD on EIONET <https://bd.eionet.europa.eu/article12/summary>

Annex 2. LIFE Nature Projects in France that aimed to help conserve the Eurasian Spoonbill (*Platalea leucorodia leucorodia*)

Project Title	Project N°	MS	Type Of Beneficiary
Conservation of the Grand-Lieu Lake	LIFE94 NAT/F/000841	FR	National authority

Source: Life Programme database, project non available with *Platalea leucorodia* as a key word or species