



AEWA Eurasian Curlew International Working Group
Establishment of an adaptive harvest management process for the Eurasian Curlew
ssp. *Numenius a. arquata*

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Overview of current knowledge of migratory patterns of Eurasian Curlew (sub-species *Numenius a. arquata*) occurring in France

Prepared by ONCFS

1. Introduction

Due to the continued decline of the species, the Eurasian Curlew is recognized as Near-Threatened by the IUCN and is listed on Table 1 Column A Category 4 of AEWA, which means that it is included amongst the migratory bird populations granted the strictest category of protection under the Treaty.

The Eurasian Curlew sub-species *Numenius a. arquata* (Europe/Europe, North & West Africa population) is listed on Annex 3, Table 1 of the Agreement in Column A, Category 4, whereby hunting of this population may continue on a sustainable use basis under the provisions of the Agreement, by way of an exception (AEWA Action Plan, Annex 3, paragraph 2.1.1). This sustainable use shall be conducted within the framework of an international species action plan, through which Parties will implement adaptive harvest management.

The AEWA International Species Action Plan for the Conservation of the Eurasian Curlew was adopted at the 6th Meeting of the AEWA Parties in 2015. Included therein, in accordance with the provisions of the Agreement, is a specific objective to increase the survival of the species by ensuring that any harvest is sustainable. This is foreseen to be achieved by launching an adaptive harvest management process for the portion of the *N. a. arquata* population which spends part of its life cycle in France, where hunting is permitted as specified in Action 3.1.1.

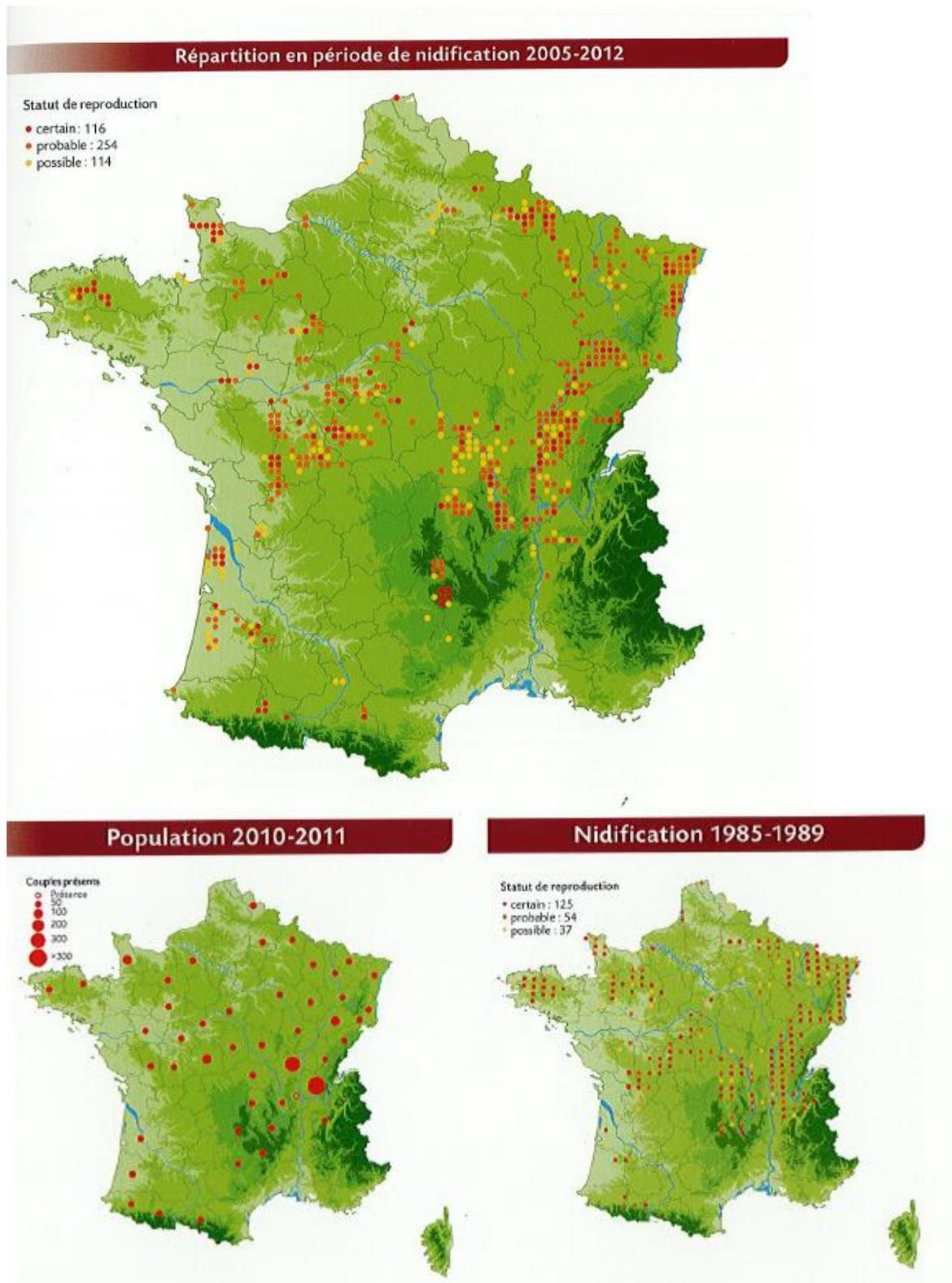
On the 30th of July 2008, a Ministerial Decree suspended the hunting of Eurasian Curlew in France. This hunting moratorium was reversed along the coast in February 2012, and subsequently a partial moratorium has been in place with hunting allowed on marine state property only.

France is currently the only range state of the sub-species where an open hunting season has been considered. As such, the starting point of the adaptive harvest management process as agreed at the 1st Meeting of the AEWA Eurasian Curlew International Working Group in September 2018 has been to define the relevant management unit(s), i.e. understand from which range states Eurasian Curlews migrate to/through France.

A first initial overview of the current knowledge of migratory patterns of Eurasian Curlew ssp. *Numenius a. arquata* in relation to France is presented below. Further data and subsequent analysis are, however, still needed and will be an integral part of the proposed Adaptive Harvest Management Programme.

2. Abundance and Distribution of Eurasian Curlew in France

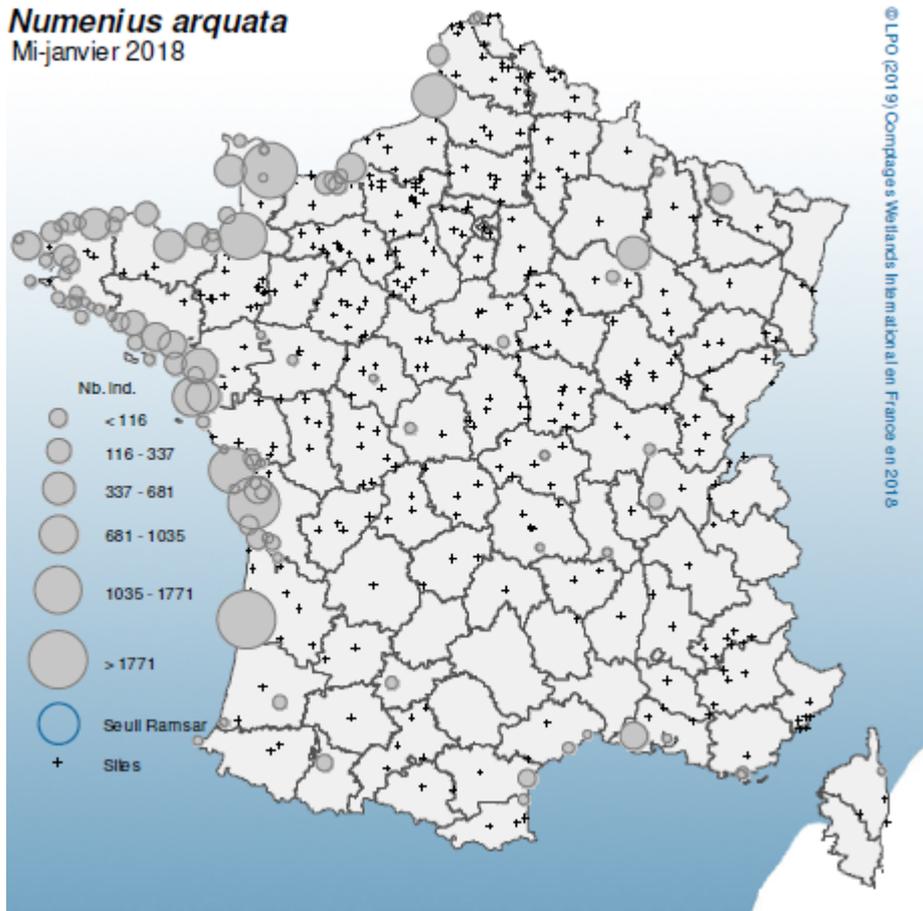
The breeding distribution of the Eurasian Curlew in France is very fragmented, but half of the breeding population is located in Val de Saône in eastern France (2 departments: Ain and Saone-et-Loire – see Map 1 below). The distribution of Eurasian Curlew wintering in France is mainly along the coasts (>85% - see Map 2 below).



Map 1. Breeding sites (Issa and Muller 2015)

Numenius arquata

Mi-janvier 2018



Map 2. Wintering sites (Wetlands International 2018)

Annual counts

Eurasian Curlews are counted in French wetlands on an annual basis in mid-January and during recent years we estimated their abundance to be around 25,000 individuals (Wetlands International counts). Data on the variation in occurrence between years does exist, but it is hard to obtain a clear view of the variation of abundance during the winter.

While the majority of Eurasian Curlews counted in mid-January (during the mid-winter counts coordinated by Wetlands International) are distributed throughout the coastal zone, population trends during the winter are difficult to evaluate as their distribution depends very much on the weather conditions. Indeed, during cold winters, continental sites can welcome more Curlews which are then potentially missed from the mid-January counts but on the other hand more Curlews are often observed during cold weather as France functions as a refuge during extreme climatic events (Francesiaz et al. *in prep*).

The analysis of the French wintering Curlew population does not allow finding a positive effect of the moratorium on the population size trend (Francesiaz et al. *in prep*). This result can have three interpretations: 1) there is indeed no effect of the hunting moratorium, (2) the precision of the data does not allow the detection of an effect, (3) the statistical tools are not powerful enough to detect an effect.

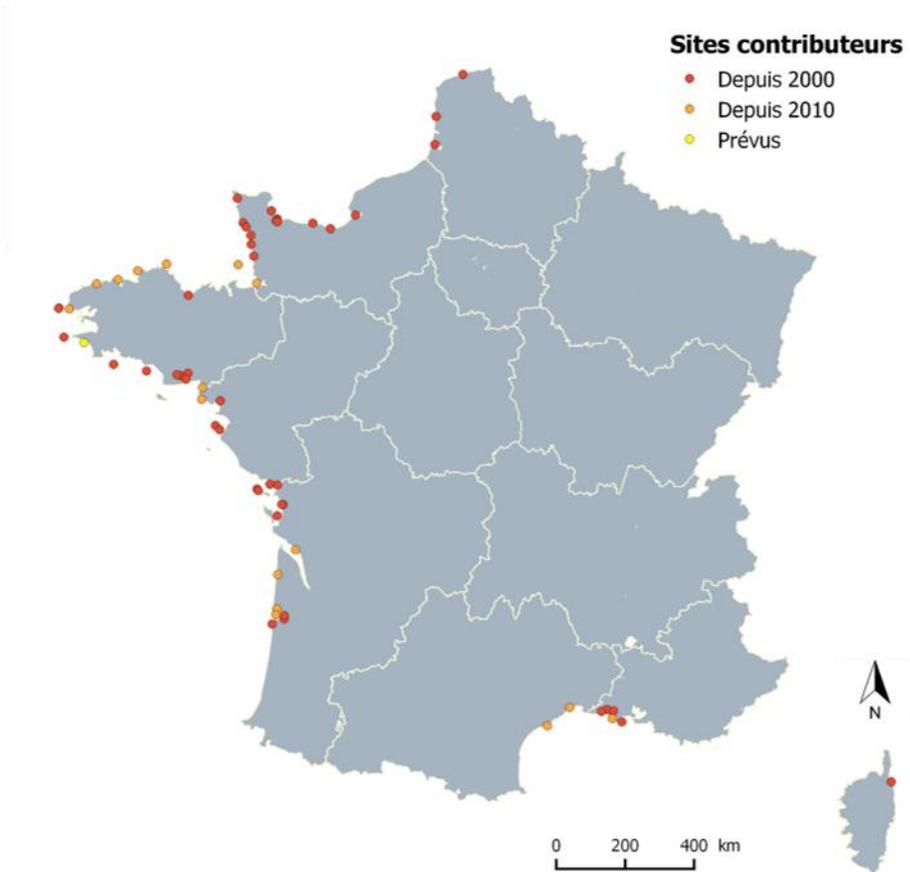
Monthly counts

Several sites are followed monthly.

- The ISNEA (Institut Scientifique Nord-Est Atlantique) counts Curlews every month between October and March on several sites in the north of France. The highest abundance of Curlews at the sites monitored by ISNEA is reported for October and November, after which numbers decrease. These data must be further analysed, however, as no information on the exact number of sites monitored

and their repartition was available at the time of writing. Moreover, the abundance at these sites varies greatly from one year to the next.

- The network RNF (Réserves Naturelles de France) gathers data from a network of sites all along the French Atlantic coast (Map 3) with monthly counts, which allows for a better determination of the phenology of Curlews during winter in France. Depending on the site, the birds seem to arrive in July or in September and then leave the sites from February or March onwards.
- Two of the major sites for waterbirds on the Atlantic coast (Baie de l'Aiguillon and Baie de Bourgneuf) are also counted all year round on a monthly basis for 40 years by a network of ornithologists from several institutions (ONCFS, LPO, FDC85, Communauté de communes de Noirmoutier). The number of Curlews is variable between winters but stays almost constant from October to December and is often a bit higher in January.



Map 3: Sites from the Shorebird network of RNF- *Observatoire Patrimoine Naturel Littoral – Volet “Limicoles côtiers”*. RNF-AFB, 2019

During autumn and winter, Eurasian Curlews use a large number of variable sites located mainly along the French coast but also some inland sites (particularly during cold events). It is thus hard to have a precise estimate of these parameters and their variation through time. However, the repartition of the species and the sites occupied by the species throughout the year are well known.

3. Hunting of Eurasian Curlew in France

As stated before, a complete hunting moratorium was implemented in 2008 and from 2012 onward hunting was allowed on the coast only.

The timing and duration of open seasons for the Eurasian Curlew are presented in the table below (Table 1), which covers the dates for the department of Vendée as an example (in other departments, the opening date was the first Saturday of August instead of the last one).

From 2012 onwards, the harvest of Curlews has only been allowed on the coast. The majority of Curlews are harvested in August and September (ISNEA, FDC85), but no official annual bag data has been collected on the harvest of Curlews in France to date.

However, hunting bags of the Eurasian Curlew hunted on the marine state property (called DPM in French) must be declared and made available to ONCFS (article 23 of the ministerial decree from the 24th February 2014). To this date, no information has been made available to quantify the hunting pressure on shorebirds. This lack of information is an important gap in the process of hunting evaluation.

The only data available on hunting bags come from a study from ONCFS (Aubry et al. 2016) conducted from a hunting survey. The number of Curlews hunted is estimated to be 6,961 (IC 95% 4 394- 9529) on the coast only for the hunting season 2013-2014 (since this was prohibited in the inland territories at this date).

Table 1: Open seasons for the Eurasian Curlew in the department Vendée 1990-2018 (Source: FDC85; hunting federation of Vendée).

Year	Opening date	Closing date
1990	02/09/1990	15/02/1991
1991	01/09/1991	29/02/1992
1992	06/09/1992	28/02/1993
1993	05/09/1993	28/02/1994
1994	04/09/1994	28/02/1995
1995	03/09/1995	28/02/1996
1996	01/09/1996	28/02/1997
1997	31/08/1997	28/02/1998
1998	30/08/1998	28/02/1999
1999	29/08/1999	29/02/2000
2000	27/08/2000	10/02/2001
2001	26/08/2001	10/02/2002
2002	10/08/2002	31/01/2003
2003	09/08/2003	31/01/2004
2004	29/08/2004	31/01/2005
2005	27/08/2005	31/01/2006
2006	26/08/2006	31/01/2007
2007	25/08/2007	31/01/2008
2008	-	-
2009	-	-
2010	-	-
2011	-	-
2012	25/08/2012	31/01/2013
2013	31/08/2013	31/01/2014
2014	30/08/2014	31/01/2015
2015	29/08/2015	31/01/2016
2016	27/08/2016	31/01/2017
2017	26/08/2017	31/01/2018

On the coast, the birds are mainly hunted on the beach or in the mudflats with different methods. Hunters either hide in a hut or dig a hole and hide inside and wait for the tide to come in if there are at the coastal sites. They often use plastic or wooden decoys as well as a whistle to attract the birds.

The number of hunters that harvest Curlews is not exactly known but is estimated to be around 15,000 individuals. This estimate is based on a report from the French National Hunting Federation stating that 2,943

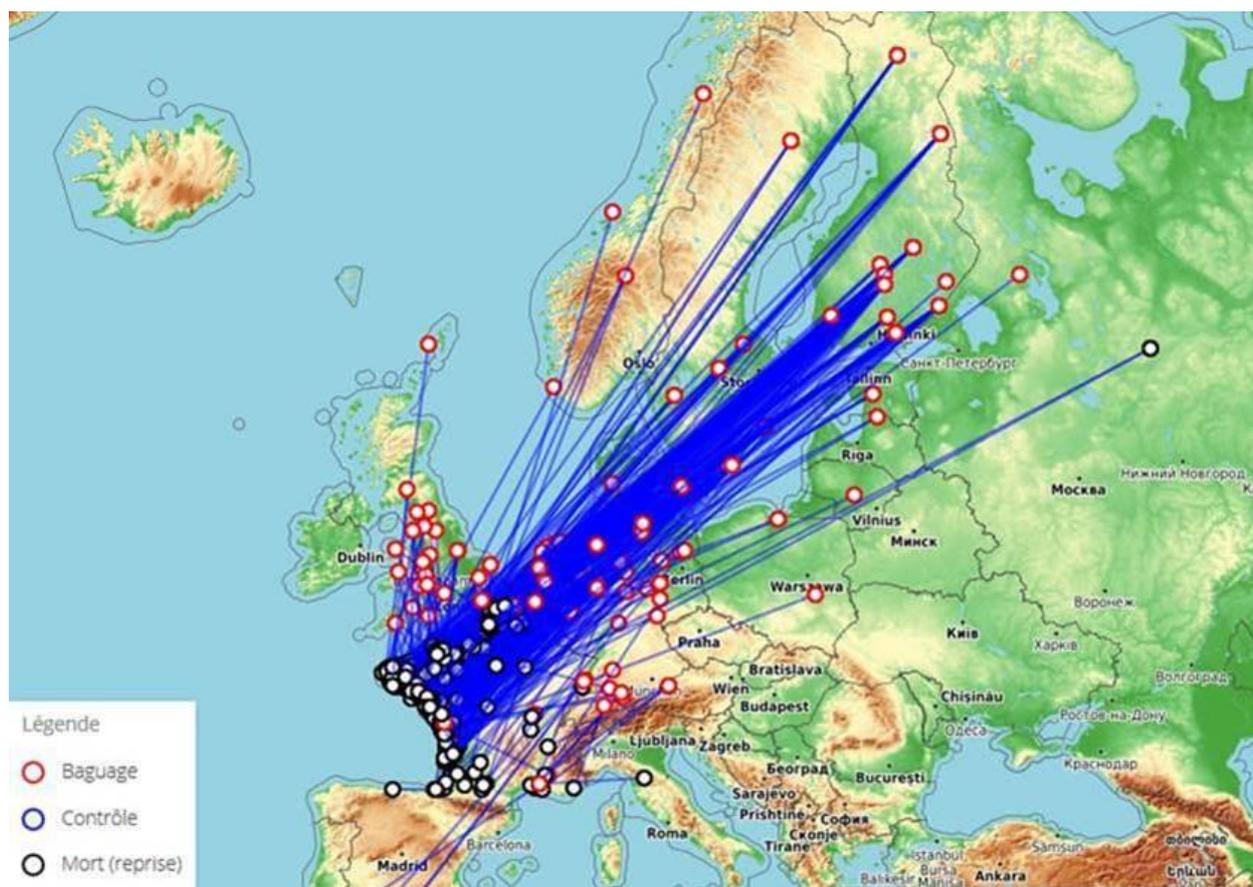
hunters represent roughly 20% of the total of “coastal hunters” (hunters permitted to hunt on the coast where the hunting of the curlew is allowed).

For the hunting season 2019/2020, the hunting of a total of 6,000 Curlews was allowed on the coast only from the 1st of August and on all the territory from the 15th of September. However, the decision has been reversed on the 26th of August and as such no additional quota is available for this season.

4. Overview of current knowledge on migratory patterns

Extensive knowledge gaps still remain with respect to understanding which individuals and proportions of the Eurasian Curlew sub-species *Numenius a. arquata* migrate through France on autumn migration and/or winter in France. A key piece of work in the coming months will therefore be to gather information from all the key range states and work together to obtain a more global understanding of the migration pathways and population dynamics of the sub-species. ONCFS has initiated an analysis of EURING data and data from hunters should in addition be obtained to estimate the age and sex ratio of the hunting bag of the birds killed in August this year but also the number of birds killed and the hunting seasonality (numbers that should normally be made available annually).

Using the literature available, it appears that France hosts Eurasian Curlews migrating from across the entire breeding area of *Numenius a. arquata*. This is based on published literature reporting ring recoveries (Wernham et al. 2002, Bakken et al. 2003, Fransson et al. 2008, Saurola et al. 2013, Bairlein et al. 2014) and the first results of the tracking program LIMITRACK conducted by Pierrick Bocher (LIENS, La Rochelle) where of 21 Curlews equipped with GPS tracking devices, 16 migrated to Russia, 2 to Belarus, 2 to Germany and 1 to Finland (Bocher et al. 2017 - Map 3). A Curlew from Poland holding a GPS was also harvested in France. German Curlews equipped with GPS transmitters in winter in Spain and those from Poland usually winter in the West of France (Vendée, Charente) (Bocher, com.pers).



Map 4. CRBPO – red circles represent ringing stations and black circles represent death recapture.

Data from the French Ringing Centre shows that Eurasian Curlews harvested in France come from a very large number of range states. Most birds have been ringed as chicks and are then harvested as juveniles with

the largest proportion harvested in August and then again in January. Indeed, juveniles migrate after the adults (in August-September) and are unaware of the hunting zones, dispersing more widely than adults (which are faithful to their stopover and wintering sites). Juveniles are thus more likely to be hunted. In January, this can also be seen in the response of juveniles to cold winter which makes them disperse even more.

Most of the birds hunted in France are located on the coast, which means that the protection implemented from 2012 onwards to allow hunting only on the coast has potentially protected only a small proportion of the population. On the coast, a large number of birds benefit from protection from hunting on reserves. This was not part of the hunting moratorium, but it has certainly helped to protect a part of the population wintering in France.

However, this kind of illustration and literature from the ringing atlas does not allow us to define the proportion of birds coming from each region since the number of re-sightings or recoveries depends on the ringing effort in each country.

It is not possible for now to determine a sustainable harvest rate without further information on the origins of wintering curlew in France, the wintering areas of European breeding populations and thus the hunting pressure on this population (in France but potentially in southern wintering countries as well). Finally, we also miss information on the impact of hunting on the French breeding population itself as there is a lack of knowledge of the behaviour of juveniles and the wintering areas of French breeders.

5. Conclusions

Based on the initial overview of available data, it appears that France hosts Eurasian Curlews migrating from across the entire breeding area of *Numenius a. arquata* birds during the autumn/winter hunting season and that all of these individuals could thus potentially be subject to harvest (as well as to disturbance from harvest related activities) in France.

As such, those countries identified as Principle Range States for the sub-species *Numenius a. arquata* in the AEWA International Single Species Action Plan for the Conservation of the Eurasian Curlew have been invited to participate in the establishment of an Adaptive Harvest Management Programme for the species under the provisions of AEWA.

6. References

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