



MANAGEMENT PLAN for PINTAIL (*Anas acuta*) 2007 –2009

Directive 79/409/EEC on the conservation of wild birds

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Executive summary

The Pintail *Anas acuta* is listed on Annex II/1 of the EU Birds Directive as a species for which hunting is permitted. However, the Pintail has been identified as a bird species, which has an Unfavorable Conservation Status within Europe and the EU because of a moderate continuing decline, although its global population is not concentrated in Europe and it is thus a Category 3 Species of European Conservation Concern (SPEC)(BirdLife International 2004a,b).

This Management Plan outline management prescriptions to reverse the negative trend. It is aimed at all 25 Member States with breeding, staging or wintering populations of Pintail. This plan outlines the actions to be taken in the period 2006 - 2009. It is the responsibility of the relevant authorities of each Member State to decide how to implement the management prescriptions of this plan. It should be followed by new versions with revised objectives that take into account the results achieved during the first phase.

The Pintail is a Holarctic dabbling duck with a circumpolar distribution – only 5-8% of the European population breeds in the EU and the European population represents only 5-24% of the global breeding and wintering population (BirdLife International 2004a, b). There is considerable overlap on the breeding grounds between all wintering groups of the species in western Eurasia and Africa and the distributions are modified by periods of cold weather in Europe and drought in the Sahel. For conservation management purposes, however, the birds in the EU have been divided into two major groups: the north-western Europe wintering group which mainly breeds in the Nordic countries and winters in North-west Europe (population size estimated at 60,000) and the Black Sea/Mediterranean Basin/west African wintering group which breeds in Russia and mainly winters in West Africa and in the Mediterranean countries (population size estimated at 1 million birds).

Breeding and wintering numbers underwent a large decline between 1970 and 1990. Although it was stable or increased over much of its European range during 1990-2000, the stronghold breeding population in Russia continued to decline, as did the only other large breeding population in Finland, the smaller one in Sweden and the populations of less than 100 pairs in most of the other countries neighbouring the Baltic. The species underwent a moderate decline (>10%) overall both in breeding and wintering numbers (BirdLife International 2004a).

The main threats to Pintail in the EU are identified as (1) habitat destruction/modification, (2) hunting (in particular for the north-western Europe wintering group), (3) disturbance and (4) pollution/poisoning. Recognising that the Pintail has an Unfavourable Conservation Status in Europe due to declining population, the plan aims to restore the Pintail to a Favourable Conservation Status in Europe. To reach this target the Action Plan identifies ten operational objectives or Results that have to be achieved during its 3- year running period. These are:

- (1) No Pintails are hunted in EU Member States during spring migration or during the end of the breeding season.
- (2) Data on the annual number of Pintail shoot in Member States is available.
- (3) Restoration of breeding sites for Pintail is initiated in all Member States where this species has disappeared or is in decline.
- (4) Identification, conservation, wise-use and management of wetlands and other habitats with breeding Pintail is supported to ensure no loss of Pintail numbers and distribution

- (5) All staging and wintering areas of international importance for Pintail within the EU are identified and designated SPAs.
- (6) SPAs of international importance as staging and wintering resorts for Pintails are managed in a way that stops habitat degradation and secure access to feeding opportunities.
- (7) Disturbance-free areas are established in a minimum of two SPAs of international importance for wintering and/or staging Pintail in all relevant Member States.
- (8) Annual mid-winter census of all areas of international importance for wintering Pintail within the EU are carried out as part of the International Waterfowl Census with the support of the authorities responsible for the implementation of the provisions of the Birds Directive in each Member State.
- (9) A national monitoring programme to provide an assessment of annual productivity in late summer prior to the autumn migration is established in all Member States with an important breeding population of Pintail.
- (10) National ringing activities on breeding, staging and wintering areas and analyses of existing ringing data to identify population units and provide annual estimates of Pintail mortality, are supported by national authorities in all Member States with important breeding, staging or wintering numbers of Pintail.

0. Introduction

The Pintail *Anas acuta* is listed on Annex II/1 of the EU Birds Directive as a species for which hunting is permitted. However, the Pintail has been identified as a bird species, which has an unfavourable conservation status within Europe and the EU, although its global population is not concentrated in Europe and it is thus a Category 3 Species of European Conservation Concern (SPEC) (BirdLife International 2004 a, b). It is classified as “Declining” due to its moderate continuing population declines in many European countries (BirdLife International 2004 a, b).

It is therefore important to assess its current conservation status and available research information in order to appraise the current effectiveness of conservation actions, identify reasons for the observed trends and recommend options for future management to reverse the downward trend in numbers. Hence, this plan will focus upon the full implementation of the provisions of the Birds Directive as these apply for this species.

The overall format of this action plan follows a Single Species Action Plan format developed by BirdLife International for UNEP/AEWA Secretariat. However, some parts of the plan including some tables have been modified to make it meet the specific needs of a plan that covers a relatively widespread species with several populations occurring in the EU.

Ideally, the management prescriptions of this plan should cover the entire geographical range of the Pintail populations concerned. However, as the implementation of the plan is part of the fulfilment of the EU Birds Directive the geographical scope of the plan is at this stage limited to the 25 EU Member States.

The first chapter of the Management Plan briefly presents key information on the Eurasian Pintail populations. The second chapter provides more detailed information on the populations that occur in Europe with the focus on the 25 EU Member States. Chapter 3 analyses the threats that are believed to be the causes of the decline while chapter 4 list the policies and legislation relevant for Pintail management in Europe.

Chapter 5 evaluates the status of Pintail in the EU and sets out long-term and immediate objectives for its future management.

Chapter 6 describes the actions to be taken in the EU for the period 2006-2009. These activities cover all 25 Members States.

It is the intention that this management plan shall be revised in 2009.

1. Biological Assessment

<p>General information</p>	<p>The Pintail is a Holarctic dabbling duck with a circumpolar distribution. In Europe the main breeding area is the Nordic countries with wintering grounds in northwest Europe. Birds from the large Russian breeding population mainly pass eastern and central Europe where some winter, while others move to West Africa for the winter. It mainly breeds near freshwater marshes. Outside the breeding period Pintails mainly occur in brackish coastal areas.</p> <p>The Pintail is an important and popular quarry species throughout its range and listed on Annex II/1 of the EU Birds Directive as a species for which hunting is permitted. However, the Pintail has recently been identified as a bird species, which has an unfavourable conservation status within the EU due to moderate continuing declines (BirdLife International 2004a, b). This concern is based upon the fact that Pintail populations are showing decreasing trends in many Member States (BirdLife International 2004a, b).</p>
<p>Taxonomy</p>	<p>The Pintail is monotypic.</p>
<p>Populations</p>	<p>There is considerable overlap on the breeding grounds between all wintering groups of the species in western Eurasia and Africa (perhaps even within a single winter), and the distributions are modified by periods of cold weather in Europe and drought in the Sahel (Ridgill & Fox 1990, Scott & Rose 1996). For this reason, no discrete populations can be readily identifiable. For conservation management purposes, however, the birds in western Eurasian have been divided into three major groups as follows:</p> <p>(i) the north-western Europe wintering group is considered to originate from the Baltic States, Finland, Sweden, Norway and Iceland as well as from local restricted breeding numbers in countries further south in the region (e.g. Denmark, United Kingdom). Recoveries from Britain (Boyd 1957a, b, Ogilvie 1975, Ridgill & Fox 1990), Denmark (Thompson 1941) and The Netherlands (Perdeck & Clason 1980, 1983) confirm this general pattern in winter.</p> <p>Cold weather movements have been recorded in north-western Europe, especially from the extremes of the winter range. Pintail leave Danish, German and Dutch coasts during cold spells, when there are corresponding increases in northern France, extending to the Iberian Peninsula in prolonged periods of cold weather (Ridgill & Fox 1990). It is generally assumed that birds from this group "rarely cross the Sahara to the West African wintering grounds" (Scott & Rose 1996).</p> <p>(ii) the Black Sea, Mediterranean Basin/west African wintering group is considered to originate from Russia. Ringing recovery data show that Mali and Senegal birds originate from Russian breeding areas on both sides of the Urals as far east as 90°E (Roux 1981, Goodman & Meininger 1989). Some of these birds pass through France as birds ringed in Russia have been recorded from the Atlantic coast of France (Triplet <i>et al.</i> 1996). Wide fluctuations between Europe and the three major west African river catchment systems (Senegal River, Niger River and Lake Chad) suggest substantial interchange between these four systems (Monval & Pirot 1989).</p>

<p>Populations</p>	<p>By far the most important wintering grounds in the Mediterranean Basin are located in Spain, southern France and Greece (Gilissen <i>et al.</i> 2002). The group shows differing wintering patterns in response to rainfall patterns and hydrological conditions at wintering resorts.</p> <p>(iii) the south-western Asia/NE and E African wintering group is very little studied or known, but ringing recovery data suggest that birds passing through the southern Caspian originate from the basins of the Ob and Irtysh (east to 86°E), although birds ringed on migration in the Volga Delta have been recovered from Senegal to Iran. In the absence of data to the contrary, this flyway is considered to extend largely outside of the European Union Member States and is therefore not considered in detail here.</p>
<p>Population developments</p>	<p>The population of the north-western Europe wintering group is currently estimated at 60,000 (Wetlands International 2002). Breeding numbers show an overall decline this century, with range contraction in Central Europe. More recent declines have occurred in Central and Eastern Europe, notably Russia where the breeding stronghold is situated (Tucker & Heath 1994). The total wintering number in 1997 – 1999 varied between 35,927 in 1998 and 55,568 in 1997 (Gilissen <i>et al.</i> 2002). The major wintering areas are located in the United Kingdom, northern France and in the Netherlands, with very few in the Nordic, Baltic or central European countries (Gilissen <i>et al.</i> 2002).</p> <p>Population assessment: Although no estimates seem available from the beginning of this century it is well documented that the numbers and range of this population has decrease notably.</p> <p>The population of the Black Sea/Mediterranean Basin/West Africa wintering group is currently estimated at a maximum of 750,000 (Delany 2005) with less than 100,000 in the Mediterranean area in the late 1990s (see below) and less than 350,000 in West Africa between 1999 and 2000 (see below). The trend for the period 1974 – 05 has been a significant decrease (Delany <i>et al.</i> 1999, Delany 2005). It has been assumed that most, if not all, of this element of the population breeds in Russia, where declines in breeding numbers have been reported in recent years (BirdLife International 2004a).</p> <p>Marti & Del Moral (2002) give an average west Mediterranean wintering population of 46,000 for the period 1990 – 2001, with 39% in Spain, especially in Donana (Andalucia) and on the Ebro Delta (Eastern Coast).</p> <p>In the East Mediterranean region, Greece holds the only major wintering sites. Here mid-winter numbers fell from an average of over 64,000 (during 1966-1976) to 29,300 (during 1982-1986) but there is some indication that wintering numbers are affected by severity of winters (Monval & Pirot 1989). In the period 1997-1999 the numbers recorded in mid-January in Greece fluctuated between 24,567 in 1997 and 44,157 in 1999 (Gilissen <i>et al.</i> 2002).</p> <p>The most important wintering areas for this group are situated in West Africa where, in 1987 a total of 838,000 were counted from all key areas. Peak count at the three key sites during 1983-1990 were: Senegal Delta 247,000 (1986), Central Niger Delta 345,000 (1983) and 526,000 Lake Chad (1987) (Perennou 1991).</p>

<p>Population developments</p>	<p>By 1999-2001 numbers had declined alarmingly ranging between 22% and 42% of the sum total from 1987. Only the numbers in Senegal appear to have been more or less stable over the last 20 years (Schricke <i>et al.</i> 2001, Schricke in press, Triplet in press) while numbers in the Niger Inland Delta and at Lake Chad have been drastically reduced (Dodman and Diagana 2003).</p> <p>Population assessment: Although information from the breeding areas is sparse data from wintering areas confirm a major decline of this wintering group during the last decades. Thus the estimated size of the Black Sea/Mediterranean Basin/West Africa wintering group has been downgraded from 1,2 mill in 1999 to 750,000 in 2005.</p>
<p>Distribution throughout the annual cycle</p>	<p>The Pintail has a wide breeding distribution across North America and northern Eurasia. In western Eurasia, it breeds between 60° and 70°, although its breeding range extends south into the semi-desert regions around the Sea of Azov and the Caspian Sea. Approximately 5-24% of the world population breeds in Europe, 90-94% of these in Russia (BirdLife International 2004a).</p> <p>Pintail winter quarters are distributed widely throughout the temperate, sub-tropical and tropical parts of the Old and New Worlds. Western Eurasian breeding birds mainly winter in the Sahelian region of West Africa (Perrenou 1991). Significant numbers also winter in (i) north-western Europe, (ii) the Mediterranean Basin, (iii) eastern Africa and south-western Asia south to the Arabian Gulf (Monval & Pirot 1989). Very few remain in Central Europe and northern Black Sea coasts throughout the winter. For detailed winter distribution maps, see Cramp & Simmons (1977) and Gilissen <i>et al.</i> (2002).</p> <p>The species is unusual amongst dabbling ducks in being highly concentrated in winter. Greece, Spain, France and the UK hold the bulk of the European wintering population.</p> <p>Ringling results from North America show that Pintail have a low probability of return to breeding areas, but a high propensity to respond opportunistically to available wetlands (Johnson & Grier 1988). Pintail there do show high fidelity to wintering areas, hence wintering area affinities represent more stable population units than birds associating on the breeding areas (Hestbeck 1993b). There is limited data to prove that the same holds true for the European population, but the species has a reputation in Europe for sporadic breeding in suitable habitats that suggests that the same is true here.</p>

<p>Survival and productivity</p>	<p>There are no European-wide monitoring schemes to measure <u>annual mortality</u> of Pintail. Some states gather bag statistics on specific species and others have ringing schemes that generate recoveries from which annual estimates might be generated. There is very little published data on annual survival of Pintail in western Europe (see Table 6 and 7).. Annual survival rates vary widely between 35% and 81% (Grenquist 1965, Hestbeck 1993a), based on different investigations, methods and localities. Hence, based on limited available information, the Pintail is a relatively short-lived species.</p> <p>There are no European-wide monitoring schemes to measure <u>annual productivity</u> of Pintail. Some states monitor their own breeding numbers to some extent, but there is no attempt to monitor the state of wetlands utilised by Pintail or to sample the output per female in the way that the autumn flight is monitored in North America (e.g. US Fish & Wildlife Service 1997). There are very few data published relating to age ratios of Pintail.</p> <p>Early analyses of the ratio of juveniles to adults in Great Britain showed a mean ratio for the years 1967-1972 of 1.55 (Boyd <i>et al.</i> 1975). Wing studies based on small samples from British hunting bags from 1994/5-1996/7 revealed between 1.9 and 4.4 young per adult female per winter (Reynolds and Harradine 1997). During 1986-1996, the ratio of young to adult females in the shot bag in Denmark varied between 2.4 per adult female and 14.7 per adult female (Clausager 1987, 1988, 1989,1990, 1991,1992, 1993, 1994, 1995, 1996, 1997, 1998).</p> <p>Even allowing for the probability that juvenile birds are over represented in the shot sample because of their differential vulnerability to hunting, the suggestion would seem to be that there is considerable variation in breeding output between years. This is supported by the widely observed phenomenon that wintering numbers vary considerably more between years than in other dabbling duck species, e.g. amongst numbers wintering in Britain (Cranswick <i>et al.</i> 1995).</p>
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Life history	Breeding:	Feeding:	Outside breeding season:
	<p>According to Cramp & Simmons 1977: Formation of pairs start quite early in winter, but most attachments resulting in strong bonds probably develop gradually during spring migration (Cramp & Simmons 1977). The pair-bond is of seasonal duration.</p> <p>Breeds close to water. Not colonial but nests are sometimes as close as 2-3 m.</p> <p>Clutch size is normally 7-9.</p> <p>Incubation is 22-24 days.</p> <p>Fledging period is 40 – 45 days.</p>	<p>In breeding period omnivorous, but most often feeds on invertebrate foods obtained in shallow water areas, especially those experiencing seasonal water-table recession (Cramp & Simmons 1977).</p> <p>In winter also omnivorous, often with plant material, especially seeds, predominating (Cramp & Simmons 1977), although intertidal invertebrates are also important, e.g. a study in southern Britain found Pintail feeding almost exclusively on the abundant mollusc <i>Hydrobia ulvae</i> (Olney 1965).</p>	<p>Males undertake moult migration from late May onwards as females commence incubation. Large moult concentrations in the lower Ob valley, Yamal Peninsula and Volga Delta, with many small aggregations elsewhere during the period of wing moult from June to late August (Scott & Rose 1996). Dispersal towards wintering areas takes place from mid-July to September.</p> <p>Main autumn passage in mid-September until November, birds reaching wintering areas October/November where they remain until February/March (Ridgill & Fox 1990).</p> <p>In winter it forms large flocks. In north-west Europe it is strikingly coastal in distribution and amongst the most concentrated of all waterfowl species in winter. In the Netherlands and Wadden Sea coasts, large numbers arrive in August, with peak numbers in October and November. Cold weather may force large numbers to leave North Sea coasts. After mild winters, numbers in south west Netherlands begin to decline in March (Ridgill & Fox 1990). Birds depart from wintering areas from January onwards, arriving back on breeding areas in April/May, extending into June.</p>

<p>Habitat requirements</p>	<p>It Western Eurasia it breeds near shallow freshwater marshes, lakes and rivers, usually with some dense vegetation but almost always in open habitats. Habitats include shallow tundra wetlands characterised by low vegetation, subarctic bogs and eutrophic lakes in the boreal and temperate zones.</p> <p>Most abundant (0.5 to 2 breeding pairs per km²) in the central boreal zone of Finland amongst the plethora of mires and dyseutrophic lakes where it uses <i>Carex</i> and <i>Equisetum</i> beds around large mixotrophic and eutrophic lakes, favouring open grassy margins of more eutrophic <i>Phragmites</i> dominated waters (Haapanen & Nilson 1979). In temperate areas, the species also breeds on pools in seashore meadows and saltmarshes. In the south of its range, occupies wetlands in open grassland and steppe habitats (Berndt & Kauppinen 1997).</p> <p>Many habitats are ephemeral in nature, vulnerable to drought or flooding, both of which appear to make breeding unpredictable in time and space, despite birds being loyal to favoured sites. Breeding numbers therefore appear rather unstable, and this factor may be part of the explanation for wide fluctuations in breeding success.</p> <p>It mainly winters in large flocks on brackish coastal lagoons, in estuaries and deltas, and on large inland lakes (Scott & Rose 1996). In West Africa it occur at large wetlands in particular shallow lakes and inland deltas.</p>
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Table 1. Geographical distribution of Pintail during the year (EU 25 only)

Breeding	Formerly breeding (date of extinction)	Migrating (September – November & February – April/May)	Non breeding visitor (October – March)
<ul style="list-style-type: none"> • Austria • Belgium • Czech Republic • Denmark • Estonia • Finland • France • Germany • Greece • Hungary • Ireland • Latvia • Lithuania • Netherlands • Poland • Slovakia • Slovenia • Spain • Sweden • United Kingdom 	<p style="text-align: center;">?</p>	<p>Principally all EU Member States but the following have areas of particular importance for staging Pintails during migration:</p> <ul style="list-style-type: none"> • Denmark • France • Germany • Netherlands 	<ul style="list-style-type: none"> • Austria • Belgium • Denmark • France • Germany • Greece • Ireland • (Luxembourg) • Netherlands • Portugal • Spain • United Kingdom

2. Available key knowledge

In a number of tables this chapter provides a summary of up-to-date knowledge on the biology, distribution and trends of the populations of Pintail that occur in the EU. It also gives information on the hunting status in the 25 Member States.

A major problem for the development of this Management Plan for the Pintail is the lack of knowledge about the breeding and wintering populations outside the EU that makes it particularly difficult to assess the population trend for the Mediterranean Basin/west Africa wintering group.

Furthermore the knowledge of the bag statistic and the year to year variation in the number of Pintail taken throughout Europe is simply too inadequate to assess the extent and variation of hunting pressure. What is available on open seasons and annual bags are shown in Table 12.

Table 2. *European breeding population of Pintail Anas acuta.*

Country	Breeding pairs	Quality	Year(s) of the estimate	Breeding Population trend	Baseline population (year)	Reference
Austria	1-5	1	1998-02	0		BirdLife International 2004a
Belarus	70-150	1	1997-00	0		BirdLife International 2004a
Belgium	9-12	1	2000-02	+		BirdLife International 2004a
Bulgaria	0-5	2	1995-02	?		BirdLife International 2004a
Czech Rep	Present	2	2000	?	0-5	BirdLife International 2004a
Denmark	50-100	2	2000	-1	200-250 (1988)	BirdLife International 2004a
Estonia	50-100	2	1998	-2	200-300 (1970s)	BirdLife International 2004a
Finland	15,000- 25,000	2	1999-01	-1	20,000-25,000 (1992)	BirdLife International 2004a
France	0-7	1	1994-00	+2		BirdLife International 2004a
Germany	15-24	1	1995-99	-1	20-60	BirdLife International 2004a
Hungary	(30-50)	2	1990-93	(0)		BirdLife International 2004a
Iceland	400-600	2	1991	?		BirdLife International 2004a
Ireland	2	2	1988-91	?		BirdLife International 2004a
Latvia	0-20	2	1990-00	(-)		BirdLife International 2004a
Lithuania	(5-20)	2	1999-01	(F)	1-5 (1985-88)	BirdLife International 2004a
Netherlands	20-30	1	1998-00	F	35-65(1989-91)	BirdLife International 2004a
Norway	500-2,000	2	1990-03	(0)		BirdLife International 2004a
Poland	10-20	1	1995-00	-2		BirdLife International 2004a
Romania	0-5	2	1990-02	(F)		BirdLife International 2004a
Russia	300,000-325,000	2	1990-00	(-1)		BirdLife International 2004a
Slovakia	0-10	2	1980-99	?		BirdLife International 2004a
Serbia & MM	8-15	2	1990-02	-1		BirdLife International 2004a

Spain	0-50	2	1998-02	(F)		BirdLife International 2004a
Sweden	600-1,100	2	1999-00	(-)	700-2,000 (1987)	BirdLife International 2004a
Turkey	80-160	2	2001	(-)		BirdLife International 2004a
Ukraine	300-900	2	1990-00	F		BirdLife International 2004a
UK	12 - 40	1	1996-00	+2	30-40 (1988-91)	BirdLife International 2004a
Totals	320,000- 360,000					BirdLife International 2004a

Breeding population data quality:

1: reliable quantitative data, 2 incomplete quantitative data, 3 no quantitative data

Breeding population trend:

- 2 Large decrease, - 1 Small decrease, 0 Stable, F Fluctuating, N New breeder.

Table 3. Migration and wintering population numbers of Pintail *Anas acuta* in Europe.

Country	Migrating or Non Breeding visitor	Year(s) of the estimate	Trend in numbers	Baseline population*	Reference
Albania	3940, 12, 5895	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Austria	16, 49, 35	1997, 1998, 1999		200-300	Gilissen <i>et al.</i> 2002
Belgium	1814, 1033, 949	1997, 1998, 1999		300-900	Gilissen <i>et al.</i> 2002
Bulgaria	659, 251, 401	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Czech Rep	2, 1, 3	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Denmark	33, 228, 249	1997, 1998, 1999	+ 1		Gilissen <i>et al.</i> 2002
Estonia	0	1997-1999			Gilissen <i>et al.</i> 2002
Finland	0-10				Ecoscope 1996
France	26211, 12158, 18601	1997, 1998, 1999		max. 12750	Gilissen <i>et al.</i> 2002
Germany	3,135, 1,998, 1,552	1997, 1998, 1999		2700 – 8100	Gilissen <i>et al.</i> 2002
Greece	24567, 40547, 44157	1997, 1998, 1999		28000	Gilissen <i>et al.</i> 2002
Cyprus	18, 44	1998, 1999			Gilissen <i>et al.</i> 2002
Hungary	6, 157, 42	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Ireland	1663, 632, 637	1997, 1998, 1999		2000	Gilissen <i>et al.</i> 2002
Italy	4918, 5579, 5866	1997, 1998, 1999		5552	Gilissen <i>et al.</i> 2002
Latvia	0	1997-1999			Gilissen <i>et al.</i> 2002
Lithuania	0	1997-1999			Gilissen <i>et al.</i> 2001
Luxembourg	5-10				Ecoscope 1996
Netherlands	2162, 7168, 8295	1997, 1998, 1999		10000	Gilissen <i>et al.</i> 2002
Norway	2, 1, 6	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Poland	1, 2, 4	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Romania	33, 111, 174	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Portugal	2123, 4472, 13919	1997, 1998, 1999		1000-10000	Gilissen <i>et al.</i> 2002
Slovakia	7, 7, 8	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Slovenia	4, 8, 12	1997, 1998, 1999			Gilissen <i>et al.</i> 2002

Spain	48053, 9416, 18749	1997, 1998, 1999		4876	Gilissen <i>et al.</i> 2002
Sweden	5, 1, 5	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Switzerland	111, 110, 101	1997, 1998, 1999			Gilissen <i>et al.</i> 2002
Turkey	7, 13,570	1997, 1999			Gilissen <i>et al.</i> 2002
Ukraine	29 & 81	1998 & 1999			Gilissen <i>et al.</i> 2002
UK	25439, 14959, 27021	1997, 1998, 1999		28100	Gilissen <i>et al.</i> 2002
Totals					

Non-breeding population trend: + 2 large increase, + 1 small increase, - 2 Large decrease, - 1 Small decrease, 0 Stable, F Fluctuating.

* Baseline population figures from Ecoscope 1996.

Table 4. Numbers of wintering Pintail - results from the International Waterbird Census (Gilissen *et al.* 2002)

	1997	1998	1999
Baltic and Nordic Area	41	232	264
Central European area	488	854	576
East Mediterranean & Black Sea area	30,056	42,120	64,786
Northwest European area	55,568	35,927	53,364
West Mediterranean area	64,764	24,804	46,569
Total	216,897	146,017	165,816

Table 5. Mid-winter counts of Pintail at main wintering sites in West Africa (Dodman and Diagana 2003).

	Senegal Delta		Niger Inland Delta		Lake Chad Basin		Total
	Senegal	Mauritania	Mali	Niger	Cameroon	Chad	
Jan. 1999	96,700	39,000	41,000	710	20	5,300	182,730
Jan. 2000	148,700	15,120	116,650	220	25,430	42,500	348,620
Jan. 2001	119,600	20,120	174,150	11,800	190	90	325,950

Table 6. *Survival estimates of Pintail based on ringing recoveries of captured birds.*

Age/sex group	Country of ringing	Annual survival	Source
Adults	Britain	0.52	Boyd (1962)
Adults	Britain	0.64	Wainwright (1967)
Adults	Finland	0.37	Grenquist (1965)
Young	Finland	0.35	Grenquist (1965)
Adult males	North America	0.63-0.81	Hestbeck 1993a
Adult females	North America	0.42-0.77	Hestbeck 1993a

Table 7. *Survival estimates of Pintail in Britain, based upon population trends and wing survey data, using proportions of immatures in bag surveys adjusted by a factor of 1.5 to correct for their over representation in the kill (data from Bell & Mitchell 1996).*

Time period	Rate of population Change	Proportion of immatures	Annual survival
1966/67-1973/74	1.203	0.608	0.715
1977/78-1980/81	1.081	0.575	0.667

Table 8. *The ratio of young Pintail to adult females in the annual hunting bag statistics from Denmark.*

Hunting season	Young birds per adult female (sample size)	Source
1986/87	6.5 (95)	Clausager (1987)
1987/88	6.2 (97)	Clausager (1988)
1988/89	13.7 (356)	Clausager (1989)
1989/90	3.5 (213)	Clausager (1990)
1990/91	13.1 (269)	Clausager (1991)
1991/92	11.4 (175)	Clausager (1992)
1992/93	2.4 (150)	Clausager (1993)
1993/94	5.0 (142)	Clausager (1994)
1994/95	4.4 (195)	Clausager (1995)
1995/96	7.7 (220)	Clausager (1996)
1996/97	4.9 (71)	Clausager (1997)
1997/98	7.7 (182)	Clausager (1998)

Table 9. *Variation in wintering numbers of dabbling ducks at Internationally Important wintering sites in Great Britain, 1989/90-1993/94 (data from Cranswick et al. 1995).*

Species	Number of sites	mean coefficient of variation of maxi- mum counts	range
Pintail	13	53.8%	23.2%-94.1%
Shoveler	5	25.8%	15.2%-31.4%
Mallard	11	24.3%	12.6%-44.0%

3 Threats

This chapter gives an overview of current human activities that are believed to have a negative impact on “the north-western Europe wintering group” and “the Black Sea/Mediterranean Basin/west African wintering group” of Pintail. For each human activity the importance for each population is assessed according to a ranking system described at the end of the chapter.

To describe the importance of threats to European Pintail populations, the following categories are used:

Critical: a factor causing or likely to cause **very rapid declines** (>30% over 10 years);

High: a factor causing or likely to cause **rapid declines** (20-30% over 10 years);

Medium: a factor causing or likely to cause relatively **slow, but significant, declines** (10-20% over 10 years);

Low: a factor causing or likely to cause **fluctuations**;

Local: a factor causing or likely to cause negligible declines;

Unknown: a factor that is likely to affect the species but it is unknown to what extent

1. Habitat loss/degradation (human induced)

Breeding

Declines in the numbers of breeding Pintail in Europe are considered to be primarily due to wetland loss and degradation on the breeding areas, particularly in Russia, although there is no specific explanation of what mechanism is entailed nor how extensive the effect are (e.g. Krivenko 1984, Krivenko 1990, Rutschke 1989). However, a recent decline in breeding numbers in southern Finland is believed to be caused by cessation of grazing and hay-making on sea shore and lake-side meadows (Tiainen *in litt.*).

In North America, Pintail numbers have been declining since 1955 and a Recovery Group has been established in response. The main cause of the decline is generally accepted to be poor nest success on the prairie breeding grounds due to conversion of natural habitats to agriculture causing nest loss to predation and farm machinery (J A Robinson *in litt.*).

Wintering

Throughout the EU, major factors reported to be causing declines or limiting waterbird populations include loss and modification of staging and wintering habitat.

Most of the important Pintail wintering resorts in north-west Europe are designated SPAs and have some level of protection. If protection, and appropriate management, of all sites of international importance for Pintail (on a regular basis or as hard weather refuges in severe winters) can be guaranteed, then there is little additional site safeguard that can be achieved.

Under these circumstances, habitat loss *per se* at the major sites should not constitute a serious threat. Nevertheless, intertidal coastal wetlands and floodlands typically favoured by the species are constantly under threat from development and agricultural modification. For example, in the United Kingdom, the most severe threats to wintering birds comes from potential land claim on estuaries, particularly through the proposed construction of barrages (Batten *et al.* 1990).

The protection of these habitats through provision of a network of sites is essential to ensure maintenance of local and regional Pintail numbers at the flyway level.

Simple protection of habitat is no guarantee that Pintail numbers will be maintained, since habitat degradation remains a threat in many resorts, and access to feeding opportunities may be restricted by human activity, such as hunting and other recreational disturbance. Site management planning must identify Pintail as key elements in the process if local numbers are to be maintained and enhanced.

On other sites, of less numerical importance for the species, the maintenance of Pintail numbers are a contribution to local maintenance of biodiversity and are important to safeguard the range and abundance of the species throughout the flyway.

Decreases in the Mediterranean basin have also been attributed to the recent large scale loss and degradation of wetlands in the region (see Costa and Guedes 1996). Habitat loss on the African wintering grounds may also be a serious threat as large scale river diversion and irrigation schemes are planned for several of the most important wintering areas (Hughes & Hughes 1992, Hollis *et al.* 1993, Scott & Rose 1996).

Importance of habitat loss/degradation

- For **areas of breeding** in the EU (almost exclusively bird belonging to the north western Europe wintering group) the importance of habitat loss/modification is set at Medium.
- For the **winter areas** in the EU the importance of habitat loss/modification for the north-western Europe wintering group is set at Low/Medium.
- For the **winter areas** in the EU the importance of habitat loss/modification for the Black Sea/Mediterranean Basin/west African wintering group is set at Medium.

2. Harvesting

Breeding/staging

Little or nothing is known about the extent or effect of hunting on the breeding and staging grounds of the species. Within the Member States, hunting does not occur on the breeding areas, but the impact of the spring hunt in Russian breeding areas and the effects of illegal hunting on the nesting grounds is unquantified and unknown. Hunting occurs from 20 August in Finland and Estonia and affects especially the late hatching Pintail broods. In Austria, the breeding population is only estimated at 3 pairs. Here, duck hunting starts on 16 August, thus affecting possible late broods and staging autumn migrants (A. Ranner *in litt.*). If similar levels prevail on the Russian core breeding areas, there is justification for examining critically the effects of such hunting on the population compared with the off-take during the major part of the winter elsewhere in the range.

Winter

Listed as a moderate threat in some Member States (Ecoscope 1996), between 92,000 and 142,000 birds are shot annually in the EU with more than 10,000 taken annually in France, Italy, Spain, Greece and Finland (Table 15).

The majority of Pintail shot in the EU probably belong to the north-western Europe wintering group, but as some Pintails from the much larger Russian population also are known to pass Europe during migration some harvesting of this population also take place in the EU. In addition to this comes large but unknown numbers shot in Russia. The size of the two populations combined is estimated at 810,000 (Delany 2005) and declining.

Thus the figures suggest that 14% of the Pintail of the two populations combined are harvested every year (taken the mid-range bag estimates from Table 15). However, as only part of the Black Sea, Mediterranean Basin/west African wintering group from the Russian breeding grounds pass the EU

countries on migration, a considerable higher portion of the Pintail that pass Europe are taken every year.

The hunting and trapping in the winter quarters in West Africa is believed to be of relatively limited importance for this species. A study from the Niger Inland Delta in Mali revealed that a total of 62,500 dabbling ducks were shot or trapped in 1999 but the majority of these were Garganey (Kone *et al.* 1999).

Importance

- For the north-western Europe wintering group the importance of hunting is provisionally set at High.
- For the Black Sea/Mediterranean Basin/west African wintering group importance of hunting is set at Low.

3. Pollution

The highly aggregated nature of the species in winter exposes the wintering concentrations to a high risk from even localised water pollution incidents. This is especially the case where wintering areas exist in close proximity to industrial complexes. Although there have been few reports of serious pollution events affecting wintering Pintail in the Member States, the oil spill which occurred in the Mersey Estuary, UK in August 1989 shows the potential for such a disaster (Clark *et al.* 1990).

Importance

- For **areas of breeding** in the EU (almost exclusively bird belonging to the north western Europe wintering group) the importance of pollution is set at Unknown.
- For the **winter areas** in the EU the importance of pollution for the north-western Europe wintering group is set at Low.
- For the **winter areas** in the EU the importance of pollution for the Black Sea/Mediterranean Basin/west African wintering group is set at Low.

4. Human disturbance

Summer/staging

There are virtually no published data relating to the levels of human disturbance to Pintail in summer and from any European states.

Wintering

Recreation/tourism disturbance of staging and wintering Pintail is considered of significance in several countries. As a highly aggregated species both during migration and on the wintering grounds, Madsen & Pihl (1993) consider the species highly sensitive to disturbance.

There have been dramatic increases in the numbers of Pintail bird-days per year from 1,000-2,000 to over 180,000 at an experimental study site in Denmark after the control of hunting disturbance (Madsen *et al.* 1995, Madsen 1998). Maximum counts have also increased from less than 100 to over 4,000 Pintail at this single site.

Studies at some of the most important Greek wetlands for the species have demonstrated that hunting activity causes mass displacement of ducks from the most important feeding areas, and Pintail in particular cease feeding when shooting occurs near them (Joensen & Madsen 1985).

It is therefore clear that simple site-based management of hunting disturbance can have a dramatic effect on local distribution and abundance. It is not, however, clear whether this has an impact at the population level.

Importance

- For **areas of breeding** in the EU (almost exclusively bird belonging to the north western Europe wintering group) the importance of disturbance is set at Unknown.
- For the **winter areas** in the EU the importance of disturbance for the north-western Europe wintering group is set at Medium.
- For the **winter areas** in the EU the importance of disturbance for the Black Sea/Mediterranean Basin/west African wintering group is set at Medium.

4. Policies and legislation relevant for management

Table 10. *International conservation and legal status of the Pintail.*

World Status¹ (Criteria)	European and EU Status²	SPEC category³	EU Birds Directive Annex	Bern Convention Annex	Bonn Convention Annex	African-Eurasian Migratory Waterbird Agreement	Convention of International Trade on Endangered Species
Not listed	Moderate continuing decline	3	II/1	Not listed	Annex II	Annex II	Not listed

Member States / Contracting parties obligations

Pintail is listed on Annex II/1 in the EU Birds Directive, which imply that it can be hunted in all Member States, which has defined a hunting season for this species.

¹ BirdLife International/IUCN Red List assessment.

² BirdLife International 2004a,b

³ BirdLife International 2004a,b.

National policies, legislation and ongoing activities

Table 11. Brief overview of management measures and restoration planning processes currently underway, which benefit Pintail in Member States.

MEMBER STATE	TITLE	CATEGORY	HUNTING ACTIONS	HABITAT/ SPECIES ACTION	OTHER ACTIONS
Austria	Distelverein March-Thaya Ramsar Project (LIFE)	I		hampd	rpes
Austria	Creation of wetland habitats for waterfowl by hunting associations and Euroeducks-Austria	I		hpd	ep
Germany	Hunting forbidden in all nature Reserves and SPAs in Sachsen-Anhalt	I	C:g		
Denmark	Wetland restoration by state and private persons				
France	Acquisition by Federation des Chasseurs de France		g	I:hs	
France	Establishment of Réserve de chasses (hunting-free areas)		C:g		s
France	Office National de la Chasse – Federations des Chasseurs de France network				s
France		R		I:am	I:r
United Kingdom			b		
Italy	Valli da Pesca-Aziende Faunistico Venatorie management	I	C:dhb	C:hds	s
Italy	Wetland creation/restoration by hunters	I	C:d	C/I:hd	
Italy	Wetland creation/restoration by public authorities (Emilia-Romagna)	I	b	C:hs	s
Sweden	National goal: creation/restoration of 12,000 hectares of wetlands by 2010	-	-	h	-
United Kingdom	Catchment management plans	I		hms	s
United Kingdom	SSSI/ASSI management plans	I		hamds	s
United Kingdom	ESA	R		ham	s
United Kingdom	Integrated estuary management plans	I		hmnds	pes
United Kingdom	Water level management plans	I		ham	s

Category: R = restricted measure, I = integrated management plan.

Action status: C = completed, P = in progress, F = planned in future.

Hunting actions: g = general hunting ban, b = bag limits, r = regional hunting ban, s = shortened hunting period, d = limit to hunting days, h = limit to hunting hours, o = other.

Habitat/species actions: h = habitat improvement, a = modifications to agricultural activity, m = minimisation of adverse effects of harvesting, roads, etc., p = predator control, d = prevention of disturbance, s = site safeguard, o = other.

Other actions: r = research, p = public awareness, e = education campaigns, s = survey, census and monitoring, o = other.

Table 12. National conservation, hunting status and seasons and bag statistics.

Country	Status in national Red Data Book ⁴	Year of protection status	Hunting Status	National open season	Regional open season	Annual bag size (period)	Annual Statutory Bag Statistics	Highest responsible national authority
<i>Austria</i>	Category 1		H/NH P ⁴	None	16/8 – 31/12 ¹ 1/9-31/12 ² 1/9- 15/1 ³	?	?	
<i>Belgium</i>	Flanders: always rare breeder, nor on red list		P	None	No	0	-	
<i>Cyprus</i>			H	last Sunday of Oct. to 2nd week of Feb., Sun-Wed only	-	c. 20-50	-	The Game Fund Interior Ministry
<i>Czech Republic</i>			-					
<i>Denmark</i>	“Vulnerable” and “responsibility” species since min. 20% of NW European pop. occur		H	1/9 – 15/1 ⁵	No	6,900 & 5,000 (2001/2002 & 2002/2003)	yes	Ministry of Environment
<i>Estonia</i>			H	20/8 – 15/11	No	200 (2002)	?	
<i>Finland</i>			H	20/8-31/12	1/9-31/12	10,800 (1998-2001)	?	
<i>France</i>			H	1/9 – 31/1	No	(30,000-45,000) ^A	no	
<i>Germany</i>	Category 2,		H/P ⁷	1/10/-15/1	No	?	?	
<i>Greece</i>			H	15/9 – 28/2	No	(10,000-14,000) ^A	?	

A

<i>Hungary</i>			-					
<i>Ireland</i>			H	1/9 – 31/1	No	2,000-2,500 ^A	?	
<i>Italy</i>			H	u/9-31/1 ⁸	No	(20,000-30,000) ^A	?	
<i>Latvia</i>			H	2 nd weekend of August – 15 November	No	Few hundred	yes	State Forest Service
<i>Lithuania</i>	Category I – Endangered		P	None	No	0	-	
<i>Luxembourg</i>			PE	None	No	0	-	
<i>Malta</i>			H	Spring & autumn	No	few hundred	No	
<i>Netherlands</i>		1996	P	None	No	0	?	
<i>Poland</i>								
<i>Portugal</i>			H	21/8-22/1	No	No data	No	Ministry of Agriculture (DGRF)
<i>Slovakia</i>			PE	None	No	0	-	
<i>Slovenia</i>			PE	None	No	0	-	
<i>Spain</i>			H/P ⁹	p/10-m/2	No	(15,000-30,000) ^A	?	
<i>Sweden</i>	Species demanding appropriate care		PE	None	No	0	New sampling system	
<i>United Kingdom</i>	Amber list species of medium conservation concern		H	1/9 – 31/1	1/9-20/2 ¹⁰	1,500	?	
Total						92,000 – 140,000		

^A Wetlands International Hunting Specialist Group unpublished data provided to Ecoscope Ltd. In the drafting of Ecoscope (1996).

Bold type signifies reliable quantitative data, normal type incomplete quantitative data and bracketed figures indicate best estimates in the absence of quantitative data. PE indicates species is protected under European legislation, P indicates species is protected under national legislation, H indicates hutable with declared open season, NH indicates that the species is hutable, but no hunting season is established.

Footnotes:

1. Burgenland
2. Kärnten (1/9-31/12) and Niederösterreich (01/10 – 31/12).
3. Wien, also hutable with no declared open season in Oberösterreich, Steiermark, Tirol and Vorarlberg.
4. Salzburg,
5. Hunting at sea permissible until 15/1
6. France hunting below high water mark allowed from 20/7 in 14 departments, from 15/8-1/9 in 8 departments; from 20/7 on wetlands (coastal and inland) in 1 department, from 27-28/7 in 9 departments, from 3-4/8 in 8 departments, from 10-18/8 in 40 departments, from 25/8 in 3 departments and from 1/9 in 3 departments.
7. No hunting season in Laender Brandenburg, Hessen, Nordrhein Westphalen, Rhienland-Pfalz and Thüringen (data from Federal Agency for Nature Conservation, Bonn)
8. In Italy hunting of Pintail starts on the third Sunday in September.
9. Protected in Cantabria, Madrid, Murcia and Navarra in 1990 (IIMA 1991)
10. Hunting below high water mark allowed until 20/2 in United Kingdom

Table 13. *Site (and habitat) protection and research.*

(1) North-west European wintering population

Breeding Within the EU large breeding populations only are found in Finland and Sweden. **Non-breeding** Based on the International Waterfowl Census results, Scott & Rose (1996) drafted a list of sites, which supported more than 1% of the populations of Western Palearctic Anatidae. This list forms the basis for this table but for a few countries a number of sites have been added. The complete list of sites is included in the plan as Annex II.

Country	Number of sites of international importance for Pintail (more than 1% of flyway pop.) and protection status of these sites
<i>Belgium</i>	Both sites which support internationally important numbers are protected (one completely, the other partially so).
<i>Czech Republic</i>	No sites are known to support more than 1% of the population.
<i>Denmark</i>	5 sites of int. important wintering numbers are protected. Two of these have hunting and disturbance free zones. One is scientific reserve with no admittance for the public (and no hunting). Four other important spring and autumn staging areas are also protected.
<i>Estonia</i>	Both sites, which support int. important numbers, are protected.
<i>Finland</i>	No sites in Finland are known to support more than 1% of this Pintail population.
<i>France</i>	In those parts of France used by this group of Pintail, 12 internationally important sites (one protected the remainder partially so) support an average of 6,900 Pintail in winter.
<i>Germany</i>	Six sites have been identified as being of international importance as wintering areas for Pintail, with a further 3 sites supporting internationally important staging numbers. Of the wintering areas, 4 are protected and 2 partially protected, and of the remainder, 1 is protected and 2 are of unknown status.
<i>Ireland</i>	Four sites are of international important sites for Pintail support over 1,000 birds in winter, all of which are protected as SPAs.
<i>Latvia</i>	No sites are known to support more than 1% of the population.
<i>Lithuania</i>	No sites are known to support more than 1% of the population.

<i>Luxembourg</i>	No sites are known to support more than 1% of the population.
<i>Netherlands</i>	Seven sites support internationally important numbers of Pintail in winter, of which two are reserves, three have partial protection and the remainder are unprotected. Four of these sites are designated SPAs. In autumn, ten sites have supported international important numbers (average 22,200 birds) of which four are reserves, four are partially protected, two are unprotected and 5 are designated SPAs.
<i>Poland</i>	No sites support more than 1% of the Pintail population
<i>Portugal</i>	No sites support more than 1% of the Pintail population
<i>Sweden</i>	Although no sites supporting 1% of the Western Palearctic population have been identified, several sites, supporting 200 birds or less, have been classified as SPA.
<i>United Kingdom</i>	Twenty sites have supported internationally important numbers in winter based on January counts (Scott & Rose 1996). All sites have some level of protection (i.e. at least protected as Sites of Special Scientific Interest under domestic legislation) and all but 2 are designated SPAs. Collectively, these sites have supported 30,500 birds on average in the last five years for which data are available, which constitutes more than the estimated United Kingdom population (probably due to declines in most recent winters, Kirby 1995).

(2) The Mediterranean Basin/West Africa wintering group

Country	Number of sites of international importance for Pintail (more than 1% of flyway pop.) and protection status of these sites
<i>Austria</i>	No sites are known to support more than 1% of the population.
<i>Cyprus</i>	No sites are known to support more than 1% of the population.
<i>Malta</i>	No sites are known to support more than 1% of the population.
<i>Portugal</i>	No sites support more than 1% of the Pintail population but counts made in the Sado Estuary (an SPA) has shown flocks of more than 500 wintering Pintail in 2002.
<i>Spain</i>	One site, Marsimas del Guadalquivir, which has some levels of protection, has supported up to 39,800 Pintail in winter (Scott & Rose 1996). In addition large numbers (but less than the 1% threshold) have been recorded wintering in the Ebro Delta in recent years.
<i>France</i>	No SPAs or IBAs in Mediterranean France have supported more than 1% of the Pintail population but for the whole of Carmargue the average wintering population is about 5,600.
<i>Italy</i>	No sites are known to support more than 1% of the population.
<i>Greece</i>	Three internationally important areas are all protected sites supporting an average of 11,700 Pintail in winter.
<i>Slovakia</i>	No sites are known to support more than 1% of the population.
<i>Slovenia</i>	No sites are known to support more than 1% of the population.
<i>Hungary</i>	No sites are known to support more than 1% of the population.

5. Framework for Action

Priority statement/evaluation

The Pintail is a relatively abundant but declining waterfowl species and an important quarry species throughout much of its range in Europe.

European breeding and wintering numbers underwent a large decline between 1970 and 1990. Although it was stable or increased over much of its European range during 1990-2000, the stronghold breeding population in Russia continued to decline, as did the only other large breeding population in Finland, the smaller one in Sweden and the populations of less than 100 pairs in most of the other countries neighbouring the Baltic. The species underwent a moderate decline (>10%) overall both in breeding and wintering numbers.

Little is known about the reasons for these declines but habitat loss due to reduced grazing and hay cutting of sea shore and lake-side meadows are believed to be of major importance. Its erratic breeding output in any one year results in fluctuations in autumn population size which should be taken into account when determining the size of the hunting bag in the following winter. Its highly concentrated wintering distribution makes it highly vulnerable to pollution events and disturbance.

Efforts should therefore be addressed to ensuring site safeguard throughout the range, minimising disturbance and the effects of habitat loss, degradation and pollution and to ensure that protection measures are applied in a co-ordinated fashion throughout the flyway. Whilst it is likely that loss of breeding habitat has been a factor involved in recent declines, it is also clear that the recovery of such a relatively widespread and common species will not be assisted by current levels of hunting exploitation.

This Management Plan presents a framework for the restoration of Pintail populations in EU and its habitats. But to become effective each of the countries with breeding and/or wintering population should develop its own national plan that describe management activities on the basis of what is presented here.

Purpose of the action plan

The Pintail has been in decline as breeding and wintering bird in some European countries where it occurs. Recognising that the Pintail has an unfavourable conservation status in Europe due to a moderate continuing population decline the long-term objective (10 years) of this plan is:

To restore the Pintail to a Favourable Conservation Status in EU¹.

This plan aims to address the most urgent issues to halt the decline of the Pintail population in the EU but at the same time restrict the activities to be carried out to a realistic level. Thus, the short-term objectives outlined in the plan will focus on:

- Assessment of potential impact of hunting and collection of annual bag data.
- Restoration and management of breeding and wintering sites
- Monitoring of population sizes and trends
- Collection of more robust data to identify population units, estimates of mortality and other types of population regulations.

Results for the period 2006-2009

This section outlines the Results to be achieved during the first 3-year period of Pintail management within the EU. The Results outlined below (and the corresponding Activities in Chapter 6) are targeted at the authorities responsible for the implementation of the provisions of the Birds Directive in the Member States. In the Logical Framework Analyses (LFA) table on page 42, the Results with corresponding Activities, verifiable indicators, means of verification and assumptions are summarised.

Policy and legislative actions

An essential component when managing a huntable species is detailed information on the number of birds shoot per year. This type of information is currently lacking from several Member States where Pintail hunting is permitted. Collection of reliable and updated bag data is therefore a key Activity of this plan. There is also a need for examining critically the date for the hunting start in the EU Member States to avoid affects on the late hatching Pintail broods. Finally, there is a need for examination of the date of the end of the open season to avoid hunting of Pintails on spring migration.

¹ The EU Habitats Directive (92/43/EEC) states that a species's conservation status will be taken as Favourable when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats; and
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis.

Results of the implementation of this Management Plan should therefore be that by the end of 2008:

- (1) No Pintails are hunted in EU Member States during migration or during the end of the breeding season.
- (2) Data on the annual number of Pintail shot in each Member States is available.

Management of breeding, staging and wintering populations

The majority of Pintails that breed in the EU occur in Finland and also Sweden where numbers are declining. In southern Finland the decline is probably because of habitat loss from reduced grazing of seashore meadows and lakeside meadows. Also most of the mall breeding populations (none exceeding 100 pairs) of other Member States bordering the Baltic are in decline, namely, in decreasing size of breeding population, Estonia, Denmark, Poland and Latvia. The populations of less than 25 pairs in Lithuania and Germany are fluctuating and stable, respectively.

Results of the implementation of this Management Plan should therefore be that by the end of 2009:

- (3) Restoration of breeding sites for Pintail is initiated in all Member States where this species has disappeared or is in decline.
- (4) Identification, conservation, wise-use and management of wetlands and other habitats with breeding Pintail is supported to ensure no loss of Pintail numbers and distribution and to increase reproductive success and colonising ability (all Member States with breeding Pintail).

Pintail is unusual among dabbling ducks in being highly concentrated in winter. Throughout the EU major factors reported to be causing declines or limiting populations include habitat loss and modification. Most important Pintail wintering resorts in the EU have some level of protection but habitat degradation remains a threat in many areas.

A Result of the implementation of this Management Plan should therefore also be that by the end of 2009:

- (5) All staging and wintering areas of international importance for Pintail within the EU are identified and designated SPAs.
- (6) SPAs of international importance as staging and wintering resorts for Pintails are managed in a way that stops habitat degradation and secure access to feeding opportunities.

Management of human activities

The Pintail is considered highly sensitive to disturbance and efforts should therefore be addressed to ensuring site safeguard throughout the range with a minimum of disturbance. By the end of 2009:

- (7) Disturbance-free areas are established in a minimum of two SPAs of international importance for wintering and/or staging Pintail in all Member States with sites of international importance for this species.

International co-operation

There is an urgent need for improved knowledge about staging and wintering population numbers and the distribution of the population groups in Europe. Furthermore, since the bulk of the Pintails shot in the EU come from Russia, and the Russian population appears to be declining due to causes that may well originate on the breeding grounds, the EU has a responsibility to assist in diagnosing the causes of the Russian declines and obtaining estimates of annual productivity and the factors affecting it in the main Russian breeding grounds.

By the end of 2009 the following international activities should be on schedule:

- (8) Annual mid-winter census of all areas of international importance for wintering Pintail within the EU are carried out as part of the International Waterfowl Census with the support by the authorities responsible for the implementation of the provisions of the Birds Directive in each Member State.

Research and monitoring

Adequate population monitoring and an understanding of factors which contribute to population dynamics is vital to the process of management planning to achieve the goals of restoring species of unfavourable conservation status to favourable conservation status. This must be done at local, national and international level.

In the case of the Pintail, there is an urgent need for establishing a monitoring program to provide an assessment of annual productivity in late summer prior to the autumn migration, and establish systems to report these data to other range states (Member States). This information should subsequently form the basis for a decision on the annual hunting pressure the species can tolerate. There is also a need to get a better understanding of the population units including their dispersal, flyways and annual mortality. Ringing schemes and analyses of existing ringing/recovery information can help in better determining the status of population units within the Western Palearctic, but specifically within the EU Member States. The results of these analyses would be disseminated to guide national site protection measures and the objectives of future collaborative ringing schemes.

A Result of the implementation of this Management Plan should therefore be that by the end of 2009:

- (9) A national monitoring programme to provide an assessment of annual productivity in late summer prior to the autumn migration is established in all Member States with an important breeding population of Pintail.
- (10) National ringing activities on breeding, staging and wintering areas and analyses of existing ringing data to identify population units and provide annual estimates of Pintail mortality, is supported by national authorities in all Member States with important breeding, staging or wintering numbers of Pintail.

6. Activities

Table 14. *Actions in all countries in the EU with breeding population of Pintail (the scale for Priority and Time Scale is given on page 41).*

Result	Priority	National activities	Time scale	Means of verification
No Pintails are hunted in EU Member States during spring migration or during the end of the breeding season.	High	<ul style="list-style-type: none"> Ensure that national hunting seasons are in accordance with information on breeding period as defined in “Period of Reproduction and Prenuptial migration of Annex II Bird Species in the EU”, that there are no derogations and no illegal hunting of Pintails outside the open season. 	Immediate	Publication/website with official hunting season in Member State available by 2009.
Restoration of breeding sites for Pintail is initiated where this species has disappeared or is in decline.	High	<ul style="list-style-type: none"> Initiate restoration of breeding sites for Pintail where this species has disappeared or is in decline. 	Short	Publication/website of relevant national authority in Member States and report to Ornis Committee by national delegate no later than 2009.
A national monitoring programme to provide an assessment of annual productivity in late summer prior to the autumn migration is established in all Member States with an important breeding population of Pintail.	High	<ul style="list-style-type: none"> Establish in all Member States with an important breeding population of Pintail a national monitoring programme to provide an assessment of annual productivity in late summer prior to the autumn migration. 	Medium	Publication/website of relevant national authority in Member States and report to Ornis Committee by national delegate no later than 2009.

<p>National ringing activities on breeding areas and analyses of existing ringing data to identify population units and provide annual estimates of Pintail mortality is supported by national.</p>	<p>High</p>	<ul style="list-style-type: none"> • Support ringing schemes and analyses of existing ringing data to identify population units and provide annual estimates of Pintail mortality. 	<p>Medium</p>	<p>Papers and/or reports produced documenting new information.</p>
<p>Identification, conservation and wise-use of wetlands and other habitats with breeding Pintail is supported to ensure no net loss of Pintail numbers and distribution.</p>	<p>High</p>	<ul style="list-style-type: none"> • Support identification, conservation, wise-use and management of wetlands and other habitats with breeding Pintail to ensure no loss of numbers and distribution. 	<p>Medium</p>	<p>Publications produced and distributed to private landowners, local authorities and others.</p>

Table 15. *Actions in all countries in the EU with staging and/or wintering population of Pintail (the scale for Priority and Time Scale is given on page 41).*

Result	Priority	National activities	Time scale	Means of verification
Data on annual number of Pintail shoot in Member States is available	High	<ul style="list-style-type: none"> Ensure that annual bag data of Pintail is available from all countries where hunting of this species is permitted. 	Short	Publication/website with official bag statistics in relevant Member States available by 2008.
All staging and wintering areas of international importance for Pintail within the EU are identified and designated SPAs.	High	<ul style="list-style-type: none"> Ensure that all staging and wintering sites supporting more than 1 % of the relevant population of Pintail within their country are designated SPAs. 	Short	All staging and wintering sites in the EU, which supports more than 1% of the relevant Pintail population according to latest list published by Wetlands International, are designated as SPA.
SPAs of international importance as staging and wintering resorts for Pintails are managed in a way that stops habitat degradation and secure access to feeding opportunities.	Medium	<ul style="list-style-type: none"> Ensure that SPAs of international importance as staging and wintering resorts for Pintails are managed in a way that stops habitat degradation and secures access to feeding opportunities. 	Medium	Counts of staging and wintering Pintail in SPAs of international importance for the species show no decline that can be attributed to habitat destruction or deterioration of disturbance.
A minimum of two disturbance-free areas within SPAs of international importance for wintering and/or staging Pintail are established in all Member States with sites of international importance for this species.	High	<ul style="list-style-type: none"> Establish by 2008 in all Member States with SPAs of international importance for staging and/or wintering Pintail a minimum of two disturbance-free areas within such SPAs. 	Short	Publication/website of relevant national authority in Member States and report to Commission by national Ornithology Committee delegate.

Annual mid-winter census of all areas of international importance for wintering Pintail within the EU are carried out as part of the International Waterfowl Census with the support by the authorities responsible for the implementation of the provisions of the Birds Directive in each Member State.	High	<ul style="list-style-type: none"> Ensure that annual mid-winter census of all areas of international importance for wintering Pintail are carried out (co-ordinated by Wetlands International as part of the International Waterfowl Census). 	Short	Data for annual Pintail mid-winter counts from all sites of international importance in Member States are present in IWC database.
National ringing activities on staging and wintering areas and analyses of existing ringing data to identify population units and provide annual estimates of Pintail mortality is supported by national authorities in all Member States with important breeding, staging or wintering numbers of Pintail.	Medium	<ul style="list-style-type: none"> Support ringing schemes and analyses of existing ringing data to identify population units and provide annual estimates of Pintail mortality. 	Medium	Papers and/or reports produced documenting new information.

The **Priority** of each Result is given, according to the following scale:

- Essential: an action that is needed to prevent a large decline in the population, which could lead to species or subspecies extinction.
- High: an action that is needed to prevent a decline of more than 20% of the population in 20 years or less
- Medium: an action that is needed to prevent a decline of less than 20% of the population in 20 years or less
- Low: an action that is needed to prevent local population declines or which is likely to have only a small impact on the population across the range.

The **Time scales** attached to each Activity use the following criteria:

- Immediate: completed within the next year.
- Short: completed within the next 1-3 years
- Medium: completed within the next 1 – 5 years.
- Long: completed within the next 1 – 10 years
- Ongoing: an action that is currently being implemented and should continue.
- Completed: an action that was completed during the preparation of the Management Plan.

Table 16. *Summary of objectives/results and activities of the Pintail Management Plan 2006-2009.*

DESCRIPTION	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>Purpose: To restore the Pintail to a Favourable Conservation Status in Europe</p>	<p>The European Pintail population is restored.</p>	<p>The European Threat Status classification of the Pintail.</p>	<p>Pintail Action Plan approved and supported by EU and Member States.</p>
<p>Results 2006-2009:</p> <ol style="list-style-type: none"> 1. No Pintails are hunted in EU Member States during spring migration or during the end of the breeding season. 2. Data on annual number of Pintail shot in Member States (with hunting of this species) is available. 3. Restoration of breeding sites for Pintail is initiated in all Member States where this species has disappeared or is in decline. 4. Identification, conservation, wise-use and management of wetlands and other habitats with breeding Pintail is supported to ensure no loss of numbers and distribution. 5. All staging and wintering areas of international importance within the EU are identified and designated SPAs. 6. SPAs of international importance as staging and wintering resorts for Pintails are managed in a way that stops habitat degradation and secure access to feeding opportunities. 7. Disturbance-free areas are established in a minimum of two SPAs of international importance for wintering and/or staging Pintail in all Member States with sites of international importance for this species 	<ol style="list-style-type: none"> 1. Hunting season and hunting of Pintail are not conflicting with “Period of Reproduction and Prenuptial migration of Annex II Birds Species in the EU”. 2. National bag reporting system developed and data on annual number of Pintail shot is collected. 3. A number of former Pintail breeding sites and/or sites with declining breeding populations are restored. 4. Surveys to identify key breeding areas undertaken, management recommendations developed for Pintail breeding habitats in Member States with important populations. 5. All staging and wintering sites, which regularly supports more than 1% of the relevant Pintail population are designated as SPAs. 6. Numbers of staging and wintering Pintail in SPAs of international importance in Member States are not declining due to habitat destruction or disturbance. 7. In each Member State with Pintail staging or wintering in numbers of int. importance according to information published by Wetlands Int. are at least two disturbance-free areas established by 2009. 	<ol style="list-style-type: none"> 1. Publication/website with official hunting seasons in relevant Member States available by 2009. 2. Publication/website with official bag statistics in relevant Member States available by 2009. 3. Publication/website of relevant national authority in Member States and report to Ornis Committee by national delegate no later than 2009. 4. Publications produced and distributed to private landowners, local authorities and others by 2009. 5. All staging and wintering sites in the EU which support more than 1% of the relevant Pintail population according to latest list published by Wetlands International are designated as SPA. 6. Counts of staging and wintering Pintail in SPAs of international importance for the species show no decline that can be attributed to habitat destruction disturbance. 7. Publication/website of relevant national authority in Member States and report to Ornis Committee by national delegate no later than 2009. 	<p>Member States have adequate resources and commitment to take responsibility for Pintail management in accordance with the Birds Directives requirements.</p>

8. Annual mid-winter censuses of all areas of international importance for wintering Pintail within the EU are carried out.

9. A national monitoring programme to provide an assessment of annual productivity in late summer prior to the autumn migration is established in all Member States with an important breeding population of Pintail.

10. National ringing activities on breeding, staging and/or wintering areas and analyses of existing ringing data to identify population units and provide annual estimates of Pintail mortality is supported.

8. Annual mid-winter counts from all sites that support more than 1% of the relevant Pintail population submitted to the International Waterbird Census (IWC) database managed by Wetlands International.

9. Data on annual productivity of Pintail is available from all Member States with important breeding populations.

10. New information on Pintail population units and mortality within the Western Palearctic and specifically within the EU Member States is available.

8. Data for annual Pintail mid-winter counts from all sites of international importance in Member States are present in IWC database by 2009.

9. Publication/website of relevant national authority in Member States and report to Ornis Committee by national delegate no later than 2009.

10. Papers and/or reports produced documenting new information.

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Annex II. Provisional list of Internationally important sites (i.e. regularly holding more than 1% of the flyway population) for North-western Europe wintering group of Pintail *A. acuta* in EU Member States

Country	Site Name	Latitude	Longitude	Protection status	Season	Max. count & importance code	Source
AU	No sites in Austria						
BE	Blankaartgebied/Ijzerbroeken	50 59 N	02 51 E	Protected	W	894 (Code8)	Scott & Rose 1996
BE	Zeeschelde Gent - Nederlandse grens	51 08 N	04 15 E	Partial SPA, Ramsar	W	1040 (Code 8)	Scott & Rose 1996
CZ	No sites in the Czech Republic						
DE	Dummer	52 31N	08 20E	Protected	W	600 (Code 10)	Scott & Rose 1996
DE	Elbe: Barnkrug-Ottendorf	53 47N	09 07E	Protected	W	1300 (Code 10)	Scott & Rose 1996
DE	Elbe: Wedeler Marsch	53 37 N	09 40 E	Unknown	S	1100 (Code10)	Scott & Rose 1996
DE	Kummerower Sea	53 49 N	09 40 E	Unknown	S	850 (Code 10)	Scott & Rose 1996
DE	Ostseeboddengewasser Westrugen-Zingst	54 32N	13 07E	Protected	A,W,S	5800 (Code 10)	Scott & Rose 1996
DE	Unterer Niederrhein	51 43N	06 14E	Protected	W	800 (Code 10)	Scott & Rose 1996
DE	Unterer Odertai Bei Schwedt	53 01N	14 18E	Protected	S	4300 (Code 10)	Scott & Rose 1996
DE	Wadden Sea (Ns)	53 43N	08 28E	Partially protected	W,S	3037 (Code 10)	Scott & Rose 1996
DE	Wadden Sea (Sh)	54 24N	08 49E	Partially protected	A,W,S	15000 (Code 10)	Scott & Rose 1996
DK	Danish Wadden Sea	55 10N	08 35E	Protected	A,W,S	5407 (Code 1)	Scott & Rose 1996
DK	Tippeme	55 53 N	08 14 E	Protected	A,S	1374 (Code 11)	Scott & Rose 1996
DK	Agger Tange			SPA	A	1129 (Code 0)	Clausen et al 2001
DK	Stadil & Vest Stadil Fjorde			SPA No. 41	A	812 (Code 0)	Clausen et al 2001
DK	Præstø Fjord, Ulvshale, Nyord & Jungshoved			SPA No. 89	A	4267 (Code 0)	Clausen et al 2001
EST	Matsalu Bay	58 45 N	23 40 E	Protected	Migration	4900 (Code 8)	Scott & Rose 1996
EST	Vaika Vain Strait	58 08 E	22 30 E	Protected	A	2060 (Code 8)	Scott & Rose 1996
FIN	No sites in Finland						
FR	Baie de Bourgneuf et Noirmoutier	47 05 N	02 15 W	Partially protected	W	700 Code 8)	Scott & Rose 1996
FR	Baie de la Somme	50 13 N	01 39 W	Partially protected	W	2500 (Code 8)	Scott & Rose 1996
FR	Baie de L' Aiguillon et Pointe D' Arcay	46 19 N	01 11 W	Partially protected	W	12300 (Code 1)	Scott & Rose 1996
FR	Baie des Veys	46 20 N	01 09 W	Partially protected	W	1358 (Code 8)	Scott & Rose 1996
FR	Bassin d' Arcachon Le Teich	44 40 N	01 10 W	Protected	W	3160 (Code 1)	Scott & Rose 1996
FR	Cote de la Rochelle	46 09 N	01 07 W	Partially protected	W	1250 (Code 9)	Scott & Rose 1996
FR	Gulfe du Morbihan	47 31 N	02 48 W	Partially protected	W	4000 (Code 1)	Scott & Rose 1996
FR	Loire: Estuary et Massereau et Barracons	47 20N	02 05 W	Partial	W	2500 (Code 8)	Scott & Rose 1996
FR	Marais d' Olonne et Chanteloup	46 31N	01 46 W	Partially protected	W	930 (Code 1)	Scott & Rose 1996
FR	Rade de Penerf	47 31 N	01 46 W	Partially protected	W	800 (Code 9)	Scott & Rose 1996
FR	Seine: Estuaire	49 31 N	00 18 W	Partially protected	W	1700 (Code 1)	Scott & Rose 1996
IR	Castlemain Harbour	52 04 N	09 56 W	SPA	W	1500 (Code 9)	Scott & Rose 1996
IR	Dublin Bay	53 20 N	06 13 W	SPA	W	635 (Code 9)	Scott & Rose 1996
IR	Tralee Bay and Lough Gill	52 15 N	09 56 W	SPA	W	666 (Code 9)	Scott & Rose 1996
IR	Wexford Harbour + Slob	52 11 N	06 26 W	SPA	W	700 (Code 9)	Scott & Rose 1996

Country	Site Name	Latitude	Longitude	Protection status	Season	Max. count & importance code	Source
LT	No sites in Latvia						
LI	No sites in Lithuania						
LX	No sites in Luxembourg						
NL	Balgzard en Wieringen	52 55 N	04 52E	Partially protected	W	1174 (Code 1)	Scott & Rose 1996
NL	Dollard e.o.	53 16 N	07 08 E	Partially protected	W	656 (Code 8)	Scott & Rose 1996
NL	Friese Noordkust	53 22 N	05 46 E	Reserve	A	670 (Code 8)	Scott & Rose 1996
NL	Groningse Noordkust	53 27 N	06 31 E	Reserve	A	982 ((Code 1)	Scott & Rose 1996
NL	Kwade Hoek en Westplaat	51 52 N	04 01 E	Not protected	W	1055 (Code 1)	Scott & Rose 1996
NL	Lauwersmeer e.o.	53 21 N	06 13E	Partial protected	A	16285 (Code 1)	Scott & Rose 1996
NL	Oosterschelde	51 35 N	03 56 E	Reserve	A,W	4411 (Code 1)	Scott & Rose 1996
NL	Schiermonnikoog	53 29 N	06 13 E	Partially protected	A	891 (Code 11)	Scott & Rose 1996
NL	Terschelling	53 24 N	05 22 E	Partially protected	W	2847 (Code 1)	Scott & Rose 1996
NL	Texel	53 06 N	04 51 E	Partially protected	A	643 (Code 8)	Scott & Rose 1996
NL	Veluwemeer e.o.	53 24 N	05 43 E	Not protected	A	640 (Code 8)	Scott & Rose 1996
NL	Volkerakmeer	51 39 N	04 15 E	Reserve	A,W	4143 (Code 1)	Scott & Rose 1996
NL	Westerschelde	51 23 N	03 44 E	Not protected	A,W	3489 (Code 1)	Scott & Rose 1996
NL	Zoommeer	51 30 N	04 14 E	Partially protected	A	1672 (Code 1)	Scott & Rose 1996
PO	No sites in Poland						
PL	No sites in Portugal						
SE	No sites in Sweden						
UK	Burry Inlet	51 07 N	04 12 W	Protected	W	2306 (Code 1)	Scott & Rose 1996
UK	Cromarty Firth	57 42 N	04 03 E	Protected	W	600 (Code 8)	Scott & Rose 1996
UK	Dee Estuary (England/Wales)	53 15 N	03 07 W	Protected	W	11945 (Code 1)	Scott & Rose 1996
UK	Duddon Estuary	54 13 N	03 13 W	Protected	W	2200 (Code 1)	Scott & Rose 1996
UK	Hamford	51 53 N	01 03 E	Protected	W	1450 (Code 1)	Scott & Rose 1996
UK	Humber Estuary	53 43 N	00 15 E	Protected	W	660 (Code 10)	Scott & Rose 1996
UK	Martin Mere	53 37 N	02 52 W	Protected	W	2940 (Code 1)	Scott & Rose 1996
UK	Medway Estuary	51 28 N	00 43 W	Protected	W	1400 (Code 1)	Scott & Rose 1996
UK	Mersey Estuary: Ince/Stanlow banks	53 16 N	02 50W	Protected	W	13750 (Code 1)	Scott & Rose 1996
UK	Morecambe Bay	54 07 N	02 58 W	Protected	W	3979 (Code 1)	Scott & Rose 1996
UK	Nene Washes	52 38 N	00 05 W	Protected	W	970 (Code 8)	Scott & Rose 1996
UK	North Norfolk Marshes	52 58 N	00 50 W	Protected	W	1714 (Code 1)	Scott & Rose 1996
UK	Ouse Washes	52 30 N	00 13 W	Protected	W	3260 (Code 1)	Scott & Rose 1996
UK	Pagham Harbour	50 45 N	00 45 W	Protected	W	839 (Code 8)	Scott & Rose 1996
UK	Ribble Estuary	53 43 N	03 00 W	Protected	W	6507 (Code 1)	Scott & Rose 1996
UK	Severn Estuary	51 35 N	02 45 W	Protected	W	657 (Code 8)	Scott & Rose 1996
UK	Solway	54 55 N	03 30 W	Protected	W	2208 (Code 1)	Scott & Rose 1996
UK	Stour Estuary	51 58 N	01 10 E	Protected	W	940 (Code 8)	Scott & Rose 1996
UK	Swale	51 21 N	00 50 E	Protected	W	753 (Code 8)	Scott & Rose 1996
UK	Wash	52 50 N	00 15 E	Protected	W	6541 (Code 1)	Scott & Rose 1996

Provisional list of Internationally important sites (i.e. regularly holding more than 1% of the flyway population) for Mediterranean Basin/west African wintering group of Pintail *A. acuta* in EU Member States

Country	Site Name	Latitude	Longitude	Protection status	Season	Max. count & importance code	Source
CY	No sites in Cyprus						
MA	No sites on Malta						
PL	No sites in Portugal						
ES	Marismas del Guadalquivir	36 59 N	06 19 W	Unknown	W	39800 (Code 1)	Scott & Rose 1996
FR	No sites in France						
IT	No sites in Italy						
GR	Amyrakikos Wetlands	38 52 N	06 19 E	Protected	W	48000 (Code 8)	Scott & Rose 1996
GR	Evros Delta	40 52 N	26 12 E	Protected	W	36000 (Code 1)	Scott & Rose 1996
GR	Kotychi Lagoon	37 58 N	21 17 E	Protected	W	12000 (Code 8)	Scott & Rose 1996
SU	No sites in Slovakia						
SL	No sites in Slovenia						
HU	No sites in Hungary						

Season used:

B = Breeding
M = Migration
W = Winter
S = Spring
A = Autumn
N = Moulting

Country Codes

AT = Austria
BE = Belgium
CY = Cyprus
CZ = Czech Republic
DE = Germany
DK = Denmark
ES = Spain
EST = Estonia
FIN = Finland
FR = France
GR = Greece
HU = Hungary
IT = Italy
IR = Ireland
LT = Latvia
LI = Lithuania
LX = Luxembourg
MA = Malta
NL = The Netherlands

PO = Poland
PL = Portugal
SL = Slovenia
SV = Slovakia
SE = Sweden
UK = United Kingdom

Importance code 0: Five or more counts available between 1994 and 1999 with an average of the last five counts exceeding 1% of the population size (i.e. 600).

Importance code 1: Five or more counts available between 1984 and 1993 with an average of the last five counts exceeding 1% of the population size (i.e. 600).

Importance code 8: At least one count exceeding 1% of the population size but less than three of the last five counts available between 1984 and 1993 reach this value and the average of the last five counts

is less than 1% of the population size.

Importance code 9: At least one of count exceeding 1% of the population size but less than three of the last five counts available prior to 1993 reach this value and the average of the last five counts is less than 1 % of the population size.

Importance code 10: Less than five counts available and less than three counts exceeding 1% of the population size but the average of all counts exceed 1% of the population size (i.e 600).

Importance code 11: Less than five counts available of which one or two exceed 1% of the population size but the average of all available counts do not.

