

ANNEX III

**INTERNATIONAL ACTION PLAN FOR THE
SLENDER-BILLED CURLEW
(*Numenius tenuirostris*)**



Final draft, August 2002



INTERNATIONAL ACTION PLAN FOR THE SLENDER-BILLED CURLEW (*Numenius tenuirostris*)

Compiled by:

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the Slender-billed Curlew Working Group

The present action plan it is based on the most up-dated information available and it is based on several documents and in particular:

the action plan attached to the *Memorandum of Understanding concerning Conservation measures for the Slender-billed Curlew* (1994);

the *Action plan for the conservation of the Slender-billed Curlew* (1996) prepared by BirdLife International with the financial support of the EU and published by the Council of Europe;

the *Conservation plan for the Slender-billed Curlew* (2001) prepared for the CMS by the Institut Royal des Sciences Naturelles de Belgique.

Reviews

This action plan should be reviewed and updated every two years. An emergency review will be undertaken if sudden major environmental changes, liable to affect the population, occur within the species' range.

Geographical scope

The action plan needs implementation in:

Albania, Algeria, Austria, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, Georgia, Greece, Hungary, Iran, Iraq, Italy, Kazakhstan, Kuwait, Malta, Morocco, Oman, Romania, Russian Federation, Saudi Arabia, Spain, Tunisia, Turkey, Turkmenistan, Ukraine, United Arab Emirates, Uzbekistan, Yemen and Yugoslavia (Serbia and Montenegro).

Cover photo:
Slender-billed Curlew, Morocco, Feb. 1995.
Chris Gomersall (RSPB)

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EXECUTIVE SUMMARY

The Slender-billed Curlew *Numenius tenuirostris* is classified as 'Critical' at a global level (BirdLife International 2000). It is almost certainly the rarest and most poorly known bird species in western Palearctic. The population is estimated to be less than 50 birds. The first action plan, covering nine range-states, was included in the BirdLife International monograph on the species (Gretton 1991), an Action Plan was developed for the Memorandum of Understanding under the Bonn Convention which was open to signatures in 1994 and an International Action Plan was developed in 1995, approved by the European Commission, endorsed and published by the Bern Convention in 1996. In 2000 a Conservation Plan was developed for CMS. The present document is intended as a consolidated and updated version based on all the above-mentioned documents.

Conservation of the Slender-billed Curlew is a truly formidable task. Although major gaps remain in our knowledge of the species in large parts of its range, certain actions can be taken immediately and some results (in particularly for what concerns the protection of some key sites) have already been achieved. Effective conservation action will depend largely on a high degree of co-operation and commitment among those responsible, and on medium- to long-term funding of the necessary activities.

Threats and limiting factors

- Habitat loss – low/high (breeding areas)
 - medium/high (passage and wintering areas)
 - medium / high (?) (in breeding areas)
- Hunting - medium (historically high)
- Illegal / accidental killing - unknown, possibly high
- Disturbance - medium
- Breakdown of social behaviour patterns - medium/high (following initial decline)
- Predation of females and nest - unknown
- Other factors - unknown

Conservation priorities

- Effective legal protection for the Slender-billed Curlew and its "look-alike" - essential/high
- Locate the breeding grounds - essential
- Promote international and national policies which protect the Slender-billed Curlew and its habitat - high
- Appropriate protection and management of all passage, wintering and breeding grounds - high
- Locate and study key wintering and passage sites - high/medium
- Increase public awareness of the species critically threatened status amongst politicians, decision makers and hunters - high

LAYOUT OF ACTION PLAN

The first section includes details of:

- Introduction
 - Aims
- Background information
 - Distribution & Population
 - Life History
 - Threats and Limiting Factors – these are categorised following Heredia *et al.* (1996) as follows:
 - *critical*: a factor that could lead to the extinction of the species in 20 years or less
 - *high*: a factor that could lead to a decline of more than 20% of the population in 20 years or less
 - *medium*: a factor that could lead to a decline of less than 20% of the population over significant parts of its range in 20 years or less
 - *low*: a factor that only affects the species at a local level
 - *unknown*: a factor that is likely to affect the species but it is not known to what extent
 - Conservation status and recent conservation measures
- The main body of the action plan is detailed in the **Table of Required Actions** and designed as follows:

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Activities
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- **Objectives** - are organised in four headlines: Policy and legislation; Species and Habitat Protection; Monitoring and Research; Public Awareness and Training.
- **Action point** - for each objective a number of action points are identified and the **activities** required to address these given in more detail.

Each action point is given a priority rating as follows (after Heredia *et al.* 1996):

- *essential* ‘an action that is needed to prevent a large decline in the population which could lead to the species’ 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 **Range States or Organisation** to which an action point applies are detailed, together with organisations that could be involved in implementing the action point (**‘Collaborator’**).
 - **Progress/Results** in implementing action points is given and **further specific actions**, often identified by national experts for individual range states, are detailed.

INTRODUCTION

The Slender-billed Curlew is arguably the most threatened bird species in the western Palearctic; it is certainly the least known of the region's threatened birds, which greatly adds to the difficulty of conserving it. It appears to be the only bird species of the western Palearctic whose breeding grounds have remained unknown for the last 75 years. Thus, although its current population size is possibly comparable with that of Zino's Petrel *Pterodroma madeira* and Bald Ibis *Geronticus eremita*, because the Slender-billed Curlew's present breeding grounds are unknown (as well, apparently, as the wintering areas), there is much less that can be done to help it. The conservation challenge is compounded by the fact that the identification of the species is not straightforward and that it is a medium- to long-range migrant, crossing many countries in which conservation action is needed.

The species is globally threatened, having a Critical threat status (BirdLife International 2000), with a population recently estimated at possibly less than 50 individuals (BirdLife International 2000). It is listed on Annex I of the EU Wild Birds Directive, of CITES, and on Appendix I of the Bonn Convention and Appendix II of the Bern Convention. A Memorandum of Understanding (MoU) for the conservation of the species was developed by the Bonn Convention Secretariat and has been signed by the following 18 Countries (in capital letters the CMS Contracting Parties):

GEORGIA (10.9.94)	UZBEKISTAN (10.9.94)
HUNGARY (22.9.94, with explanatory note)	Kazakhstan (2.12.94)
EGYPT (2.12.94)	ROMANIA (2.12.94)
CYPRUS (12.12.94)	SPAIN (15.12.94)
BULGARIA (6.4.95)	CROATIA (2.5.95)
ALBANIA (5.5.95)	Islamic Republic of Iran (15.5.95)
UKRAINE (12.6.95)	MOROCCO (15.6.95)
Oman (21.11.95)	Yemen (10.9.97)
GREECE (29.10.97)	ITALY (18.4.2000)

The MoU has been signed also by UNEP/CMS Secretariat (15.12.94), BirdLife International (27.2.95) and the International Council for Game and Wildlife Conservation (12.6.95).

Aims

1. In the short term to prevent the extinction of the Slender-billed Curlew.
2. In the medium term to prevent any further decrease in the Slender-billed Curlew population caused by threats in either the breeding, passage or wintering grounds.
3. In the long term to secure a significant increase the number of Slender-billed Curlews.

BACKGROUND INFORMATION

Distribution and population

The only fully confirmed breeding records of the Slender-billed Curlew were made between 1909 and 1924 near Tara, to the north of Omsk in Siberia (Ushakov 1909, 1912, 1916, 1925). There are a number of historical records of summering birds from elsewhere in south-west Siberia and northern Kazakhstan which may refer to breeding birds, though there is no hard evidence of nesting.

From the breeding area the main migration route is in a WSW direction, north of the Caspian and Black Seas through south-east and southern Europe to north-west Africa. There are also records of wintering birds in the Middle East (Persian Gulf), but because of the low density of observers in much of this area and the lack of photographs or other hard evidences, it is not clear whether these records represent a second wintering area or whether they refer to vagrants. Iran and Iraq may be of particular importance for wintering birds. Unfortunately it has been impossible to carry out surveys in Iraq in recent years.

The situation in North Africa is also rather unclear at present. Historically this area supported considerable numbers of wintering Slender-billed Curlews, with large flocks reported from Algeria and Tunisia at the end of the nineteenth century. Indeed the species was described as the most common curlew species in Tunisia (Stresemann and Grote 1943) and in Morocco and Algeria (Glutz von Blotzheim *et al.* 1977). As late as the 1960s and 1970s flocks of over 100 birds were seen in Morocco. In recent years, however, despite increasing interest in the species, only one regular wintering site for it was identified: Merja Zerga in Morocco, which had supported a small number of birds (three in early 1990s), who disappeared in 1995. There is thus almost as much mystery concerning the current winter quarters as the breeding area. During the late 1980s there were claimed observations of 30–90 Slender-billed Curlews in Algeria, but unfortunately these records could not be confirmed and have not been repeated.

The population of the species was estimated in 1990 to be 80–400 individuals; this may have been too optimistic and the estimate was recently reduced to 50–270 birds (see Gretton 1994 for the background to this estimate). Later, with the decrease of confirmed observations the population has been tentatively assessed at less than 50 birds. This estimate is based mainly on the number of passage birds. Several difficulties exist in producing a population estimate from such data, notably uncertainty regarding the proportion of passage birds that are likely to be seen and whether the same birds would be seen in different locations. In the decade 1969–79 an average of at least 43 birds were recorded annually, in the following decade the number decreased to 20, while in the last decade only 9 birds were recorded each year. Since 1998 only three birds were seen each year.

Life history

Breeding

Little detailed information can be given on breeding ecology and behaviour, since the only confirmed observations come from just one site at least 75 years

ago (Ushakov 1909, 1916, 1925). This site, near Tara, is close to the northern limit of the forest-steppe zone. Ushakov described the habitat as “*an extensive quaking peatbog with a dense cover of sedge...*”, with willow, birch and pine present. The habitat appeared largely unchanged during surveys in 1990 and 1994, and was closer to a taiga marsh than a typical forest-steppe marsh. It is possible that the habitat at this site was not typical of that used by the species, and thus the species may nest further north (in true taiga habitat) or south (in steppe habitat).

In the 1909 article Ushakov states that the birds “*are not seen before 10th May*”, arriving apparently already in pairs. He had “*always found single nests (quite often with Eurasian Curlew very close by) but local hunters tell me they have seen tens of nests in a small area*”. “*Complete clutches of 4 eggs have been found 30th May-11th June*”. The nests are almost always “*in the middle of the marsh, on grassy hillocks or small dry islands, 10-15m²*”.

In May 1914 Ushakov (Ushakov 1916) found a single Slender-billed Curlew nest, with four eggs (Eurasian Curlews were also nesting nearby). He shot the female, thus curtailing any further observations. Ten years later, however, Ushakov found a colony of the species, containing 14 nests (within a few metres of each other), at the same site south of Tara (Ushakov 1924).

After the young fledge, in early July, the birds stay around the nesting area for quite a long time. Post breeding migration probably starts “*in the second half of August*” (Ushakov 1909)

Feeding

There is little information available on diet. The birds at Merja Zerga have been recorded taking earthworms and tipulid larvae, while elsewhere other insects (grasshoppers, an earwig and a beetle), molluscs and crustaceans have been recorded as prey. The most detailed observations of foraging behaviour have been made in recent years at Merja Zerga (van den Berg 1988, Gretton 1991) where the species uses two contrasting habitats, brackish grazing marsh and sandy agricultural land on higher ground nearby. In both areas the birds often feed with Eurasian Curlews and the feeding behaviour is broadly similar to that species: the birds walk slowly, occasionally pecking at the surface or probing the soil; if a food item is located, intensive probing results, until the item is extracted. On average 1.5–2.75 food items were obtained per minute, and feeding was concentrated in mid-morning and mid-afternoon, with the birds roosting in the lagoon at other times.

Habitat requirements

Breeding habitat (as far as it is known) is discussed above. On migration a wide variety of habitats is used, including saltmarsh, steppe grassland, fishponds, saltpans and brackish lagoons. There is a similar degree of variation in the known wintering habitats, with some records from tidal mudflats (Tunisia), others from semi-desert 'sebkhets' (temporary brackish wetlands in Tunisia and Algeria), and others from brackish marsh and sandy farmland (such as at Merja Zerga). In view of the species' rather broad choice of habitat on passage and in winter, it is

unlikely that habitat loss in these areas has played a major part in the decline (particularly since many other wader species using the same region have not suffered such a decline). Loss of breeding-ground habitat, which may be much more specialised, would better explain such a drastic collapse. It has been argued (e.g. by Belik 1994) that the species may nest primarily in steppe areas; if so, then the massive loss of such habitat (notably in Kazakhstan) may have played a part in its decline although it is still not clear whether the timing of the species decrease (first quarter of the 20th Century and again in the 1960s) is consistent with the habitat changes in the steppe regions in northern Kazakhstan (e.g. 18 million hectares ploughed between 1953 and 1956 Geise 1983 *in* Van Impe 1995).

Threats and limiting factors

Habitat loss

Due to the lack of knowledge concerning the location of the breeding grounds, it is not possible to assess the scale of threat posed by their modification/loss. In general the taiga has been little modified, the forest-steppe partly cultivated (but with many wetlands remaining), and much of the steppe severely modified by intensive agriculture. The importance of this factor could thus range from low to high, depending on which habitat is used for nesting.

Much of the passage route has been greatly modified by man, for example the Aral Sea area and the steppe areas of central and Eastern Europe. There has also been a general loss of wetlands throughout the western Palearctic. The loss of traditional stopover sites may have had serious effects on the Slender-billed Curlew, but, as noted above, it can use a range of passage habitats and yet has still suffered a much greater decline than other waders crossing the same region.

Parts of the winter quarters (e.g. the Rharb plain of north-west Morocco) have been greatly affected by man, with large-scale drainage of wetlands. In Tunisia also, temporary freshwater marshes (e.g. Kairouan) have been seriously damaged by the construction of dams for flood control and the provision of water supplies. Elsewhere in North Africa, however, other types of wetland have been less affected, such as coastal sites and inland sebkhetts/chotts (temporary brackish wetlands, e.g. those near Constantine in Algeria). The situation is hard to assess while no regular wintering sites are known after the disappearance of the birds from Merja Zerga. In Italy repeated observation in the wetlands of Manfredonia Gulf, seem to occur during very dry period. It is not clear if this area is used only in dry years and thus the birds winter in other unknown sites in North Africa or if the birds cannot be located in other years, but recently large habitat loss has occurred in this key site (Zenatello and Baccetti 2001). In the Middle East, the marshes of Iraq are potentially a very important wintering site, but are rapidly being destroyed. The area of the central wetlands present in 2000 represent 3.1% of the wetland surface existing in 1973 (UNEP, 2001), while the area of permanent marshes overall had been reduced to 40% of the 1984/85 area (from 1,133,000ha to 457,000ha). The most dramatic habitat loss occurred in the 1990s following the second Gulf War. Recent analysis of the satellite imagery has

shown that the marshland ecosystem had collapsed by 2000 (UNEP, 2001), but measures to maintain the remaining wetlands shared between Iran and Iraq are still possible (UNEP, 2001). Surveys in Iran (WIWO 2000, 2002) confirmed that along the Persian Gulf extensive areas of suitable habitat remains, but no confirmed records have been gathered.

Importance: low-high (breeding areas)
medium-high (passage and wintering areas)

Hunting

In the early part of the twentieth century, across much of Europe, hunting of waders took place on a large scale (principally for food), with curlews (as the largest waders) being a favoured quarry. Significant numbers of Slender-billed Curlew specimens, notably from Hungary and Italy, date from this time, the birds often being from markets (Gretton 1991). Because the Slender-billed Curlew is often tamer than its congeners (Gretton 1991), it could have suffered very heavily at this time. Indeed there is considerable evidence that hunting may have been the key cause of its decline, with habitat loss an important secondary factor – though it is hard to imagine habitat loss affecting this one species more than any other European wader. The selective threat posed by hunting is clear: curlews were the prime wader targets for food, and Slender-billed Curlews (according to much evidence) were the tamest curlew. It would be difficult, perhaps impossible, to prove absolutely that hunting was the key factor some 60–100 years after the main period of decline, but the available evidence points in this direction.

At least up to the 1970s there was also strong hunting pressure in parts of North Africa. At present the threat is generally less, but between 1962 and 1987 17 Slender-billed Curlews are known to have been shot (13 of these in Italy and former Yugoslavia). With the world population being so low, this number is highly significant; the loss of even a single further bird to hunting is unacceptable. In 1995 one of the three birds in Merja Zerga was injured by a gunshot.

Importance: medium (but historically high)

Breakdown of social behaviour patterns and Allee effect

This is very much a secondary factor, not responsible for the original decline, but likely to be important in keeping numbers low following the main decline (i.e. during the last 30–50 years). Early records often referred to large flocks of the species on migration and in winter, and it is possible that the experience of older birds was important in guiding such flocks. As Slender-billed Curlew numbers fell, individuals would be more likely to join flocks of other species, notably Eurasian Curlew. The chances of Slender-billed Curlews meeting each other on the breeding grounds would become increasingly low, as was graphically described for the Eskimo Curlew by Bodsworth (1954). Without drastic (and probably unfeasible) intervention, there is little that can be done to ameliorate these effects.

Importance: medium-high (following initial decline)

Female mortality

Some statistical analysis of the records and museum specimens (Harwood & Vangeluwe 1999, Van der Have & Gallo-Orsi 2001) seems to indicate a very low recruitment and a higher mortality rate in adult females, while survival rates calculated from the records from Merja Zerga (possibly all males) indicates a high survival rate .

High mortality of females may suggest high predation rates at breeding sites.

Importance: unknown

Climate

On the basis of the available data (observation and museum specimens) it seem that in dry period in or around the breeding range the number of juveniles observed is lower than in wet period. It is not clear how low precipitation affects breeding success or recruitment (Van der Have & Gallo-Orsi 2001).

Importance: unknown

Other factors

Many other possible causes of the decline have been considered (Gretton 1991), but very few are thought plausible. Two factors, affecting parts of Kazakhstan potentially used by the species, are highly speculative but warrant a mention, although it is difficult to obtain precise information on either. The level of use of agricultural chemicals in the Aral Sea area, (e.g. DDT content in soils is about 27 times above the maximum permissible concentration (MPC) and in some regions it is 46 times higher (Kasperson *et al.* 1995)) has caused widespread concern, and has been held responsible for widespread human illness and high levels of child mortality. The lack of water in the area would serve to concentrate such chemicals still further, and could contaminate Slender-billed Curlews via their food, or directly in drinking water.

There are (unconfirmed) reports of nesting Slender-billed Curlews from Ust-Kamenogorsk and Semipalatinsk (Gavrin *et al.* 1962) in the 1920s and 1930s. The main nuclear testing ground of the former U.S.S.R. is just west of Semipalatinsk, and was used until very recently. In earlier years atmospheric tests were conducted here, presumably causing major contamination. Summer records of the species are also known from the Chelyabinsk region (Gavrin *et al.* 1962), and in recent years very high levels of radioactivity have been found in the environment near Chelyabinsk-40 (E. Nowak verbally). At present we do not have enough information to assess whether such factors could have affected the Slender-billed Curlew, but the possibility cannot be entirely ruled out.

Importance: unknown

INTERNATIONAL ACTION PLAN FOR THE SLENDER-BILLED CURLEW (*Numenius tenuirostris*)

Compiled by:

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and the

Slender-billed Curlew Working Group

Conservation status and recent conservation measures

International

A wide range of activities was carried out since 1992 across much of the species' range, under the financial support of international treaties (namely EU, CMS and AEWA).

1988-1990: BirdLife International (then ICBP) project on the species. The project resulted in the first monograph on the species (Gretton, 1991) based on extensive bibliographic research and field-work. A first Action Plan is produced.

1992 March: Meeting held at Arosio (Italy) produced a declaration of experts asking for the active involvement of the hunting community into the conservation of the species.

1993 October: At the IWRB (now Wetlands International) Black Sea meeting in Odessa (UA) discussions were held on actions necessary for the Slender-billed Curlew with the four Black Sea range-states

1994 January: Workshop is held at Merja Zerga (Morocco) attended by representative from the five relevant range-states (Italy, Spain, Morocco, Algeria, Tunisia) as well as France, Belgium and U.K. The main output was an action plan covering the five west Mediterranean range-states.

1994: An agreement of co-operation was drawn up between the Novosibirsk Institute, Dutch Government, Vogelbescherming Nederland and BirdLife International for future surveys in south-west Siberia.

1993-94 Project EU (ACNAT) "Preparation d'un plan de sauvetage pour *Numenius tenuirostris* project" (European Commission 1994), collected useful information on the conservation status of a number of key sites in Europe and carried out surveys in Western Siberia.

1994 The Bonn Convention opens for signatures the Memorandum of Understanding which has been signed (as per June 2002) by 18 range-states.

1996-1999 An EU LIFE project developed co-operation between Greek and foreign scientists, including links between Greek and Russian research.

1996 November: Workshop held in Alexandroupolis (GR) in the framework of the LIFE project.

1998 The Slender-billed Curlew Working Group is established under the auspices of the CMS was established in 1998 and is co-ordinating research activities and promoting exchange of information. BirdLife International is serving as secretariat to the working group. Experts and Governmental representatives of the range states are members.

1998 October: a first informal meeting of the SbC WG experts took place in Keszthely, Hungary alongside the Wader Study Group meeting.

1999 : The SbC Database and Bibliography is circulated among all members.

2001 April: Meeting of experts of the ScB WG and hosted by UTOP (BirdLife in Ukraine) is held in Kiyv reviewing available information and identifying research priorities. A training course is held to local ornithologists. A list of priority sites based on the SbC Database, is presented. The list is given (see annex 1) for each country.

Albania

2 records, 1992–1993 (max. 5 birds).

The species is likely to have been greatly under-recorded during much of the twentieth century, and therefore it is included here as a potential range-state (further surveys are a high priority). The Slender-billed Curlew is strictly protected by Law (.no. 7875 issued 23/11/1994), but enforcement is weak and look-alike species are not protected. The protection status of the two sites is considered unsatisfactory and proposals for their declaration as protected areas (IUCN cat. IV).

Sites with at least 1 record in the period 1975-2000

Site	Location	Protection status	Legal instrument	
Fushe-Kushe Patok	41°44'N 19°37'E	Protected	Game reserve	IBA
Butrintit	39°45'N 20°03'E	Partially protected	Game reserve	IBA

Algeria

7 records, 1977–1990 (max. 37 birds), plus 3 unconfirmed records.

The Slender-billed Curlew has been protected since 1983, but other *Numenius* species and godwits *Limosa sp.* are not protected. Since the political situation deteriorated, hunting has been entirely banned; prior to that hunting was allowed on just one day per week. There are some 40,000 licensed hunters. There is not thought to be a serious problem with the poaching of waders, while tourist hunters mainly hunt wild boar.

The RSPB carried out surveys for the Slender-billed Curlew in 1990 and 1992 (Chown and Linsley 1994), resulting in one record of the species; IRSNB also surveyed selected areas in November 1992, as part of the EU (ACNAT) project.

Sites with at least 1 record in the period 1975-2000

Site	Location	Protection status	Legal instrument	
Sebkret Guellal	36°20'N 06°20'E			
Mostaganem (Oued Chelif) - Cherchell	36°0'N 00°15'E			
Sebkhet Baker	35°58'N 05°44'E	Unknown		IBA
Nr. Chott El Frain	35°55'N 05°33'E			
Sebkret Ez Zemoul	35°53'N 06°33'E	Unknown		IBA
Chott Et Tarf	35°35'N 07°13'E	Unknown		IBA?
GDE Sebkhla d'Oran	35°31'N 00°05'W	Unknown		IBA
Vorarlberg, Rhine Delta	47°28'N 09°39'E	Protected	SPA	IBA
Styria, Ennstal	47°15'N 14°30'E	Little protection	Nature Reserve / SPA	IBA

Bulgaria

19 records, 1903–1993 (max. 4–7 birds), plus 10 unconfirmed records.

10 records (1975-2000) plus 9 unconfirmed records

Key sites: Lake Atanasovo (6 records, 2 since 1975), Chengene Skelde, Burgas area (6 records since 1975)

All *Numenius* and *Limosa* species are protected, along with most other waders (Ordinance 342, 21/4/86, but the new Biodiversity Act, developed in August 2000 by MoEW and which has to be adopted by the Parliament allows exceptions in the protection of all species thus potentially also for the SbC); the penalty for shooting a Slender-billed Curlew has been increased to the maximum (30,000 leva = c.\$450). The penalties for shooting all other curlew and godwit species are also high (10,000 leva). Among waders, only Snipe and Woodcock are legal quarry. There are some 90,000 licensed hunters, plus 700–800 foreign hunters per year. There is a problem with poaching at some areas (including Lake Atanasovo) and a serious problem with largely uncontrolled foreign hunters shooting globally threatened species (e.g. Red-breasted Goose, White-headed Duck).

The Slender-billed Curlew was not included in the 1985 Red Data Book. Bulgaria was not included as a full range-state in the 1988–1990 BirdLife International project, as only seven records of the species were then known to BirdLife International. In 1993 surveys for the species were carried out by BSPB and D. Nankinov under the EU (ACNAT) project, and recommendations for conservation action were made; these have been included in the proposals below. A management plan for Lake Atanasovo has been produced by RSPB and BSPB. The second key site, Chengene Skele, is now legally protected, following efforts by BSPB. A national plan for the conservation of wetlands has been compiled by the Ministry of the Environment, BSPB, scientific institutes in 1995 and need to be updated.

Sites with at least 1 record in the period 1975-2000. In bold sites with records after 1990.

Site	Location	Protection Status	Legal instrument	
near Lyachovo, Varna	43°24'N 28°10'E	Unknown		
Chelopechene, Sofia	42°40'N 23°18'E	Unknown		

Lake Pomorie, Burgas	42°31'N 27°39'E	Unprotected		IBA
Chengene Skelde, Burgas area	42°30'N 27°30'E	Protected	Protected landscape	IBA
near Sarafovo, Burgas area	42°30'N 27°30'E	Unknown		
Lake Atanasov, Burgas area	42°30'N 27°30'E	Protected	Nature reserve / Ramsar	IBA
near Novi Chan, Sofia	42°20'N 23°34'E	Unknown		
Mandra lake complex	42 22'N 27 25'E	Partially protected	Protected landscape	IBA

Greece

70 records, 1918–1993 (max. c.150 birds), plus 7 unconfirmed records.

53 records (1975-2000), plus 8 unconfirmed

Key sites: Evros delta (SPA), Porto Lagos (SPA), Axios delta (SPA).

Curlews and godwits are legally protected throughout the year (penalty c.\$300–3000) but illegal hunting remains problematic in Greece. Intense hunting pressure occurs in the small hunting zones within the Evros and Axios deltas. These exclude areas used by Slender-billed Curlews but the risk of disturbance or illegal encroachment by hunters remains. There are some 300,000 licensed hunters, but only a small proportion are said to pursue waterfowl and/or waders. The Slender-billed Curlew is listed in the Red Data Book (Handrinos 1992) as endangered.

Surveys for the Slender-billed Curlew (and Lesser White-fronted Goose *Anser erythropus*) were carried out at the Evros delta in 1987/88, by RSPB and the Hellenic Ornithological Society; subsequently a poster was produced for these two species. BirdLife International, with V. Goutner, carried out surveys in northern Greece in 1988 and 1989. WWF has been supporting the conservation of key Greek wetlands through the “Red Alert” project and their support of the Greek Wetland centre, established near Thessaloniki in 1991. A management plan for the Evros delta has been produced and a Joint Ministerial Decision to delineate the site is in preparation. Further work on the species was carried out during 1993–1994 under the EU (ACNAT) project (Handrinos *in* European Commission 1994) and under a second EU contract (Vangeluwe and Handrinos 1995). Subsequently a LIFE project 1996-1999 has been implemented at six key wetland sites for the species. All six sites are now fully protected and habitat management is ongoing under a current LIFE III project.

Sites with at least 1 record in the period 1975-2000. In bold sites with records after 1990.

Site	Location	Protection status	Legal Instrument	
Porto Lagos, Thace	41°00'N 25°05'E	Protected	Ramsar / SPA	IBA
Nestos Delta	40°56'N 24°40'E	Protected	Ramsar / SPA	IBA
Imeros, Thraki	40°53'N 25°15'E	Partially protected	Ramsar / SPA	IBA
Evros Delta, Thraki	40°52'N 26°00'E	Partially protected	Ramsar / SPA	IBA
Axios delta, Central Macedonia	40°30'N 22°43'E	Partially protected	Wildlife Reserve	IBA
Angelochori salines	40°29'N 22°49'E	Unprotected		IBA
Aghios Mammias marsh, Toronaïos Gulf	40°14'N 23°20'E	Unprotected		IBA
Kalamas Delta, Ipiros	39°29'N 20°07'E	Partially protected	SPA	IBA
Tsoukhalio lagoon, Amvrakikos Gulf	39°00'N 21°00'E	Protected	Ramsar / SPA	IBA
Messolonghi	38°21'N 21°30'E	Protected	Ramsar / SPA	IBA
Tigaki Lake, Kos. Is.	36°53'N 27°15'E	Partially protected	Wildlife refuge	IBA
Evrotas delta, South Peloponnese	36°49'N 22°42'E	Unprotected		IBA

Hungary

85 records, 1903–1991 (max. 36 birds), plus one unconfirmed record.

10 confirmed records (1975-2000)

Key site: Hortobágy; (4 records since 1988)

Viragoskut fish ponds n1, Balmazujavros (3 confirmed records since 1988)

(Kardoskut no records since 1972).

All three curlew species (and godwits) have been protected since 1954, and the legislation is well-respected and enforced. The fine for killing a Slender-billed Curlew is now 250,000 forint (close to the maximum) and potentially one year in jail. Among waders, only Snipe *Gallinago gallinago* and Woodcock *Scolopax rusticola* are legal quarry, and all hunting is forbidden at the key sites. There are some 45,000 licensed hunters and about 25,000 visiting hunters; there have been some problems with visiting Italians not respecting Hungarian hunting laws (e.g. Great White Egret *Egretta alba* and Ferruginous duck *Aythya nyroca* being shot). Recently some visiting hunters have been persecuted.

Hungary was fully involved in the 1988-1990 BirdLife International project and the subsequent EU (ACNAT) project. The penalty for shooting Slender-billed Curlew was recently increased (it was previously only 1,000 forint). The staff of the Hortobágy National Park are well aware of the species and its needs. Detailed management recommendations for the Hortobágy and Kardoskut were included in the ACNAT report.

Sites with at least 1 record in the period 1975-2000. In bold sites with records after 1990.

Site	Location	Protection status	Legal instrument	
Viragoskut fish ponds n1, Balmazujavros	47°41'N 21°20'E	Partially protected		IBA
Hortobagy	47°37'N 21°5'0E	Partially protected	Ramsar / Biosphere Reserve	IBA
Darkany-to, Sarkeresztur	46°54'N 18°38'E	Protected	Landscape protected area	IBA
Bosca	46°36'N 19°30'E	Protected	National Park	

Iran

6 records, 1963–1973 (max. 7 birds), plus 35 unconfirmed records.

21 unconfirmed records (1975-2000)

There is apparently virtually no wader hunting, at least for food, as the meat is considered unclean by muslims (B. Behrouzi-Rad *in litt.*). No information is available on current hunting laws and penalties. BirdLife International supported surveys in 1990, which resulted in four unconfirmed records of the species. D. A. Scott and M. Smart visited Iran in the 1992/93 winter, but did not record the species and were unable to fully evaluate the previous records (D. A. Scott *in litt.* 1994). Two expedition in early 2000 and one in 2002 failed to locate birds although large areas of apparently suitable habitat still exist. There is a urgent need for training of observers and providing them with cameras for checking identification.

Sites with at least 1 record in the period 1975-2000

Site	Location	Protection status	Legal Instrument	
Ashur-Farahabad, Caspian coast, Mazandaran	36°55'N 53°35'E	Unknown		
Miankaleh, se Caspian	36°45'N 53°30'E	Protected	Ramsar / Biosphere reserve	IBA
Parishan Lake, Fars	30°29'N 51°52'E	Unknown		
Dasht-I-Arjan Marsh, Fars	29°32'N 51°58'E	Unknown		
near Bushehr, Persian Gulf Coast	29°01'N 50°42'E	Protected	Hilleh Protected Area	IBA
Nayband Bay	27°35'N 52°40'E	Unknown		
Khor Kolahy	27°01'N 56°50'E	Unprotected		
Hara Protected Region, Persian Gulf Coast	26°50'N 55°40'E	Protected	Hara Protected Area	IBA
Mehran Delta, Persian Gulf	26°50'N 55°30'E	Protected	Part of Hara Protected Area	IBA
Khore Keretan (Khor Kargan) Persian Gulf Coast	26°17'N 57°10'E	Unprotected		
Khore Berzik, Persian Gulf Coast	26°12'N 57°17'E	Unprotected		
Khore Koheh Mobarakeh, Persian Gulf Coast	25°55'N 57°35'E	Unprotected		
Pozam Maytab (Mytiab Pozm), Seistan & Balochestan	25°40'N 59°00'E	Unprotected		IBA
Haur al Hammar, nt Nasiriya	30°40'N 46°50'E			

Iraq

3 records, 1917–1979 (max. 6 birds).

Probably greatly under-recorded; the marshes of Iraq have never been fully surveyed for birds, yet they are (or were) the largest area of freshwater marsh in the western Palearctic. Efforts were made by BirdLife International to carry out joint surveys in 1988–1989; although an invitation was received from Baghdad, it was almost immediately postponed. Subsequent developments have unfortunately made the prospect of any surveys in the near future remote. No specific conservation measures for the Slender-billed Curlew are known; meanwhile the destruction of the marshes continues apace (see above, under habitat loss).

Sites with at least 1 record in the period 1975-2000

Site	Location	Protection status		
Haur al Hammar, nt Nasiriya	30°40'N 46°50'E	unknown		

Italy

76 records, 1900–1993 (max. 7 birds), plus 6 unconfirmed records.

13 records (1975-2000), max 19 birds, plus 2 unconfirmed records

Key sites: Viareggio area (1 unconfirmed records since 1975) (SPA), Golfo di Manfredonia (part SPA); Valli di Comacchio/Ravenna coast (part SPA)(1 unconfirmed record since 1988); Circeo National Park (SPA)(1 verified record

since 1988); Laguna di Orbetello/Maremma Regional Park (both SPAs) (1 verified record since 1975).

Curlews are not listed as legal quarry species, and are thus to be considered protected. Legislation is nevertheless needed for their strict protection, with substantial penalties applicable; this would best be achieved by including the species on the special protection list. Black-tailed Godwit was removed from the quarry list, but ruff is still in the list. There are now less than 800.000 registered hunters, but uncontrolled hunting still occurs next to (and even within) protected areas. Italy (Istituto Nazionale per la Fauna Selvatica, INFS) took a full part in the BirdLife International project and the recent ACNAT project. A workshop was held on the species at Arosio on 27–29 March 1992, and produced a declaration for intended circulation among hunting organisations.

LIPU produced a first Action Plan in 1995, while INFS and the Ministry of Environment produced a new, official version in 2001 (Zenatello and Baccetti 2001). In 1995 a flock of 19 birds wintered on wetlands in the Golfo di Manfredonia which are formally protected, but which are regularly shot over. Furthermore large areas of suitable habitat outside the protected areas, used by the flock has been since largely destroyed. In December 2000 three birds have been observed in the same area.

Sites with at least 1 record in the period 1975-2000. In bold sites with records after 1990.

Site	Location	Protection status	Legal instrument	
Lame del Sesia	45°26'N 08°23'E	Protected	Regional Park	IBA
Torre del Lago, Nr. Viareggio	43°50'N 10°15'E	Protected	Regional Park / SPA	IBA
Diaccia Botrona Marsh	42°43'N 10°52'E	Protected	SPA / Ramsar	IBA
Orbetello Lagoon, Tuscany	42°27'N 11°07'E	Protected	Ramsar / SPA	IBA
Frattarolo, Puglia	41°32'N 15°50'E	Protected	National Park / SPA	IBA
L. Fogliano, Lazio	41°25'N 12°54'E	Protected	National Park / Ramsar	IBA
Saline Margherita di Savoia, Apulia	41°23'N 16°09'E	Protected	Nature Reserve / Ramsar	IBA
Lago di Pergusa, Sicily	37°31'N 14°15'E	Protected	Natural Reserve	
Lentini Lake, Sicilia	37°20'N 14°57'E	Unprotected		IBA

Kazakhstan

4 records, 1921–1991 (max. 3 birds), plus 31 records, inc. 17 summering, mapped in Gavrin *et al.* (1962).

The Slender-billed Curlew is included in the Kazakhstan Red Data Book, and is thus presumably protected, but the exact situation is not known. No other specific conservation measures are known to date. Recent expedition in the country (Cresswell *et al.* 1998) reported large habitat loss (drainage and overgrazing).

Sites with at least 1 record in the period 1975-2000

Site	Location	Protection status		
Furamanovo settlement, Maly Uzen River	49°43'N 49°28'E	Unprotected		
Karaton (30 km S Kulsary)	46°26'N 53°32'E	Unprotected		
edge Caspian Sea (80 km SW Karaton)	45°70'N 53°00' E	Unprotected		
10 km inland from edge Caspian Sea (80 km SW Karaton)	45°70'N 52°50' E	Unprotected		

Morocco

53 records, 1939–1994 (max. 500–800 birds), plus 3 unconfirmed records.

12 records (1975–2000), plus 3 unconfirmed records

Key sites: Merja Zerga (29 confirmed records since 1975, 23 since 1988).

Casablanca (3 verified records since 1975)

Oued Smir (7 verified record in the period 1975–88)

All curlew species are protected, but not godwits; prior to 1990 all curlews, including Slender-billed, were listed as quarry species. In 1979 there were 50,000 hunters, with the number rising annually, plus visiting hunters (Bergier 1987). Hunting has been permitted at Merja Mellah, in the northern part of the Merja Zerga Biological Reserve (poaching also occurs elsewhere in the reserve). In December 1989 one of the three Slender-billed Curlews was shot and wounded near Merja Mellah, adding considerable pressure to the calls for hunting to be banned from the whole area (this is expected to occur before the end of 1994: Eaux et Forêts staff, verbally). Since 1996 no birds are wintering in the area (1 unconfirmed record in 1998).

The species has occurred widely along the Atlantic coast of Morocco, but the areas in the south, such as Khnifiss, were rarely monitored until recently. A considerable amount of work has been put into surveys and research on the species. BirdLife International supported work in the 1987/88 winter (van den Berg 1988), and made visits to Merja Zerga in January 1989 and 1990 (Gretton 1991). Peace Corps volunteers, notably H. Cooper, also made observations during this winter. Several surveys were carried out in the 1993/94 winter, under the ACNAT project (Agbani and Dakki, Franchimont, in European Commission 1994). A unsuccessful survey was conducted in December 2001 in the wetlands of southern Morocco (GOMAC 2002)

Sites with at least 1 record in the period 1975-2000. In bold sites with records after 1990.

Site	Location	Protection status	Legal instrument	
Oued Smir	35°40'N 05°20'W			
Oued Tahadart	35°35'N 05°59'W			
Meja Oulad Kallouf	35°33'N 05°38'W	Unprotected		IBA
Bas-Loukkos	35°12'N 06°07'W	Partially protected	Part Monument Historique & Hunting Reserve	IBA
Larache	35°10'N 06°10'W	Partially protected	Part Monument Historique & Hunting Reserve	IBA
Marais du Bas Loukkos	35°08'N 06°04'W	Partially protected	Part Monument Historique & Hunting Reserve, part unprotected	IBA
Selbha Bou Areg, nr Melilla	35°08'N 02°57'W	Unprotected		IBA
Merja Zerga	34°52'N 06°16'W	Protected	Permanent Biological Reserve / Ramsar	IBA
Plage de Skhirate	33°57'N 06°59'W	Unprotected		
Oued Yquem	33°53'N 07°00'W			
Casablanca	33°39'N 07°35'W			
Cote al Jadida-Jorf Lasfar	33°10'N 08°31'W	Unprotected		IBA
Sidi Moussa Oualidia	32°47'N 08°57'W	Protected	Permanent Hunting Reserve	IBA
Souira Kdima	32°20'N 09°21'W			
Agadir	30°30'N 09°40'W	Partially protected	Part of Parc National de Souss Massa & Aglou	IBA
Sidi Rbat, Oued Massa	30°20'N 09°40'W			
Tifnit	30°11'N 09°39'W			

Romania

16 records, 1966–1989 (max. 30 birds).

10 records (1975-2000)

Key site: Danube delta.

The Berne Convention entered into force in 1993 following ratification by Romania, The MoU was signed in 1994 and the species, as other look-alike are protected. There is apparently little interest in shooting waders, however, among the 60,000 hunters in Romania. In 1989 the fine for shooting a curlew out of season was about £5 (NOW??). All records of the species but one have been from the Danube delta, particularly the saltmarsh areas at Istria and Razelm-Sinoie. Since 1989 the conservation prospects of the delta have improved dramatically, with several agencies now involved in protecting and managing the delta, which is now a Biosphere Reserve.

Sites with at least 1 record in the period 1975-2000. In bold sites with records after 1990.

Site	Location	Protection status	Legal Instrument	
Danube Delta area	45°05'N 29°22'E	Protected	Biosphere Reserve	IBA

Russian Federation

9 records, 1908–1991 (max. 3 birds), plus Ushakov's records near Tara.

4 records (1975–2000), plus 3 unconfirmed records

The species was included in the U.S.S.R. Red Data Book and is included in the Russian Red Data Book. It is in theory therefore protected, but in some areas this seems to apply only during the breeding season. New hunting laws are being prepared at present. Members of the Russian Federation are also free to introduce their own laws. Other curlews and godwits are legal quarry.

In 1996 22 potential breeding sites have been identified (Danileko, *et al.* 1996) and some of them checked since then. At least 4 of these areas have already been destroyed by drainage (Gallo-Orsi & Boere, 2001). IBA identification in West Siberia ongoing.

Searches for the breeding grounds were carried out annually during 1989–1995 by A. K. Yurlov, in cooperation with BirdLife International and the Dutch Government (G. Boere, Ministry of Agriculture). Searches were also carried out near Barnaul (Chupin *et al.* 1994) and Chelyabinsk. Other searches were carried out in 1996 by Morozov and colleagues in the steppes of southern West Siberia, in 1997 (Boere and Yurlov 1998) and Boyko and colleagues carried out expeditions in 1997 and 1998 (Nowak and Vangeluwe 1999). In 1999 Yurlov visited some areas. In 2000 RBCU (BirdLife in Russian Federation) carried out extensive surveys in the areas.

Sites with at least 1 record in the period 1975–2000

Site	Location	Protection status		
Lake Tennis 4km from Stary Konkul settlement, Omsk	56°00'N 72°20'E			
Lake Bolshoye, Tukmaty, Kurgan Region	54°54'N 62°20'E	Unprotected		
nr Gornostalikha, Lake Maiskoye, nr Lake Chany, Novosibirsk	54°30'N 78°10'E			
South of Omsk nr Kazakhstan border	54°14'N 73°31'E	Unprotected		
Alexandrov Gai, Kastalovka, Saratov Region possibly in Kazakhstan	50°00'N 48°40'E	Unprotected		
Stanitsa Starocherkasskay, Askai District, Rostov on Don	47°15'N 39°45'E			
Lake Katai, nr Krasnavniejsk				

Spain

6 records, 1962–1980 (max. 13 birds), plus up to 35 unconfirmed observations, all but three from Coto Doñana, January 1990 to February 1992.

Potential key site: Coto Doñana National Park (SPA).

The Slender-billed Curlew is listed as Insufficiently Known in the Spanish Red Data Book (Blanco and González 1992). It is not, however, included in the national inventory of endangered species (Royal Decree 439/1990) and thus is not legally considered as belonging to the Spanish avifauna. All other curlews and godwits are protected and there is not thought to be a problem with the hunting of large waders (R. Martí verbally and *in litt.* 1994). Among waders, only Lapwing *Vanellus vanellus*, Jack Snipe *Lymnocyptes minimus*, Snipe and Woodcock are legal quarry (Royal Decree 1095/1989). Surveys for the species were carried out in Doñana and other selected sites on the Andalusian coast, between November 1993 and January 1994, under the EU (ACNAT) project. No Slender-billed Curlew records resulted from these surveys, but a full report was produced on the past occurrence and conservation of the species (Urdiales, *in* European

Commission 1994). All records from Spain have been considered as Unverified by the Spanish rarities committee.

Tunisia

26 records, 1915–1992 (max. 32 birds), plus two unconfirmed records.

15 records 1975–2000) plus 2 unconfirmed records

Key areas: Kairouan–Monastir; Gulf of Gabès.

Curlews and godwits are not listed as quarry species, and curlews, but not godwits, are explicitly protected under Article 7, Arrêté de Chasse (curlews were listed in June 1994 following a request from BirdLife International). There were some 15,000 registered hunters in 1992–1993 (the highest number to date) plus almost 2,000 tourist hunters. Existing laws are generally respected, although there may be some poaching at certain sites. During February and March 1992 surveys of coastal wetlands were carried out by RSPB, following similar surveys in Algeria (Chown and Linsley 1994); 25 sites were checked, but no Slender-billed Curlews were seen. Further surveys were carried out the following winter (November 1992 and January 1993) by the Institut Royal des Sciences Naturelles de Belgique, under the ACNAT project, and a paper was written evaluating the probability of Slender-billed Curlew occurring with Eurasian Curlew in Tunisia (Ledant and Lafontaine, in European Commission 1994).

Sites with at least 1 record in the period 1975–2000. In bold sites with records after 1990.

Site	Location	Protection status	Legal instrument	
Rades salt pans	36°45'N 10°43'E			
Garaet Kabirah, Nr Tunis	36°28'N 9°48'E			
Oued Sed/Halk el Menzel, N. of Sousse	35°50'N 10°38'E			
Kairouan, Metbassta	35°48'N 10°09'E	Protected	Hunting Reserve	IBA
La Skhira, S. of Sfax	34°10'N 10°20'E			
S.E. Jerba Is. (Gabes)	33°45'N 11°00'E			
Thyna	33°23'N 11°08'E			
Ras Lemsa, Nr Zarzis	33°23'N 11°08'E			
Bahiret el Bibane	33°20'N 11°15'E			
El Marsa, 8 Km north of Ben Gardane	33°15'N 11°10'E			
Saline de Thyna	34°39'N 10°41'E	Protected		

Turkey

29 records, 1946–1990 (max. 4 birds), plus 3 unconfirmed records.

8 records (1975–2000), plus 1 unconfirmed.

Potential key sites: Göksu delta (3 records), Tuz Gölü, Seyfe Gölü.

The Slender-billed Curlew is protected; other curlew species and Bar-tailed Godwit have been protected since 1992. Black-tailed Godwit is still a legal quarry species (open season 15 September – 28 February). Although only 12 wader species are not strictly protected, in practice almost all waders are liable to be shot, as there is very little awareness or enforcement of existing laws. There are some 4–5 million hunters, of whom only 2 million are licensed (Magnin 1989, M. Yarar *in litt.*). DHKD helped with the 1988–1990 BirdLife International project, and issued a request to visiting birdwatchers in April 1990 for information on Slender-billed Curlew and other threatened species. DHKD also distributed information and recommendations for

conservation efforts widely among government officials. WIWO (International Wader and Waterfowl Research Group) carried out several surveys at major wetlands in the late 1980s and early 1990s, but only recorded one probable Slender-billed Curlew (Çukurova delta, 1986). The potential key sites are not fully protected and protection measures are poorly implemented.

Sites with at least 1 record in the period 1975-2000

Site	Location	Protection status	Legal instrument	
Kulu Golu	39°05'N 33°09'E	Protected	SIT	IBA
Kucuk Menderes delta	37°58'N 27°17'E	Protected	SIT	IBA
W. of Milet, Buyuk Menderes delta	37°34'N 27°13'E	Protected	National Park / SIT	IBA
Akgol, Eregli Marshes	37°30'N 33°44'E	Protected	Nature Reserve / SIT	IBA
Akyatan Golu	36°35'N 35°15'E	Protected	Ramsar	IBA
Goksu delta	36°20'N 33°59'E	Protected	Ramsar / MED SPA	IBA
Dalyan Delta	36 49'N 28 32'E	Protected	SPA	

Ukraine

15 records, 1908–1993 (max. 48 birds), plus 18 unconfirmed records.

20 records (1975 - 2000), plus 15 unconfirmed

Key areas: Danube delta; northern Black Sea; Azov Sea and Sivash lagoon; partly protected (as Zapovedniks or Zakazniks), but large areas unprotected.

The Slender-billed Curlew is listed in the Red Data Book and is protected (penalty five times the minimum monthly wage), as are Eurasian Curlew and Whimbrel *Numenius phaeopus* (penalty four times the minimum monthly wage), under the law of 19/4/93 (Appendix 1/6/93). Godwits are not protected, however, and there is little enforcement of existing laws. There are 530,000 hunters, about 1% of the population. Surveys for the species were carried out in 1993 under the ACNAT project, and WIWO has also carried out detailed work on waterbirds at Sivash (van der Have *et al.* 1992). The IWRB Black Sea meeting in Odessa in October 1993 afforded a useful opportunity to discuss Slender-billed Curlew conservation issues in the region.

In 2001 a group of 12 ornithologist specifically trained by an expert surveyed three key sites. 12 birds have been identified as Slender-billed Curlews, but no photos or good descriptions are available.

Sites with at least 1 record in the period 1975-2000. In bold sites with records after 1990.

Site	Location	Protection status	Legal instrument	
Poplavyny, Halich District, Ivano-Frankovsk Region	48°40'N 24°40'E	Unprotected		
Dolgy Island, Yagorlitsky Gulf, Nikolaev Region	46°40'N 31°48'E	Protected	Biosphere Reserve / Ramsar	IBA
Molochnyy Liman, Kivilovka	46°20'N 35°23'E	Protected	Ramsar	IBA
Black Sea Nature Reserve, Tendra Island	46°12'N 31°44'E	Protected	Nature Reserve	IBA
Danube Delta	45°30'N 29°16'E	Protected	Ramsar	IBA
Lebyashi Island, Crimea	44°45'N 34°30'E	Protected	Ramsar	IBA

Croatia

5 records, 1970–1987 (max. 2 birds), plus 11 unconfirmed records.

5 unconfirmed record (1975-2000)

Included in the 1988-1990 BirdLife International project (as part of the then Yugoslavia); the species was given considerable publicity by the Croatian Institute for Ornithology. Five Slender-billed Curlews are known to have been shot between 1970 and 1987 (three by Italian hunters). In August 1999 a number of "small, short-billed curlews" were shot by Italian hunters although the only photo available was of an Eurasian curlew.

Former Yugoslavia

38 records (32 from Vojvodina), 1900–1984 (max. 50 birds).

Key site: Šoškopo.

The Slender-billed Curlew was unprotected in the former Yugoslavia, but is apparently now protected (IRSNB 1994). In 1988, in the former Yugoslavia, there were 264,000 registered hunters, as well as many visiting hunters from abroad, particularly Italy. Two Slender-billed Curlews are known to have been shot in Vojvodina in 1962 and 1968. Surveys for the species were carried out, mainly in Vojvodina, between 1988 and 1990, under the 1988-1990 BirdLife International project. Due to the political situation no further work has been carried out.

Table of Required Actions

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
1. POLICY and LEGISLATION						
1.1 To promote broad national and international policies which ensure the long-term conservation of the Slender-billed Curlew and its habitats.	<i>1.1.1. Encourage the maximum level of protection for the Slender-billed Curlew and its habitat under international conventions</i>	During 1993–1994 the Bonn Convention Secretariat (in discussion with BirdLife International and others) developed a Memorandum of Understanding “concerning conservation measures for the Slender-billed Curlew” for signing by Slender-billed Curlew range-states. The Memorandum of Understanding provides a framework for range-state government action, while this action plan sets targets for the BirdLife International Network and NGOs, as well as governments. All Slender-billed Curlew range-states should be encouraged to sign this.	Algeria, Austria, Azerbaijan, Bosnia and Herzegovina, Federal Republic of Yugoslavia, Iraq, Kuwait, Malta, Russian Federation, Tunisia, Turkey, Turkmenistan and United Arab Emirates	CMS, BirdLife International Partners in the countries	As per August 2002, 18 Range States have signed the MoU	Lobby the countries to sign the MoU
	<i>1.1.2. Encourage international policies that promote the conservation of Slender-billed Curlew sites</i>	Many of the key sites for the Slender-billed Curlew are all IBAs (Heath & Evans 2000, Africa IBA 2001, Middle East IBAs 1994, see annex 1), and are often protected as reserves/national parks, the species also occurs occasionally at a wide range of wetland sites. Only very broad policies can promote the conservation of the range of such sites. Initiatives such as MEDWET and the ESA concept (within the EU) should be promoted where possible. Any use of international funds (e.g. from the World Bank or EU structural funds) must be carefully assessed to ensure that wetlands are not damaged.	All range states	CMS, BirdLife International Partners in the countries	34% of key sites are protected.	Increase protection of key sites

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
	<i>1.1.3. Promote international co-operation and funding from bilateral sources and other agencies</i>	The sharing both of experience and skills, and of the necessary funds to allow project work, is vitally important. Because the Slender-billed Curlew is little known and poses identification problems, the involvement of those with experience of the species in countries with limited knowledge of it can be of great value. Without outside support and funds, little will be achieved in many range-states. Bilateral support can be highly effective (e.g. Dutch government programmes in Ukraine and Russia) as can wider programmes (e.g. those funded by the EU/World Bank).	Albania, Iran, Iraq, Kazakhstan, Ukraine, Uzbekistan and Russia	UNEP, GEF, EU, National and bilateral funding agencies, etc.	Several Bilateral agreements in place for co-operation on biodiversity conservation. Some funds potentially already available.	Prepare identification material and carry out training and surveys on the filed.
	<i>1.1.4. Encourage national policies for all protected areas which ensure that all Slender-billed Curlew key sites are fully and effectively protected (including sites where the species has been seen only occasionally)</i>	Any loss of (or damage to) wetland habitat within Slender-billed Curlew key sites, should be avoided and it is recommended that hunting should be banned at these sites. National wetland inventories (and conservation strategies) should be produced by each range-state to provide a framework for setting wetland conservation priorities.	All range states	CMS, Ramsar, EU	Specific habitat management carried out in some sites in Greece. Management plan prepared for Merja Zerda (Morocco)	Development and implementation of management plans

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
1.2. To promote the full and effective legal protection for the Slender-billed Curlew and its “look-alikes” throughout its range	<i>1.2.1 Encourage legal protection of the Slender-billed Curlew</i>	Encourage the listing of the Slender-billed Curlew in each range-state as a strictly protected species, with maximum applicable penalties for contravention of the law. Countries where the species is not specifically protected in this way include Italy, Spain (not included in Royal Decree 439/1990), Tunisia and Ukraine (fine too low); the situation is unclear in Kazakhstan, Iran, Iraq and Russia.	Italy, Spain (not included in Royal Decree 439/1990), Tunisia and Ukraine (fine too low); the situation is unclear in Kazakhstan, Iran, and Iraq.		Species protected in most countries, legal status improved in Russia.	Promote full legal protection and law enforcement.
	<i>1.2.2 Encourage legal protection of look-alike species</i>	Encourage the listing of other <i>Numenius</i> and <i>Limosa</i> species (and <i>Limnodromus</i> in Russia) as protected species. This is necessary due to the problem of identifying Slender-billed Curlew; few hunters would be sure to make the correct identification until it was too late.	Albania, Algeria, Croatia, Kazakhstan, Iran, Iraq, Italy (Black-tailed Godwit, Morocco (<i>Limosa</i>), Romania, Russia (look-alike species not protected everywhere) Tunisia (specific protection needed), Turkey (Black-tailed Godwit), Ukraine (<i>Limosa</i>) and Fed. Rep Yugoslavia.			Only Bulgaria, Greece, Hungary and Spain have the necessary legislation on look-alike species.

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
2. SPECIES and HABITAT PROTECTION						
2.1. To promote the appropriate protection and management of all Slender-billed Curlew passage, wintering and breeding grounds	<i>2.1.1. Promote the statutory protection of key sites</i>	Encourage the highest category of protection – as SPA (EU and Accession countries), Ramsar sites, strict reserves, national parks, etc. - for all existing key sites (and others as they become known). The establishment of buffer zones and no-hunting areas should also be encouraged where necessary. No damaging developments should be considered inside such areas.	All range states	EU, Ramsar	52 key sites are protected. At least 17 key sites are Ramsar sites.	Improve protection status of key sites.
	2.1.2. Establish protected areas in those favourable areas identified according to point 3.3.3.	An adequate and coherent network of protected areas preserving the species preferred habitat during breeding, migration and wintering could permit the species survival and re-colonisation.	All range States	CMS- SC, BirdLife International, other NGOs		Identification and mapping of preferred habitat.
	2.1.3. Develop management plans for each of the protected areas	Declaration of a protected areas, without a adequate management will not ensure the conservation of the habitat and of the species.	All range States	CMS- SC, BirdLife International, other NGOs		Development of management plans
	<i>2.1.4. Promote protection of breeding grounds</i>	Should the breeding grounds be found, all necessary steps will need to be taken to give the species total protection from any disturbance, or threat of predation. Decisions on conservation actions on the breeding grounds should be taken by a specialist Slender-billed Curlew working group (involving those searching for the breeding grounds under the agreement of co-operation with Novosibirsk). Great care should be taken with distribution of information. If necessary such information should be kept completely confidential.	Russian Federation, Kazakhstan ?	CMS	A protocol on what should be done in the case of the discovery of the breeding grounds has been developed by the SbC WG. See Annex 2. Structure in place for immediate reaction.	

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
3. MONITORING and RESEARCH						
3.1 To locate and study the current breeding grounds						
	<i>3.1.1 Undertake ground surveys to locate breeding grounds</i>	Due to the present lack of transmitters small enough to undertake satellite tracking (see 3.1.2) ground searches for the breeding grounds should continue.	Russia, Kazakhstan	CMS, BirdLife International partnership.	Extensive surveys carried out I the potential breeding areas, Most of the potential sites visited in the last 10 years	
	<i>3.1.2 Improve understanding history of habitat loss/ human impact on breeding habitat</i>	The historical and present distribution of the species has been inferred on the basis of a single breeding location and basic knowledge on the increased human presence in the Western Siberia. No detailed study on the history of human settlements and land use has been carried out. An improved understanding of this aspect might help in narrowing down the search for the breeding sites.			Some population analysis indicates some climate-related changes in breeding success.	Gather and analyse historical data on climate and land use in the breeding areas.
	<i>3.13. Narrow down the potential areas for ground searches</i>	The contents in stable isotopes in the feathers grown at the breeding grounds may provide information on the location of the breeding grounds. Feathers from museum specimens of first winter birds should be used and compared with the contents of feathers of similar species from known areas in western Siberia.		CMS, RSPB, IRHNB	RSPB started in 2002 a pilot project, also the IRHNB is working to verify the suitability of this technique.	

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
	<i>3.1.4. Develop technology to enable use of satellite tracking (from a wintering site) to pinpoint the breeding area</i>	Such a technique will only be feasible if transmitter weight comes down to 10 g and the process must be carried out with every possible care and precaution. If battery power allows, such tracking could also provide information on the spring migration route and stopover sites. In the event of the technology becoming available, it may be necessary to establish an international protocol as to the use of the technique for this species.		SbC WG	Weight of satellite tags approaching acceptable limits.	
	<i>3.1.5. Studies in the summering/breeding area, if located</i>	In the case of the discovery of the breeding grounds or possible breeding birds immediate actions should be taken. The interest raised by such discovery may become a threat causing possible disturbance. The site should be kept confidential and all protection measures should be implemented immediately.	Russian Federation, Kazakhstan?	CMS, SbC WG	A protocol on what should be done in the case of the discovery of the breeding grounds has been developed by the SbC WG. See Annex 2. Structure in place for immediate reaction	

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
3.2.To locate and study further key wintering and passage sites	<i>3.2.1. Ground surveys</i>	<p>In the absence of the necessary satellite-tracking transmitters at present, ground surveys should be continued, particularly in the least-known countries. Much time has already been spent on such surveys and a good deal of useful information has resulted. Observers must be sufficiently experienced and training sessions organised where necessary. The use of a good telescope is essential in almost all cases. Ground surveys will be difficult in some countries (eg Algeria and Iraq) until the political situation improves.</p>	<p>Wintering areas: Algeria, Libya, Iran, Iraq, the Gulf States, Tunisia, Morocco.</p>	<p>CMS, AEWA</p>	<p>Searches in the wintering areas have been carried out in Morocco (2001), Yemen (2001), Iran (2000 & 2002). Regular monitoring are ongoing (or experienced observers are already in place in Italy, Tunisia, Greece, Bulgaria and Hungary</p>	
	<i>3.2.2. Satellite-tracking</i>	<p>If this can be carried out (and if it works well), unprecedented information will result on at least the spring migration route. If Slender-billed Curlews rest for a few days at stopover sites, observers on the ground could be alerted and could gather detailed information, as has been successfully achieved for the Lesser White-fronted Goose <i>Anser erythropus</i> in some countries. At present it is unlikely that autumn and wintering sites could be located by this means, due to limitations on battery life.</p>			<p>Weight of satellite tags approaching acceptable limits.</p>	

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
	<i>3.2.3. Monitor known (and any further identified) key sites</i>	Where possible such monitoring should be carried out by on-site (or local) reserve staff/ornithologists. Full details should be recorded of all sightings (on Slender-billed Curlew record sheets) and if possible detailed observations should be made. A full research programme should be carried out at wintering sites and, using such research, recommendations for beneficial management should be made. All records should be sent to the SbC Database maintained by BirdLife International.			Observation protocol available in different languages.	
	<i>3.2.4. Improve knowledge on habitat use in wintering areas</i>	Although at present no wintering areas are known, wintering birds offer the opportunity to study in detail their habitat use. Conventional radio tracking should be seriously considered but only if the risk of injuring/killing the animal(s) is reduced to the minimum.				
3.3. Identify potential habitat and priority sites for action	<i>3.3.1. Compile historical data on habitat preference in each part of the current and historical range.</i>	Complete compilation based on published data	Range States in Eastern Europe, western Asia and north-eastern Africa.	CMS –SC, SbC WG, IRSNB	Soma data available from specific studies. Observation protocol includes provision to collect this data	
	<i>3.3.2. Compile, on the basis of 3.3.1, a catalogue of appropriate management techniques specific to each broad geographic area</i>	A number of agencies have been producing management guides, mainly for the Mediterranean basin, but they seems to be spread and not always easy to access. Furthermore for some regions (Western and Central Asia) such guidelines might not be appropriate to the local climatic conditions.	CMS- SC, SbC WG	IRSNB, Tour du Valat, Wetland International		

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
	<i>3.3.3. Compile inventory of sites where appropriate management should be carried out</i>	On the basis of 3.3.1, supplemented by data on the current distribution of suitable habitats or on the feasibility of their restoration, locate favourable areas in each Range State. Inventory to be completed, particularly in Eastern Europe, western Asia and north-eastern Africa.	Range States (within former distribution) in particularly in Eastern Europe, western Asia and north-eastern Africa.	CMS –SC, SbC WG, IRSNB, Tour du Valat, Wetland International		
3.4. Monitor hunting activity (and poaching) at sites where it occurs	<i>3.4.1. Monitor hunting and poaching in stop over and wintering sites.</i>	Simple techniques, such as shot-counting, have been useful in Italy. This information should be used to take appropriate action to control such hunting (see 2.1.1. and 2.1.2.)	Range States (migratory and wintering areas)	SbC WG, BirdLife International Partnership.		

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
4. PUBLIC AWARENESS and TRAINING						
4.1. To increase awareness of the species' critically threatened status	<i>4.1.1 To increase awareness among politicians and decision-makers</i>	Further efforts are needed to ensure that concern about the Slender-billed Curlew's plight does not remain limited to ornithologists, but is fully shared by relevant decision-makers. The essential message to convey is that the Slender-billed Curlew is the most threatened bird species in the western Palearctic and is facing a real threat of extinction in the next immediate future. The lack of detailed knowledge, particularly concerning the breeding grounds, greatly increases the problem of conserving the species, and greater financial resources are needed if real advances are to be made. The contrast with the amount spent on certain threatened bird species in countries such as the U.S.A. is striking (e.g. >\$17 million spent on the California Condor to date). BirdLife International and other NGOs should provide advice and encouragement to governments and others, whether nationally or regionally.	All range states	CMS, AEWA, Ramsar Conventions	Regular articles published on CMS and EWA Bulletins	
	<i>4.1.2. To increase awareness among the public, particularly in range-states</i>	As the most threatened western Palearctic bird species, the Slender-billed Curlew is of great potential interest to the public, and deserves effective publicity. A well-made film would probably be the best way to achieve wide awareness (good video footage was obtained at Merja Zerga), and the publication of articles in each range-state would also be very useful.	All range states	CMS, International and national NGOs	Articles on the species appeared in a number of birding and nature magazines.	
	<i>4.1.3. To increase awareness among hunters</i>	There is an urgent need to raise greatly the awareness of the species and the part played by hunting in its decline, together with the problem of look-alike species. In general, national hunters' organisations should play a key in this (and should fund the necessary actions), aided by groups such as FACE and CIC.	All range states	CMS, CIC, FACE, AEWA		

Objective	Action Point	Activity	Range State	Collaborator	Progress / Results	Further Specific Actions
4.2. Train wardens and ornithologist and increase their identifications skills		Slender-billed Curlew is difficult to identify. It can be the case that a number of birds are seen but not correctly identified. Training should be addressed to wardens, ornithologists and should aim at increase the number of observer in those areas poorly covered. Along side lack of skills there is also a lack of adequate optic instruments (binoculars and scopes).	Range States in North Africa, Persian Gulf, Ukraine, Turkey and Central Asia	SbC WG, CMS	Training course carried out in Ukraine in 2001. Training course being planned for Uzbekistan.	
4.3. Harmonise data collection	<i>4.3.1. Distribute the Observation Protocol</i>	An observation protocol, aimed at the collection of data in a standardised format, has been produced in some languages (English, French and Greek) within a LIFE project, a Russian version has been produced with CMS funding. This document should be available to all ornithologists in all range countries.	All Range states, in particular Middle East and North Africa	SbC WG, CMS	Observation protocol translated also in Russian and distributed to ornithologists in Russian Federation, Ukraine, Belarus and Uzbekistan..	

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Annex 1

List of key sites where the species has been confirmed at least once since 1975.

Country	Site	Location	Protection status	Legal instrument	IBA	Record(s) post 1990
Albania	Butrintit	39°45'N 20°03'E	Partially protected	Game reserve	YES	
Albania	Fushe-Kushe Patok	41°44'N 19°37'E	Protected	Game reserve	YES	
Algeria	Styria, Ennstal	47°15'N 14°30'E	Little protection	Nature Reserve / SPA	YES	
Algeria	Vorarlberg, Rhine Delta	47°28'N 09°39'E	Protected	SPA	YES	
Algeria	Sebkret Guellal	36°20'N 06°20'E	Unknown			
Algeria	Mostaganem (Oued Chelif) - Cherchell	36°0'N 00°15'E	Unknown			
Algeria	Sebkhet Baker	35°58'N 05°44'E	Unknown		YES	
Algeria	nr. Chott El Frain	35°55'N 05°33'E	Unknown			
Algeria	Sebkret Ez Zemoul	35°53'N 06°33'E	Unknown		YES	
Algeria	Chott Et Tarf	35°35'N 07°13'E	Unknown		YES?	
Algeria	GDE Sebkha d'Oran	35°31'N 00°05'W	Unknown		YES	
Bulgaria	Chengene Skelde, Burgas area	42°30'N 27°30'E	Protected	Protected landscape	YES	X
Bulgaria	Lake Atanasov, Burgas area	42°30'N 27°30'E	Protected	Nature reserve / Ramsar	YES	X
Bulgaria	Mandra lake complex	42 22'N 27 25'E	Partially protected	Protected landscape	YES	
Bulgaria	near Lyachovo, Varna	43°24'N 28°10'E	Unknown			
Bulgaria	Chelopechene, Sofia	42°40'N 23°18'E	Unknown			
Bulgaria	near Sarafovo, Burgas area	42°30'N 27°30'E	Unknown			
Bulgaria	near Novi Chan, Sofia	42°20'N 23°34'E	Unknown			
Bulgaria	Lake Pomorie, Burgas	42°31'N 27°39'E	Unprotected		YES	
Greece	Evros Delta, Thraki	40°52'N 26°00'E	Partially protected	Ramsar / SPA	YES	X
Greece	Axios delta, Central Macedonia	40°30'N 22°43'E	Partially protected	Wildlife Reserve	YES	X
Greece	Porto Lagos, Thace	41°00'N 25°05'E	Protected	Ramsar / SPA	YES	X
Greece	Imeros, Thraki	40°53'N 25°15'E	Partially protected	Ramsar / SPA	YES	
Greece	Kalamas Delta, Ipiros	39°29'N 20°07'E	Partially protected	SPA	YES	
Greece	Tigaki Lake, Kos. Is.	36°53'N 27°15'E	Partially protected	Wildlife refuge	YES	

Country	Site	Location	Protection status	Legal instrument	IBA	Record(s) post 1990
Greece	Nestos Delta	40°56'N 24°40'E	Protected	Ramsar / SPA	YES	
Greece	Tsoukalio lagoon, Amvrakikos Gulf	39°00'N 21°00'E	Protected	Ramsar / SPA	YES	
Greece	Messolonghi	38°21'N 21°30'E	Protected	Ramsar / SPA	YES	
Greece	Angelochori salines	40°29'N 22°49'E	Unprotected		YES	
Greece	Aghios Mammias marsh, Toronaios Gulf	40°14'N 23°20'E	Unprotected		YES	
Greece	Evrotas delta, South Peloponnese	36°49'N 22°42'E	Unprotected		YES	
Hungary	Viragoskut fish ponds n1, Balmazujavros	47°41'N 21°20'E	Partially protected		YES	X
Hungary	Hortobagy	47°37'N 21°50'E	Partially protected	Ramsar / Biosphere Reserve	YES	X
Hungary	Darkany-to, Sarkeresztur	46°54'N 18°38'E	Protected	Landscape protected area	YES	
Hungary	Bosca	46°36'N 19°30'E	Protected	National Park		
Iran	Miankaleh, se Caspian	36°45'N 53°30'E	Protected	Ramsar / Biosphere reserve	YES	
Iran	near Bushehr, Persian Gulf Coast	29°01'N 50°42'E	Protected	Hilleh Protected Area	YES	
Iran	Hara Protected Region, Persian Gulf Coast	26°50'N 55°40'E	Protected	Hara Protected Area	YES	
Iran	Mehran Delta, Persian Gulf	26°50'N 55°30'E	Protected	Part of Hara Protected Area	YES	
Iran	Ashur-Farahabad, Caspian coast, Mazandaran	36°55'N 53°35'E	Unknown			
Iran	Parishan Lake, Fars	30°29'N 51°52'E	Unknown			
Iran	Dasht-I-Arjan Marsh, Fars	29°32'N 51°58'E	Unknown			
Iran	Nayband Bay	27°35'N 52°40'E	Unknown			
Iran	Haur al Hammar, nt Nasiriya	30°40'N 46°50'E	Unknown			
Iran	Khor Kolahy	27°01'N 56°50'E	Unprotected			
Iran	Khore Keretan (Khor Kargan) Persian Gulf Coast	26°17'N 57°10'E	Unprotected			
Iran	Khore Berzik, Persian Gulf Coast	26°12'N 57°17'E	Unprotected			
Iran	Khore Koheh Mobarakeh, Persian Gulf Coast	25°55'N 57°35'E	Unprotected			
Iran	Pozam Maytab (Mytiab Pozm), Seistan & Balochestan	25°40'N 59°00'E	Unprotected		YES	
Iraq	Haur al Hammar, nt Nasiriya	30°40'N 46°50'E	Unknown			
Italy	Torre del Lago, Nr. Viareggio	43°50'N 10°15'E	Protected	Regional Park / SPA	YES	X
Italy	Diaccia Botrona Marsh	42°43'N 10°52'E	Protected	SPA / Ramsar	YES	X
Italy	Orbetello Lagoon, Tuscany	42°27'N 11°07'E	Protected	Ramsar / SPA	YES	X

Country	Site	Location	Protection status	Legal instrument	IBA	Record(s) post 1990
Italy	Frattarolo, Puglia	41°32'N 15°50'E	Protected	National Park / SPA	YES	X
Italy	L. Fogliano, Lazio	41°25'N 12°54'E	Protected	National Park / Ramsar	YES	X
Italy	Saline Margherita di Savoia, Apulia	41°23'N 16°09'E	Protected	Nature Reserve / Ramsar	YES	X
Italy	Lentini Lake, Sicilia	37°20'N 14°57'E	Unprotected		YES	X
Italy	Lame del Sesia	45°26'N 08°23'E	Protected	Regional Park	YES	
Italy	Lago di Pergusa, Sicily	37°31'N 14°15'E	Protected	Natural Reserve		
Kazakhstan	Furamanovo settlement, Maly Uzen River	49°43'N 49°28'E	Unprotected			
Kazakhstan	Karaton (30 km S Kulsary)	46°26'N 53°32'E	Unprotected			
Kazakhstan	edge Caspian Sea (80 km SW Karaton)	45°70'N 53°00' E	Unprotected			
Kazakhstan	10 km inland from edge Caspian Sea (80 km SW Karaton)	45°70'N 52°50' E	Unprotected			
Morocco	Merja Zerga	34°52'N 06°16'W	Protected	Permanent Biological Reserve / Ramsar	YES	X
Morocco	Oued Smir	35°40'N 05°20'W	Unknown			X
Morocco	Casablanca	33°39'N 07°35'W	Unknown			X
Morocco	Bas-Loukkos	35°12'N 06°07'W	Partially protected	Part Monument Historique & Hunting Reserve	YES	
Morocco	Larache	35°10'N 06°10'W	Partially protected	Part Monument Historique & Hunting Reserve	YES	
Morocco	Marais du Bas Loukkos	35°08'N 06°04'W	Partially protected	Part Monument Historique & Hunting Reserve, part unprotected	YES	
Morocco	Agadir	30°30'N 09°40'W	Partially protected	Part of Parc National de Souss Massa & Aglou	YES	
Morocco	Sidi Moussa Oualidia	32°47'N 08°57'W	Protected	Permanent Hunting Reserve	YES	
Morocco	Oued Tahadart	35°35'N 05°59'W	Unknown			
Morocco	Oued Yquem	33°53'N 07°00'W	Unknown			
Morocco	Souira Kdima	32°20'N 09°21'W	Unknown			
Morocco	Sidi Rbat, Oued Massa	30°20'N 09°40'W	Unknown			

Country	Site	Location	Protection status	Legal instrument	IBA	Record(s) post 1990
Morocco	Tifnit	30°11'N 09°39'W	Unknown			
Morocco	Meja Oulad Kallouf	35°33'N 05°38'W	Unprotected		YES	
Morocco	Selbha Bou Areg, nr Melilla	35°08'N 02°57'W	Unprotected		YES	
Morocco	Plage de Skhirate	33°57'N 06°59'W	Unprotected			
Morocco	Cote al Jadida-Jorf Lasfar	33°10'N 08°31'W	Unprotected		YES	
Romania	Danube Delta area	45°05'N 29°22'E	Protected	Biosphere Reserve	YES	X
Russian Federation	Lake Tennis 4km from Stary Konkul settlement, Omsk	56°00'N 72°20'E	Unknown			
Russian Federation	nr Gornostalikha, Lake Maiskoye, nr Lake Chany, Novosibirsk	54°30'N 78°10'E	Unknown			
Russian Federation	Stanitsa Starocherkasskay, Askai District, Rostov on Don	47°15'N 39°45'E	Unknown			
Russian Federation	Lake Katai, nr Krasnavniejsk		Unknown			
Russian Federation	Lake Bolshoye, Tukmaty, Kurgan Region	54°54'N 62°20'E	Unprotected			
Russian Federation	South of Omsk nr Kazakhstan border	54°14'N 73°31'E	Unprotected			
Russian Federation	Alexandrov Gai, Kastalovka, Saratov Region possibly in Kazakhstan	50°00'N 48°40'E	Unprotected			
Tunisia	Kairouan, Metbassta	35°48'N 10°09'E	Protected	Hunting Reserve	YES	X
Tunisia	Saline de Thyna	34°39'N 10°41'E	Protected			X
Tunisia	Oued Sed/Halk el Menzel, N. of Sousse	35°50'N 10°38'E	Unknown			X
Tunisia	La Skhira, S. of Sfax	34°10'N 10°20'E	Unknown			X
Tunisia	S.E. Jerba Is. (Gabes)	33°45'N 11°00'E	Unknown			X
Tunisia	Thyna	33°23'N 11°08'E	Unknown			X
Tunisia	Ras Lemsas, Nr Zarzis	33°23'N 11°08'E	Unknown			X
Tunisia	Bahiret el BYesne	33°20'N 11°15'E	Unknown			X
Tunisia	El Marsa, 8 Km north of Ben Gardane	33°15'N 11°10'E	Unknown			X

Country	Site	Location	Protection status	Legal instrument	IBA	Record(s) post 1990
Tunisia	Rades salt pans	36°45'N 10°43'E	Unknown			
Tunisia	Garaet Kabirah, Nr Tunis	36°28'N 9°48'E	Unknown			
Turkey	Kulu Golu	39°05'N 33°09'E	Protected	SIT	YES	
Turkey	Kucuk Menderes delta	37°58'N 27°17'E	Protected	SIT	YES	
Turkey	W. of Milet, Buyuk Menderes delta	37°34'N 27°13'E	Protected	National Park / SIT	YES	
Turkey	Akgol, Eregli Marshes	37°30'N 33°44'E	Protected	Nature Reserve / SIT	YES	
Turkey	Akyatan Golu	36°35'N 35°15'E	Protected	Ramsar	YES	
Turkey	Goksu delta	36°20'N 33°59'E	Protected	Ramsar / MED SPA	YES	
Turkey	Dalyan Delta	36 49'N 28 32'E	Protected	SPA		
Ukraine	Molochnyy Liman, Kivilovka	46°20'N 35°23'E	Protected	Ramsar	YES	X
Ukraine	Black Sea Nature Reserve, Tendra Island	46°12'N 31°44'E	Protected	Nature Reserve	YES	X
Ukraine	Danube Delta	45°30'N 29°16'E	Protected	Ramsar	YES	X
Ukraine	Lebyashi Island, Crimea	44°45'N 34°30'E	Protected	Ramsar	YES	X
Ukraine	Dolgy Island, Yagorlitsky Gulf, Nikolaev Region	46°40'N 31°48'E	Protected	Biosphere Reserve / Ramsar	YES	
Ukraine	Poplavyny, Halich District, Ivano-Frankovsk Region	48°40'N 24°40'E	Unprotected			

ANNEX 2

Revised recommendation on action to be taken if a nest is found

It is agreed that if a nest (breeding site) of the slender-billed curlew is found during surveys,

1. The Russian Bird Conservation Union (Headquarters in Moscow), the State Committee for Environmental Protection of Russian Federation, the relevant regional Committee for Environmental Protection and Natural Resources (or respectively other federal and regional authorities of the responsibilities), BirdLife International, and the Bonn Convention Secretariat will be informed by the survey team of the location of the breeding area on the condition that this information is used internally for species conservation purposes.
2. As a possible breeding pair is found, no attempt to find the nest should be made and the finder should immediately contact Vladimir Morozov (RBCU Headquarters in Moscow) and Alexander Yurlov (Novosibirsk region) who will act as focal points and assist the finder and decide on action to be taken on the basis of an agreed protocol.
3. All possible immediate measures should be taken to protect the birds, their nest, eggs and young and the area.
4. Priority attention must be given to assessing the threats and breeding biology of the species, and to obtaining documentary evidence (photos, videos) to confirm the finding.
5. The number of people informed on the nest location should be kept at the lowest possible level.
6. No artificial raising of young must take place; instead information on habitat associations during brooding period is of vital importance.
7. Survey team must fill in a detailed IBA Datasheet excluding exact information on the geographical location of the nest.
8. All publications emerging after or relevant to the location of the nest should exclude geographical information on the nest location.

ANNEX 3 -

Threats to European Key sites for the Slender-billed Curlew identified as IBAs (Important Bird Areas)

Source: BirdLife IBA DataBase, assessed in March 2001.

The threats are those affecting the IBA, and do not necessarily affect the Slender-billed Curlew or its habitat.

For a description of the Threats and the evaluation of the impact see: Heath M.F. & M.I. Evans eds. (2000) *Important Bird Areas in Europe: Priority sites for conservation*. 2 Vols. Cambridge, UK: BirdLife International (BirdLife Conservation Series No. 8).

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Albania	Butrinti	AL012	Lake Butrinti	Recreation/tourism	High
Albania	Butrinti	AL012	Lake Butrinti	Disturbance to birds	High
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Unsustainable exploitation	Medium
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Recreation/tourism	Medium
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Forest grazing	Medium
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Firewood collection	High
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Dredging and canalization	High
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Drainage	High
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Disturbance to birds	High
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Deforestation (commercial)	High
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Aquaculture/fisheries	High
Albania	Fushe-Kushe Patok	AL014	Patoku lagoon	Agricultural intensification and expansion	High
Austria	Vorarlberg, Rhine Delta	AT055	Delta of the Rhine and Lauteracher Ried	Intensified forest management	Low
Austria	Vorarlberg, Rhine Delta	AT055	Delta of the Rhine and Lauteracher Ried	Recreation/tourism	Medium
Austria	Vorarlberg, Rhine Delta	AT055	Delta of the Rhine and Lauteracher Ried	Drainage	Medium
Austria	Vorarlberg, Rhine Delta	AT055	Delta of the Rhine and Lauteracher Ried	Disturbance to birds	Medium
Austria	Vorarlberg, Rhine Delta	AT055	Delta of the Rhine and Lauteracher Ried	Aquaculture/fisheries	Medium
Austria	Vorarlberg, Rhine Delta	AT055	Delta of the Rhine and Lauteracher Ried	Agricultural intensification and expansion	High

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
				expansion	
Bulgaria	Mandra lake complex	BG034	Mandra--Poda complex	Burning of vegetation	Low
Bulgaria	Mandra lake complex	BG034	Mandra--Poda complex	Infrastructure	Medium
Bulgaria	Mandra lake complex	BG034	Mandra--Poda complex	Industrialization and urbanization	Medium
Bulgaria	Mandra lake complex	BG034	Mandra--Poda complex	Unsustainable exploitation	High
Bulgaria	Lake Atanasov, Burgas area	BG036	Atanasovo lake	Other	Medium
Bulgaria	Lake Atanasov, Burgas area	BG036	Atanasovo lake	Other	Medium
Bulgaria	Lake Atanasov, Burgas area	BG036	Atanasovo lake	Disturbance to birds	Medium
Bulgaria	Lake Atanasov, Burgas area	BG036	Atanasovo lake	Disturbance to birds	Medium
Bulgaria	Lake Atanasov, Burgas area	BG036	Atanasovo lake	Infrastructure	High
Bulgaria	Lake Atanasov, Burgas area	BG036	Atanasovo lake	Infrastructure	High
Bulgaria	Lake Pomorie, Burgas	BG037	Lake Pomorie	Abandonment/reduction of land management	Low
Bulgaria	Lake Pomorie, Burgas	BG037	Lake Pomorie	Unsustainable exploitation	Medium
Bulgaria	Lake Pomorie, Burgas	BG037	Lake Pomorie	Industrialization and urbanization	Medium
Bulgaria	Chengene Skelde, Burgas area	BG042	Chengene Skele	Unsustainable exploitation	Medium
Bulgaria	Chengene Skelde, Burgas area	BG042	Chengene Skele	Unsustainable exploitation	Medium
Bulgaria	Chengene Skelde, Burgas area	BG042	Chengene Skele	Disturbance to birds	Medium
Bulgaria	Chengene Skelde, Burgas area	BG042	Chengene Skele	Disturbance to birds	Medium
Croatia	Donji Miholjac	HR006	Donji Miholjac fish-ponds	Unsustainable exploitation	Unknown

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Croatia	Donji Miholjac	HR006	Donji Miholjac fish-ponds	Burning of vegetation	Low
Croatia	Donji Miholjac	HR006	Donji Miholjac fish-ponds	Disturbance to birds	Medium
Croatia	Donji Miholjac	HR006	Donji Miholjac fish-ponds	Aquaculture/fisheries	Medium
Croatia	Jelas polje	HR008	Jelas field	Burning of vegetation	Low
Croatia	Jelas polje	HR008	Jelas field	Intensified forest management	Medium
Croatia	Jelas polje	HR008	Jelas field	Disturbance to birds	Medium
Croatia	Jelas polje	HR008	Jelas field	Aquaculture/fisheries	Medium
Croatia	Jelas polje	HR008	Jelas field	Agricultural intensification and expansion	Medium
Croatia	Jelas polje	HR008	Jelas field	Abandonment/reduction of land management	High
Croatia	Koncanica	HR010	Koncanica fish-ponds and surrounding area	Unsustainable exploitation	Unknown
Croatia	Koncanica	HR010	Koncanica fish-ponds and surrounding area	Other	Medium
Croatia	Koncanica	HR010	Koncanica fish-ponds and surrounding area	Disturbance to birds	Medium
Croatia	Koncanica	HR010	Koncanica fish-ponds and surrounding area	Deforestation (commercial)	Medium
Croatia	Koncanica	HR010	Koncanica fish-ponds and surrounding area	Aquaculture/fisheries	Medium
Croatia	Koncanica	HR010	Koncanica fish-ponds and surrounding area	Agricultural intensification and expansion	Medium
France	Ouessant, Finistere	FR013	Ile d'Ouessant		Unknown
Greece	Evros Delta, Thraki	GR006	Evros delta	Industrialization and urbanization	Low
Greece	Evros Delta, Thraki	GR006	Evros delta	Construction and impact of dykes/dams/barrage	Low
Greece	Evros Delta, Thraki	GR006	Evros delta	Recreation/tourism	Medium
Greece	Evros Delta, Thraki	GR006	Evros delta	Forest grazing	Medium
Greece	Evros Delta, Thraki	GR006	Evros delta	Firewood collection	Medium
Greece	Evros Delta, Thraki	GR006	Evros delta	Dredging and canalization	Medium
Greece	Evros Delta, Thraki	GR006	Evros delta	Unsustainable exploitation	High
Greece	Evros Delta, Thraki	GR006	Evros delta	Groundwater abstraction	High
Greece	Evros Delta, Thraki	GR006	Evros delta	Drainage	High

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Greece	Evros Delta, Thraki	GR006	Evros delta	Agricultural intensification and expansion	High
Greece	Imeros, Thraki	GR010	Lake Mitrikou (Ismarida)	Drainage	Unknown
Greece	Imeros, Thraki	GR010	Lake Mitrikou (Ismarida)	Recreation/tourism	Medium
Greece	Imeros, Thraki	GR010	Lake Mitrikou (Ismarida)	Groundwater abstraction	Medium
Greece	Imeros, Thraki	GR010	Lake Mitrikou (Ismarida)	Aquaculture/fisheries	Medium
Greece	Imeros, Thraki	GR010	Lake Mitrikou (Ismarida)	Unsustainable exploitation	High
Greece	Imeros, Thraki	GR010	Lake Mitrikou (Ismarida)	Infrastructure	High
Greece	Imeros, Thraki	GR010	Lake Mitrikou (Ismarida)	Industrialization and urbanization	High
Greece	Imeros, Thraki	GR010	Lake Mitrikou (Ismarida)	Agricultural intensification and expansion	High
Greece	Porto Lagos, Thace	GR011	Porto Lagos, Lake Vistonis, and coastal lagoons (Lakes of Thrace)	Aquaculture/fisheries	Unknown
Greece	Porto Lagos, Thace	GR011	Porto Lagos, Lake Vistonis, and coastal lagoons (Lakes of Thrace)	Recreation/tourism	Low
Greece	Porto Lagos, Thace	GR011	Porto Lagos, Lake Vistonis, and coastal lagoons (Lakes of Thrace)	Unsustainable exploitation	Medium
Greece	Porto Lagos, Thace	GR011	Porto Lagos, Lake Vistonis, and coastal lagoons (Lakes of Thrace)	Industrialization and urbanization	Medium
Greece	Porto Lagos, Thace	GR011	Porto Lagos, Lake Vistonis, and coastal lagoons (Lakes of Thrace)	Infrastructure	High
Greece	Porto Lagos, Thace	GR011	Porto Lagos, Lake Vistonis, and coastal lagoons (Lakes of Thrace)	Groundwater abstraction	High
Greece	Porto Lagos, Thace	GR011	Porto Lagos, Lake Vistonis, and coastal lagoons (Lakes of Thrace)	Drainage	High
Greece	Porto Lagos, Thace	GR011	Porto Lagos, Lake Vistonis, and coastal lagoons (Lakes of Thrace)	Agricultural intensification and expansion	High
Greece	Nestos Delta	GR012	Nestou delta and coastal lagoons	Deforestation (commercial)	Low
Greece	Nestos Delta	GR012	Nestou delta and coastal lagoons	Unsustainable exploitation	Medium

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Greece	Nestos Delta	GR012	Nestou delta and coastal lagoons	Infrastructure	Medium
Greece	Nestos Delta	GR012	Nestou delta and coastal lagoons	Industrialization and urbanization	Medium
Greece	Nestos Delta	GR012	Nestou delta and coastal lagoons	Drainage	Medium
Greece	Nestos Delta	GR012	Nestou delta and coastal lagoons	Aquaculture/fisheries	Medium
Greece	Nestos Delta	GR012	Nestou delta and coastal lagoons	Construction and impact of dykes/dams/barrage	High
Greece	Nestos Delta	GR012	Nestou delta and coastal lagoons	Agricultural intensification and expansion	High
Greece	Axios delta, Central Macedonia	GR028	Axios, Loudias, and Aliakmon estuaries	Construction and impact of dykes/dams/barrage	Low
Greece	Axios delta, Central Macedonia	GR028	Axios, Loudias, and Aliakmon estuaries	Unsustainable exploitation	Medium
Greece	Axios delta, Central Macedonia	GR028	Axios, Loudias, and Aliakmon estuaries	Industrialization and urbanization	High
Greece	Axios delta, Central Macedonia	GR028	Axios, Loudias, and Aliakmon estuaries	Dredging and canalization	High
Greece	Axios delta, Central Macedonia	GR028	Axios, Loudias, and Aliakmon estuaries	Agricultural intensification and expansion	High
Greece	Angelochori salines	GR030	Alyki Angelochoriou lagoon (Megalou Emvolou)	Recreation/tourism	Low
Greece	Angelochori salines	GR030	Alyki Angelochoriou lagoon (Megalou Emvolou)	Aquaculture/fisheries	Medium
Greece	Angelochori salines	GR030	Alyki Angelochoriou lagoon (Megalou Emvolou)	Unsustainable exploitation	High
Greece	Aghios Mammas marsh, Toronaios Gulf	GR034	Aghios Mamas marsh	Other	Low
Greece	Aghios Mammas marsh, Toronaios Gulf	GR034	Aghios Mamas marsh	Dredging and canalization	Low
Greece	Aghios Mammas marsh, Toronaios Gulf	GR034	Aghios Mamas marsh	Recreation/tourism	Medium

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Greece	Aghios Mammas marsh, Toronaïos Gulf	GR034	Aghios Mamas marsh	Industrialization and urbanization	Medium
Greece	Aghios Mammas marsh, Toronaïos Gulf	GR034	Aghios Mamas marsh	Filling in of wetlands	Medium
Greece	Aghios Mammas marsh, Toronaïos Gulf	GR034	Aghios Mamas marsh	Unsustainable exploitation	High
Greece	Kalamas Delta, Ipiros	GR074	Kalamas estuary	Recreation/tourism	Low
Greece	Kalamas Delta, Ipiros	GR074	Kalamas estuary	Infrastructure	Medium
Greece	Kalamas Delta, Ipiros	GR074	Kalamas estuary	Drainage	Medium
Greece	Kalamas Delta, Ipiros	GR074	Kalamas estuary	Burning of vegetation	Medium
Greece	Kalamas Delta, Ipiros	GR074	Kalamas estuary	Unsustainable exploitation	High
Greece	Kalamas Delta, Ipiros	GR074	Kalamas estuary	Agricultural intensification and expansion	High
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Infrastructure	Unknown
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Construction and impact of dykes/dams/barrage	Unknown
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Extraction industry (mining)	Medium
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Drainage	Medium
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Unsustainable exploitation	High
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Recreation/tourism	High
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Industrialization and urbanization	High
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Groundwater abstraction	High
Greece	Tsoukalio lagoon,	GR081	Amvrakikos gulf	Dredging and canalization	High

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
	Amvrakikos Gulf				
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Disturbance to birds	High
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Aquaculture/fisheries	High
Greece	Tsoukalio lagoon, Amvrakikos Gulf	GR081	Amvrakikos gulf	Agricultural intensification and expansion	High
Greece	Messolonghi	GR092	Mesolongi and Aetoliko lagoons, and Acheloos and Evinos estuaries	Aquaculture/fisheries	Low
Greece	Messolonghi	GR092	Mesolongi and Aetoliko lagoons, and Acheloos and Evinos estuaries	Unsustainable exploitation	Medium
Greece	Messolonghi	GR092	Mesolongi and Aetoliko lagoons, and Acheloos and Evinos estuaries	Filling in of wetlands	Medium
Greece	Messolonghi	GR092	Mesolongi and Aetoliko lagoons, and Acheloos and Evinos estuaries	Drainage	Medium
Greece	Messolonghi	GR092	Mesolongi and Aetoliko lagoons, and Acheloos and Evinos estuaries	Industrialization and urbanization	High
Greece	Messolonghi	GR092	Mesolongi and Aetoliko lagoons, and Acheloos and Evinos estuaries	Construction and impact of dykes/dams/barrage	High
Greece	Messolonghi	GR092	Mesolongi and Aetoliko lagoons, and Acheloos and Evinos estuaries	Agricultural intensification and expansion	High
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Drainage	Unknown
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Recreation/tourism	Low
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Industrialization and urbanization	Low
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Abandonment/reduction of land management	Low
Greece	Evrotas delta, South	GR122	Evrota delta	Infrastructure	Medium

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
	Peloponnese				
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Filling in of wetlands	Medium
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Dredging and canalization	Medium
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Construction and impact of dykes/dams/barrage	Medium
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Unsustainable exploitation	High
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Groundwater abstraction	High
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Aquaculture/fisheries	High
Greece	Evrotas delta, South Peloponnese	GR122	Evrota delta	Agricultural intensification and expansion	High
Greece	Tigaki Lake, Kos. Is.	GR166	Mount Dikios, Cape Louros, Lake Psalidi, and Alyki	Intensified forest management	Unknown
Greece	Tigaki Lake, Kos. Is.	GR166	Mount Dikios, Cape Louros, Lake Psalidi, and Alyki	Drainage	Unknown
Greece	Tigaki Lake, Kos. Is.	GR166	Mount Dikios, Cape Louros, Lake Psalidi, and Alyki	Agricultural intensification and expansion	Low
Greece	Tigaki Lake, Kos. Is.	GR166	Mount Dikios, Cape Louros, Lake Psalidi, and Alyki	Unsustainable exploitation	Medium
Greece	Tigaki Lake, Kos. Is.	GR166	Mount Dikios, Cape Louros, Lake Psalidi, and Alyki	Recreation/tourism	Medium
Greece	Tigaki Lake, Kos. Is.	GR166	Mount Dikios, Cape Louros, Lake Psalidi, and Alyki	Infrastructure	High
Greece	Tigaki Lake, Kos. Is.	GR166	Mount Dikios, Cape Louros, Lake Psalidi, and Alyki	Industrialization and urbanization	High
Hungary	Hortobagy	HU032	Hortobágy	Recreation/tourism	Medium

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Hungary	Hortobagy	HU032	Hortobágy	Drainage	Medium
Hungary	Hortobagy	HU032	Hortobágy	Disturbance to birds	Medium
Hungary	Hortobagy	HU032	Hortobágy	Burning of vegetation	Medium
Hungary	Hortobagy	HU032	Hortobágy	Aquaculture/fisheries	Medium
Hungary	Hortobagy	HU032	Hortobágy	Abandonment/reduction of land management	Medium
Hungary	Darkany-to, Sarkeresztur				Unknown
Italy	Lame del sesia	IT020	River Sesia heronries	Agricultural intensification and expansion	Medium
Italy	Comacchio, Emilia-Romagna	IT072	Valli di Comacchio and Bonifica del Mezzano	Agricultural intensification and expansion	Low
Italy	Comacchio, Emilia-Romagna	IT072	Valli di Comacchio and Bonifica del Mezzano	Unsustainable exploitation	Medium
Italy	Comacchio, Emilia-Romagna	IT072	Valli di Comacchio and Bonifica del Mezzano	Natural events	Medium
Italy	Comacchio, Emilia-Romagna	IT072	Valli di Comacchio and Bonifica del Mezzano	Groundwater abstraction	Medium
Italy	Comacchio, Emilia-Romagna	IT072	Valli di Comacchio and Bonifica del Mezzano	Disturbance to birds	Medium
Italy	Comacchio, Emilia-Romagna	IT072	Valli di Comacchio and Bonifica del Mezzano	Aquaculture/fisheries	Medium
Italy	Torre del Lago, Nr. Viareggio	IT077	Lake Massaciuccoli	Disturbance to birds	Low
Italy	Torre del Lago, Nr. Viareggio	IT077	Lake Massaciuccoli	Aquaculture/fisheries	Low
Italy	Torre del Lago, Nr. Viareggio	IT077	Lake Massaciuccoli	Abandonment/reduction of land management	Low
Italy	Torre del Lago, Nr. Viareggio	IT077	Lake Massaciuccoli	Infrastructure	Medium
Italy	Torre del Lago, Nr.	IT077	Lake Massaciuccoli	Industrialization and urbanization	Medium

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
	Viareggio				
Italy	Torre del Lago, Nr. Viareggio	IT077	Lake Massaciuccoli	Filling in of wetlands	Medium
Italy	Torre del Lago, Nr. Viareggio	IT077	Lake Massaciuccoli	Agricultural intensification and expansion	High
Italy		IT082	Migliarino--San Rossore	Afforestation	Low
Italy		IT082	Migliarino--San Rossore	Consequences of animal/plant introductions	Medium
Italy		IT082	Migliarino--San Rossore	Other	High
Italy		IT082	Migliarino--San Rossore	Natural events	High
Italy	Diaccia Botrona Marsh	IT097	Diaccia Botrona	Drainage	Low
Italy	Diaccia Botrona Marsh	IT097	Diaccia Botrona	Groundwater abstraction	Medium
Italy	Diaccia Botrona Marsh	IT097	Diaccia Botrona	Disturbance to birds	High
Italy	Diaccia Botrona Marsh	IT097	Diaccia Botrona	Aquaculture/fisheries	High
Italy		IT098	Uccellina mountains, Trappola marshes and Ombrone mouth	Recreation/tourism	Low
Italy		IT098	Uccellina mountains, Trappola marshes and Ombrone mouth	Afforestation	Low
Italy		IT098	Uccellina mountains, Trappola marshes and Ombrone mouth	Other	Medium
Italy		IT098	Uccellina mountains, Trappola marshes and Ombrone mouth	Disturbance to birds	Medium
Italy		IT098	Uccellina mountains, Trappola marshes and Ombrone mouth	Agricultural intensification and expansion	Medium
Italy		IT098	Uccellina mountains, Trappola marshes and Ombrone mouth	Natural events	High
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Disturbance to birds	Low
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Afforestation	Low

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Abandonment/reduction of land management	Low
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Recreation/tourism	Medium
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Other	Medium
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Natural events	Medium
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Industrialization and urbanization	Medium
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Dredging and canalization	Medium
Italy	Orbetello Lagoon, Tuscany	IT104	Orbetello lagoon and Burano lake	Aquaculture/fisheries	Medium
Italy	L. Fogliano, Lazio	IT121	Circeo National Park	Unsustainable exploitation	Medium
Italy	L. Fogliano, Lazio	IT121	Circeo National Park	Recreation/tourism	Medium
Italy	L. Fogliano, Lazio	IT121	Circeo National Park	Other	Medium
Italy	L. Fogliano, Lazio	IT121	Circeo National Park	Industrialization and urbanization	Medium
Italy	L. Fogliano, Lazio	IT121	Circeo National Park	Groundwater abstraction	High
Italy	L. Fogliano, Lazio	IT121	Circeo National Park	Agricultural intensification and expansion	High
Italy		IT128	Lakes Lesina and Varano	Forest grazing	Low
Italy		IT128	Lakes Lesina and Varano	Construction and impact of dykes/dams/barrage	Low
Italy		IT128	Lakes Lesina and Varano	Afforestation	Low
Italy		IT128	Lakes Lesina and Varano	Groundwater abstraction	Medium
Italy		IT128	Lakes Lesina and Varano	Filling in of wetlands	Medium
Italy		IT128	Lakes Lesina and Varano	Agricultural intensification and expansion	Medium

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Italy		IT128	Lakes Lesina and Varano	Unsustainable exploitation	High
Italy		IT128	Lakes Lesina and Varano	Recreation/tourism	High
Italy		IT128	Lakes Lesina and Varano	Dredging and canalization	High
Italy		IT128	Lakes Lesina and Varano	Drainage	High
Italy		IT128	Lakes Lesina and Varano	Disturbance to birds	High
Italy		IT128	Lakes Lesina and Varano	Aquaculture/fisheries	High
Italy	Saline Margherita di Savoia, Apulia,	IT130	Manfredonia Gulf wetlands	Unsustainable exploitation	Unknown
Italy	Saline Margherita di Savoia, Apulia,	IT130	Manfredonia Gulf wetlands	Drainage	Unknown
Italy	Frattarolo, Puglia	IT130	Manfredonia Gulf wetlands	Unsustainable exploitation	Unknown
Italy	Frattarolo, Puglia	IT130	Manfredonia Gulf wetlands	Drainage	Unknown
Italy	Saline Margherita di Savoia, Apulia	IT130	Manfredonia Gulf wetlands	Agricultural intensification and expansion	High
Italy	Frattarolo, Puglia	IT130	Manfredonia Gulf wetlands	Agricultural intensification and expansion	High
Italy	Lentini Lake, Sicilia	IT163	Simeto mouth and Biviere di Lentini	Infrastructure	Medium
Italy	Lentini Lake, Sicilia	IT163	Simeto mouth and Biviere di Lentini	Disturbance to birds	Medium
Italy	Lentini Lake, Sicilia	IT163	Simeto mouth and Biviere di Lentini	Aquaculture/fisheries	Medium
Italy	Lentini Lake, Sicilia	IT163	Simeto mouth and Biviere di Lentini	Unsustainable exploitation	High
Italy	Lentini Lake, Sicilia	IT163	Simeto mouth and Biviere di Lentini	Recreation/tourism	High
Italy	Lentini Lake, Sicilia	IT163	Simeto mouth and Biviere di Lentini	Other	High
Poland	Reda river mouth, Gdansk bay	PL012	Puck Bay	Unsustainable exploitation	Low
Poland	Reda river mouth, Gdansk bay	PL012	Puck Bay	Recreation/tourism	Medium
Poland	Reda river mouth, Gdansk bay	PL012	Puck Bay	Other	Medium
Poland	Reda river mouth,	PL012	Puck Bay	Natural events	Medium

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
	Gdansk bay				
Poland	Reda river mouth, Gdansk bay	PL012	Puck Bay	Disturbance to birds	Medium
Poland	Reda river mouth, Gdansk bay	PL012	Puck Bay	Aquaculture/fisheries	Medium
Poland	Reda river mouth, Gdansk bay	PL012	Puck Bay	Dredging and canalization	High
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Abandonment/reduction of land management	Unknown
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Consequences of animal/plant introductions	Low
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Burning of vegetation	Low
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Aquaculture/fisheries	Low
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Unsustainable exploitation	Medium
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Recreation/tourism	Medium
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Other	Medium
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Firewood collection	Medium
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Filling in of wetlands	Medium
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Dredging and canalization	Medium
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Drainage	Medium
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Disturbance to birds	Medium
Romania	Danube Delta area	RO001	Danube Delta and Razelm--Sinoe complex	Agricultural intensification and expansion	Medium
Turkey	Kucuk Menderes delta	TR018	Küçük Menderes delta	Infrastructure	Unknown
Turkey	Kucuk Menderes delta	TR018	Küçük Menderes delta	Recreation/tourism	High
Turkey	Kucuk Menderes delta	TR018	Küçük Menderes delta	Drainage	High
Turkey	Kucuk Menderes delta	TR018	Küçük Menderes delta	Construction and impact of dykes/dams/barrage	High
Turkey	Kucuk Menderes delta	TR018	Küçük Menderes delta	Agricultural intensification and	High

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
				expansion	
Turkey	W. of Milet, Buyuk Menderes delta	TR022	Büyük Menderes delta	Recreation/tourism	Medium
Turkey	W. of Milet, Buyuk Menderes delta	TR022	Büyük Menderes delta	Aquaculture/fisheries	Medium
Turkey	W. of Milet, Buyuk Menderes delta	TR022	Büyük Menderes delta	Industrialization and urbanization	High
Turkey	W. of Milet, Buyuk Menderes delta	TR022	Büyük Menderes delta	Construction and impact of dykes/dams/barrage	High
Turkey	W. of Milet, Buyuk Menderes delta	TR022	Büyük Menderes delta	Agricultural intensification and expansion	High
Turkey	Kulu Golu	TR063	Kulu lake	Industrialization and urbanization	Unknown
Turkey	Kulu Golu	TR063	Kulu lake	Filling in of wetlands	Unknown
Turkey	Kulu Golu	TR063	Kulu lake	Disturbance to birds	Unknown
Turkey	Kulu Golu	TR063	Kulu lake	Recreation/tourism	Medium
Turkey	Akgol, Eregli Marshes	TR064	Eregli marshes	Disturbance to birds	Unknown
Turkey	Akgol, Eregli Marshes	TR064	Eregli marshes	Construction and impact of dykes/dams/barrage	Unknown
Turkey	Akgol, Eregli Marshes	TR064	Eregli marshes	Industrialization and urbanization	Medium
Turkey	Akgol, Eregli Marshes	TR064	Eregli marshes	Drainage	High
Turkey	Akgol, Eregli Marshes	TR064	Eregli marshes	Agricultural intensification and expansion	High
Turkey	Goksu delta	TR073	Göksu delta	Infrastructure	Unknown
Turkey	Goksu delta	TR073	Göksu delta	Aquaculture/fisheries	Low
Turkey	Goksu delta	TR073	Göksu delta	Industrialization and urbanization	Medium
Turkey	Goksu delta	TR073	Göksu delta	Recreation/tourism	High
Turkey	Goksu delta	TR073	Göksu delta	Construction and impact of dykes/dams/barrage	High
Turkey	Goksu delta	TR073	Göksu delta	Agricultural intensification and	High

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
				expansion	
Turkey	Dipsiz Golum, Cukurova Delta	TR076	Tuzla lake	Recreation/tourism	Unknown
Turkey	Dipsiz Golum, Cukurova Delta	TR076	Tuzla lake	Groundwater abstraction	Unknown
Turkey	Dipsiz Golum, Cukurova Delta	TR076	Tuzla lake	Aquaculture/fisheries	Unknown
Turkey	Dipsiz Golum, Cukurova Delta	TR076	Tuzla lake	Industrialization and urbanization	Medium
Turkey	Dipsiz Golum, Cukurova Delta	TR076	Tuzla lake	Construction and impact of dykes/dams/barrage	High
Turkey	Dipsiz Golum, Cukurova Delta	TR076	Tuzla lake	Agricultural intensification and expansion	High
Turkey	Akyatan Golu	TR077	Akyatan Lake	Infrastructure	Unknown
Turkey	Akyatan Golu	TR077	Akyatan Lake	Industrialization and urbanization	Medium
Turkey	Akyatan Golu	TR077	Akyatan Lake	Disturbance to birds	Medium
Turkey	Akyatan Golu	TR077	Akyatan Lake	Aquaculture/fisheries	Medium
Turkey	Akyatan Golu	TR077	Akyatan Lake	Drainage	High
Turkey	Akyatan Golu	TR077	Akyatan Lake	Agricultural intensification and expansion	High
Turkey	Dipsiz Golum, Cukurova Delta	TR078	Agyatan lake	Agricultural intensification and expansion	Medium
Turkey	Dipsiz Golum, Cukurova Delta	TR079	Yumurtalik lagoons	Aquaculture/fisheries	Medium
Turkey	Dipsiz Golum, Cukurova Delta	TR079	Yumurtalik lagoons	Agricultural intensification and expansion	Medium
Turkey	Dipsiz Golum, Cukurova Delta	TR079	Yumurtalik lagoons	Industrialization and urbanization	High
Ukraine	Black Sea Nature Reserve, Tendra Island	UA065	Yagorlytskiy and Tendrovskiy Bays	Disturbance to birds	Low

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
Ukraine	Black Sea Nature Reserve, Tendra Island	UA065	Yagorlytskiy and Tendrovskiy Bays	Agricultural intensification and expansion	Low
Ukraine	Dolgy Island, Yagorlitsky Gulf, Nikolaev Region	UA065	Yagorlytskiy and Tendrovskiy Bays	Disturbance to birds	Low
Ukraine	Dolgy Island, Yagorlitsky Gulf, Nikolaev Region	UA065	Yagorlytskiy and Tendrovskiy Bays	Agricultural intensification and expansion	Low
Ukraine	Lebyashi Island, Crimea	UA067	Karkinitiskiyy and Dzharilgatchskiy Bays	Unsustainable exploitation	Low
Ukraine	Lebyashi Island, Crimea	UA067	Karkinitiskiyy and Dzharilgatchskiy Bays	Disturbance to birds	Low
Ukraine	Lebyashi Island, Crimea	UA067	Karkinitiskiyy and Dzharilgatchskiy Bays	Aquaculture/fisheries	Low
Ukraine	Lebyashi Island, Crimea	UA067	Karkinitiskiyy and Dzharilgatchskiy Bays	Agricultural intensification and expansion	Medium
Ukraine	Molochnyy Liman, Kivilovka	UA071	Molochniy Liman	Aquaculture/fisheries	Low
Ukraine	Molochnyy Liman, Kivilovka	UA071	Molochniy Liman	Unsustainable exploitation	Medium
Ukraine	Molochnyy Liman, Kivilovka	UA071	Molochniy Liman	Disturbance to birds	Medium
Ukraine	Molochnyy Liman, Kivilovka	UA071	Molochniy Liman	Agricultural intensification and expansion	High
Ukraine	Danube Delta	UA084	Zhebriyanovskie plavni	Costruction/impact of dyke/dam/barrage	Unknown
Ukraine	Danube Delta	UA084	Zhebriyanovskie plavni	Aquaculture/fisheries	Low
Ukraine	Danube Delta	UA084	Zhebriyanovskie plavni	Agricultural intensification and expansion	Medium
Ukraine	Danube Delta	UA084	Zhebriyanovskie plavni	Burning of vegetation	High
Ukraine	Lake Aktash, Kerch peninsula, Crimea	UA101	Uzunlarskoe lake	Disturbance to birds	Medium
Ukraine	Lake Aktash, Kerch	UA101	Uzunlarskoe lake	Agricultural intensification and expansion	Medium

Country	Site name (as in SbC Database)	IBA CODE	IBA International name	Threat	Impact
	peninsula, Crimea			expansion	
Ukraine	Lake Aktash, Kerch peninsula, Crimea	UA102	Bagerovo	Agricultural intensification and expansion	High
Yugoslavia	Soskop	YU012	Slano kopovo	Recreation/tourism	Low
Yugoslavia	Soskop	YU012	Slano kopovo	Dredging and canalization	Low
Yugoslavia	Soskop	YU012	Slano kopovo	Drainage	Low
Yugoslavia	Soskop	YU012	Slano kopovo	Disturbance to birds	Medium
Yugoslavia	Soskop	YU012	Slano kopovo	Agricultural intensification and expansion	Medium