

## INTERNATIONAL ACTION PLAN FOR THE GREAT SNIPE *Gallinago media* (Latham, 1787)



### **Third Version**

*This International Action Plan for the Great snipe (Gallinago media) was commissioned by BirdLife International. It has been compiled by John Atle Kålås, Norwegian Institute for Nature Research and is based on a workshop arranged in Estonia 22-23 February 2002, and on comments given by ORNIS committee members for range states in the EU, Bern Convention, government officials outside EU, BirdLife partners and a number of other people who have kindly shared their knowledge with us (see Annex III). We will also like to point out the importance of the support given by OMPO for the development of knowledge about the Great Snipe in Lithuania, Estonia and Belarus during the latest 5 years. Financial support for the preparation of this Action Plan is given by Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA). The content and structure of this document is based on guidelines given by BirdLife International, and the Dark-Bellied Brent Goose Action Plan developed in 2000 has been used as a model.*



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## **Summary**

### **What is the profile of the Great Snipe?**

At present the Great snipe breeds in two separate areas, a western population in the Scandinavian Mountains and an eastern population from Poland throughout the Baltic States, Ukraine, Belarus and the boreal areas and bush-tundra areas in Russia eastwards to the Yenisey river in Siberia. It winters with several stop-over sites in tropical Africa and seems to have a rapid spring and autumn migration with rather few and short stop-over between African wintering areas and the breeding sites. The population declined dramatically at the end of the 19<sup>th</sup> and the first half of the 20<sup>th</sup> century when the species disappeared from Netherlands, Germany, Denmark, Finland and the lowlands in Sweden and Norway. During the same period there was also a strong population reduction in Poland, the Baltic States, Ukraine, Belarus and in Russia (best documented for the southern parts).

The western breeding population (Scandinavian Mountains) seems now to be stabilising and is roughly estimated to hold 6,000 - 17,000 'pairs'. The population in Poland and the Baltic is estimated to be 1,600 - 2,300 'pairs', and the Belarus population estimate is 4,600 - 6,000 'pairs'. Large structural changes in the agricultural practices in these areas cause at present a strong threat to this fraction of the population. The Russian population is roughly estimated to more than 250,000 'pairs'. The information about population size and population changes for the Russian population is very fragmented, but the southern part of this population is apparently experiencing a continued decline (Tomkovich 1992).

The Great snipe is currently classified as "Near Threatened" at global level (BirdLife International, 2000). At European level it is considered 'Vulnerable' and classified as SPEC 2 (concentrated in Europe with an unfavourable conservation status) (Tucker & Heath, 1994). The species is listed in Annex I of the European Birds Directive (79/409/EEC), indicating that the species "shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution", and that "Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land areas where this Directive applies". It is on Annex II (species which would benefit from international co-operation in their conservation and management) of the Bonn Convention, and in the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) the Scandinavian Great Snipe population is listed in table 1 column B category 1, while the eastern population is categorised in column B category 2 which requires: 'Parties to regulate any taking so that it is sustainable, in order to maintain and restore the population to a favourable conservation status and more in general request special attention for the species because the population showing significant long-term decline'. The Great Snipe is listed in Annex II (take appropriate and necessary measures for the conservation of the habitats of the species) of the Bern Convention.

### **Why an international Action Plan for the Great Snipe?**

The population of the Great Snipe is not directly threatened at present. However, it would be classified as "Vulnerable" at a global level if the current decline continues. The AEWA category B1 status for the western population and B2c for the eastern population indicate that it needs special attention, particularly so because it is a habitat specialist demanding upon open and nutrient areas for breeding, areas where conflicts with human activities easily occur.

### **What is the basis of the Action Plan?**

This Action Plan is the result of an extensive consultation process among specialists, including a workshop with 10 participants from 7 countries held in Tartu, Estonia on 22-

24 February 2002, and communication with ORNIS Committee members for each range state in the EU, Bern Convention, AEWA Technical Committee members, government officials outside EU and BirdLife Partners. Since there are important gaps in our knowledge about population biology (e.g. details about the breeding range, population size, migration habits, wintering range) and ecology (e.g. habitat use and diet, particularly outside the breeding season) of the Great snipe, one of the most important actions proposed here is the gathering of relevant knowledge, so that later reviews of this Action Plan can be more focused on the most important direct conservation activities.

#### **What is the objective of the Action Plan?**

The general objective of the plan is to permit the Great Snipe to reach a level of population that will remove the species from the "Near threatened" list. In this first phase it implies a stop of the population decline where the species at present still occur.

#### **What does the Action Plan consist of?**

The Action Plan presents a framework for management and conservation of habitats and the population. Measurable objectives are set at national and international level, and general management options are given for the countries where the species at present breeds. The Great Snipe is a secretive species and we still miss significant knowledge about the population biology of the species. This Action Plan therefore also includes a list of gaps in our knowledge, which are needed to perform an optimal management of the species.

#### **Which countries are involved?**

Implementation of the Action Plan requires effective international co-ordination of organisation and action. In this Action Plan countries where breeding occurs (Norway, Sweden, Poland, Estonia, Latvia, Lithuania, Ukraine, Belarus and Russia) are especially involved with the implementation. The countries visited during migration and wintering are handled more generally. For migration (ca. 50 countries) this is so because the apparently restricted importance of stop-over sites during migration, and for wintering (ca. 35 countries) this is caused by the general lack of detailed information about winter occurrence (e.g. movements during the winter) and winter habitat use.

#### **What should these countries do?**

There should be commitment of all individual Range States. These should develop their own National Action Plans. In these Action Plans, management activities should be described, on the basis of the actions that have been presented in this International Action Plan.

#### **How should the Action Plan be implemented?**

A working group under the Technical Committee of the AEWA should be established for implementation of the Action Plans. Activities mandated to the working group are listed. The plan should be formally adopted at the Second Session of the Meeting of the Parties, which will take place from 26-28 September 2002 in Bonn, Germany, and be reviewed every three years thereafter.

## 1. Introduction

The Great Snipe has for several years been a Red List species that is highly ranked on a number of international convention and agreements. This implies that specific management requirements are necessary for the Great Snipe and UNEP/AEWA Secretariat have asked BirdLife International to prepare an international conservation plan for this species.

This Action Plan shortly describes and evaluates the ecological status and the political and legislation status of the species throughout its geographical range. It focuses on the possibilities for ensuring quantity and quality of suitable habitats (particularly during breeding) and reduction of direct negative influence caused by people (hunting, agricultural activity etc.). One of the main problems developing an Action Plan for the Great Snipe is the lack of knowledge about the ecology of the species. This Action Plan has to be based on available knowledge. Therefore we are not able to be as specific as we would like to be. This concerns particularly the migration and wintering conditions. In this Action Plan we therefore also include a list of lacking knowledge, which are needed to develop an optimal management plan for the Great snipe.

The successful conservation management of the Great Snipe is the joint and equal responsibility of the governments in the breeding countries, the countries visited during migration and the countries used during wintering. Effective conservation of the population requires the involvement of a range of governmental and non-governmental organisations in all the range countries. International co-operation is required in the implementation of all aspects of the Action Plan.

The general objective of this International Action Plan is:

In the short term (3 years):

1. To maintain the population of Great Snipe to such a level that will guarantee it long-term conservation in all its present range.
2. To increase knowledge about the Great Snipe (e.g. habitat use, breeding range and population size particularly for the eastern population, and migration and wintering conditions), to be able to increase the effectiveness of the reviewed version of the Great snipe Action Plan to be produced in 2005.

In the long term (15 years):

1. To restore the population at the population level which will remove the species from the 'Near Threatened' list.

In order to reach this objective, the following principles need to be met:

1. To ensure international co-operation between the Range States in joint programmes of monitoring, research, conservation, management, utilisation and liaison for the benefit of Great Snipe, their habitats and the human populations with which the snipes come into contact or shares the habitat with.
2. To control and reduce all human activities which negatively affect the species and its habitat.
3. To fulfil all legal and other relevant obligations, such as the obligations taken up in European legislation (especially the Birds Directive) and international conventions.

The Plan presents operational and measurable objectives, and management options to achieve these objectives. It is a framework to ensure the coherence of, and communication about, the national plans. The framework leaves room for manoeuvre for the Range States to tune their management policy to the national situation, as long as the objectives are achieved.

The success of the Action Plan depends to a large extent on:

1. the efforts of the Range States to draw up and communicate National Action Plans.
2. implementation aspects such as: a time frame for monitoring and evaluation and for the communication of progress and activities in the different Range States, insight into budgetary consequences.
3. organisational matters such as: a clear vision on the role of the African- Eurasian Waterbird Agreement (AEWA) Technical Committee and a decision on the potential establishment of a new working group in this committee.

The Plan applies for a period of 3 years, after which it need to be evaluated and reviewed.

## 2 Biological Assessment for the Great Snipe

<b>General Information</b>	The Great Snipe ( <i>Gallinago media</i> ) is a medium sized migratory wader species that winters in tropical Africa. It is a lekking species that breeds along the tree line in the Scandinavian mountains and in boreal and bush tundra areas from eastern Poland eastwards to the Yenisey river in Russia. It is a food and habitat specialist that during the breeding season needs relatively open and base-rich habitats with high biomass of invertebrates. The stringent breeding habitat demands make the species scattered distributed and also vulnerable to environmental changes.
<b>Population Development</b>	The species experienced a dramatic population decline in the period ca.1850 – 1930s, most strongly pronounced in the western part of the breeding range. Probably due to habitat change brought about by the industrial development, changes in agricultural practices and traditional harvesting on lekking arenas (Kåås et al. 1997b). After 1950 the western population, now restricted to areas along the tree line in the Scandinavia mountains, seems to have stabilised, while the population reduction seems to have continued in the eastern range, particularly so in the southern and western parts.
<b>Distribution Throughout The Annual Cycle</b>	Birds leave wintering areas in April-May and the southern breeding birds seems to go directly to breeding grounds where lekking starts in late April. The most northern breeding birds probably use more southern/lowland roosting sites waiting for the breeding areas to become available (early-mid June). Adult birds start leaving their breeding areas in early August and the juveniles leave their natal area in late August/early September. During the autumn migration most birds seem to move rather rapidly back to tropical Africa with rather few and short stop-over along the migration route (Devort & Paloc 1994, but see Meltofte 1993). During the winter most birds stay in inland Africa where they have several stop-over following the rain-season as it progress southwards, resulting in an utilisation of a large fraction of tropical Africa during the winter.
<b>Survival and Productivity</b>	Annual survival rate for adults birds seems to be relatively high (0.6 – 0.7 for a 1987-96 sample from Norway (Fiske et al. ms)). Production is probably quite variable (20-40 % young recruits in the breeding population in a sample from Norway 1987-01 (Kåås, unpubl.)), due to: i) fluctuating predator pressure related to small mammal (lemming) cycles in the western population and the northern part of the eastern population, and ii) fluctuating weather condition (eg. dry weather makes food less available, flooding may destroy nests).
<b>Life history</b>	<p><b>Breeding:</b> A lekking species where males perform a very energetic demanding display on lekking arenas (Höglund et al. 1992) which female visit only to copulate (Höglund &amp; Alatalo 1995). Female solely cares for chicks, which are fed by the female during their first days of life. Their behaviour and habitat use during breeding makes them difficult to detect (Kåås 2000). Clutch size: 4, incubation period: 22-24 days, fledging period: ca. 25 days</p> <p><b>Feeding:</b> Almost strictly invertebrates. In breeding areas the lekking males demand on large quantities of high-quality food (Höglund et al. 1992), and earthworms are the main food item at least for the western population and for the south-western part of the eastern population (Løfdali et al.1992, Kuresoo &amp; Luigujõe, unpubl.). Insect adults and larvae (e.g. Diptera and Coleoptera) are also to some extent taken. Basically no information available about winter food.</p> <p><b>Migration and Wintering:</b> Wintering in tropical Africa. Few extensively used stop-over areas between wintering and breeding grounds are known. Seems to move rather directly between tropical Africa and the breeding grounds, particularly during spring migration (Devort &amp; Paloc 1994). Most birds seems to leave Africa in April-early May and the adult birds return to Africa in the second half of August while the juveniles seems to arrive in early September (Devort 2000). We have only fragmented information about wintering habits. However, Great Snipe seems to have several stop-over appearing in ca. 35 countries in tropical Africa covering a belt from Senegal and southern Mali, eastwards to Ethiopia and Kenya and southwards to Zimbabwe, northern Namibia and Botswana. The Ethiopian plateau grasslands seem to be very important for a large fraction of the eastern population for a two months period after the birds have arrived in Africa (Massoli-Novelli 1988). Birds seem to follow the wet areas as the rain-season progresses resulting in the utilisation of the northernmost wintering areas in early and late wintering and the southern areas during mid wintering (Devort 2000). Moults data from Africa also indicate that there are two distinct populations (different moult schedule) that also differs in area usage in Africa (Devort 2000).</p>



<b>Habitat requirements</b>	<p><b>Breeding habitat:</b> The western population inhabits open and base-rich habitats along the tree line (Kåås et al. 1997b), while the eastern population inhabits floodplains, rich fen and meadows in south and rich fen and shrub areas northwards into the bush tundra (Kåås et al. 1997a). Do often feed in open bush habitats with sedge and grass, but when the soil get dry and the earthworms get less active they have to change to more open fen habitats that are generally damper. During the lekking period males feed quite aggregated close to the lekking arena, while females, with or without chicks, feed more scattered (Kåås et al. unpubl.). The same kind of feeding habitats are used during the whole breeding season and both for adults and juveniles. Nests are situated in similar habitats as are used for feeding (Løfdal et al. 1992).</p> <p><b>Autumn and winter:</b> Solitary or in small scattered flocks during migration and in winter. The rather few birds that are annually observed in southern Europe during migration inhabit mainly sedge marshes and meadows. In eastern Europe birds are also observed along water reservoirs in rice-fields and in dried fishponds. During winter mainly in marshes and slightly damp short sedge and grass areas. Are difficult to detect also during migration and winter because of cryptic behaviour and the use of habitats with dense ground vegetation (sedge and grass).</p>
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### The geographical distribution of the Great Snipe during the year.

<b>Breeding:</b>	<b>Formerly breeding</b>	<b>Migrates through</b> (April-May and August-September):	<b>Winters</b> (early September – early May, the most northern countries early and late in this period and the southern countries in mid-winter):
Russian Fed., Ukraine, Belarus, Estonia, Latvia, Lithuania, Poland, Sweden, Norway.	Finland, Denmark, Germany.	Principally all countries situated between the breeding range and the wintering range (e.g. all countries in Mid- and Southern Europe, The countries surrounding the Caspian Sea, The Middle East and Northern Africa. See also Annex II).	Mauritania, Senegal, Gambia, Guinea-Bissau, Guinea, Mali, Sierra Leone, Liberia, Ivory Coast, Ghana, Burkina Faso, Togo, Benin, Niger, Nigeria, Chad, Cameroon, Rep. of Central Africa, Sudan, Ethiopia, Gabon, Dem. Rep. Congo, Congo, Uganda, Kenya, Rwanda, Burundi, Tanzania, Angola, Zambia, Malawi, Zimbabwe, Mozambique, Namibia, Botswana, South Africa. (See also Annex II).

## Available key knowledge.

A major problem for the development of an optimal Action Plan for the Great snipe is the lack of knowledge about the population biology and the ecology of the species. Such knowledge is needed for us to be able to identify what kind of actions will be most effective (cost vs. benefit) for the conservation of the species, and also to give guidelines where conflicts between human activities and the conservation of the Great snipe occur (eg. farming practices and intensity). The table also includes estimates for population size for different countries and the relevance of protected areas and established Important Bird Areas (IBA's).

G – Good quantified knowledge; S – Semi-quantified knowledge, qualified guesses; L – Little knowledge; N – No knowledge available; d – probably decreasing.  
( ) indicate that national knowledge probably can be generated by the use of knowledge from neighbouring countries.

	Norway	Sweden	Poland	Estonia	Latvia	Lithuania	Ukraine	Belarus	Russia	Migration*	Wintering**
<b>Breeding population ('pairs') #</b>	5 000-15 000	1 000-2 000	600-800	600-800	200-300	200-400	500-700	4 600-6 000	>250 000		
Number of IBA's where the species breeds	2	3	13	10	6	2	4	8	26		
Proportion of population in IBA's	< 2 %	< 2 %	95 %	35 %	75 %	20 %	25 %	25 %	< 2 %	< 1 %	< 1 %
Proportion of population in protected areas	< 5 %	< 5 %	75 %	25 %	25 %		15 %	20 %	< 2 %	< 1 %	< 1 %
<b>Type of knowledge</b>											
Population biology											
A. Population size	S	S	S	S	S	S	S	S	L	L	L
B. Details on occurrence	S	S	S	S	S	S	S	S	L	L	L
C. Population changes latest 20 years	N	N	N	d	d	d	d	d	N	N	N
Habitat and diet											
A. Habitat use	G	G	(G)	G	G	G	(G)	G	L	S	L
B. Diet	G	(G)	(G)	G	(G)	(G)	(G)	(G)	L	L	N

# - **Based on information:** Norway & Sweden (Kålås 2000); Poland (M. Maniakowski, pers. com.); Estonia (A. Kuresoo & L. Luigujõe pers. com.); Latvia (Aunins 2000); Lithuania (L. Raudonikis, pers. com.); Belarus (E. Mongin pers. com.); Ukraine (G. Gavris, pers. com.); Russia (V. Morozov & S. Fokin, pers. com.).

\* - Migration includes generally all countries (ca. 50) situated between breeding areas and tropical Africa.

\*\* - Wintering includes ca. 35 countries in tropical Africa covering a belt from southern Senegal eastwards to Ethiopia and Kenya mainly used in early and late wintering, and southwards to Zimbabwe and northern Namibia and Botswana.

### 3 Human Activities

This chapter gives an overview of human activities potentially affecting the Great Snipe population and their relevance by country.

Human activities potentially affecting the Great Snipe population can be subdivided into three categories:

1. Human activities potentially directly affecting the Great Snipe population.
2. Human activities affecting the quantity of the habitat (e.g. land claims for urban and industrial developments and agricultural practises).
3. Human activities affecting the quality of the habitat (e.g. agricultural practises deterioration and contamination).

Concerning influence by human activity on the breeding conditions for Great snipe the population can generally be divided into two parts: i) the southern and particularly the south-western part of the eastern population inhabiting floodplains and meadows, and ii) the Scandinavian and the northern part of the Russian population inhabiting fen and open shrub habitats. Generally spoken it is the first group which is strongly influenced by human activity and which seems to be under immediate threat, while the last group at present seems to be under less threat by human activity.

#### Factors affecting the species (increasing mortality)

##### **Hunting**

The behaviour of the lekking birds makes them very easy to catch when lekking. The species is therefore particularly vulnerable to such harvesting, and this may have accelerated the dramatic population decrease during the first part of the previous century. Such harvesting seems not to be going on at present. Their short flushing distance and short straight-line flight when flushed makes them vulnerable to hunting also during migration and wintering. The species is legally protected in all breeding countries with the exception of the Russian Federation, Ukraine and Belarus. In Russia the annual bag is estimated in 32.000 birds each year (80% of which are juveniles) (Sergei Fokin pers. com.) which seems to represent a limited proportion of the breeding population. No bag statistic is available for Ukraine and Belarus. The species is also hunted in the wintering areas. The extent of such hunting is unknown, but at present probably of restricted importance.

Common Snipe (*Gallinago gallinago*) hunting can result in some accidental mortality of Great Snipe at the beginning of the hunting season (August and early September). The numbers of foreigner hunters in Eastern Europe aiming at Common Snipe are increasing and these accidents may increase as a consequence.

Lead shot have been found in Common Snipe stomachs and may represent a threat to the Great Snipe but no data are available, since no stomach contents from wintering/passage areas with high hunting pressure have ever been analysed.

##### **Disturbance from tourism / recreation**

Recreational activities (tourism, fishing) may interfere with lekking birds and disturb breeding birds. This seems to be more likely in southern Russia and Ukraine. In Russia also pointing-dog training and competition during the breeding season can have an effect.

##### **Predation**

Human activities in breeding areas can increase the level of predation by facilitating the discovery of nests or increasing the number of predators on nests and chicks (American

mink, fox, crow, cats, etc.). In some areas predation pressure is also increased by presence of introduced alien predators (American mink, racoon dog).

### **Factors affecting habitat quantity (habitat loss)**

**Agricultural activity.** The relation between Great Snipe and human activities is not exclusively negative. As the species needs open fertile areas for breeding, specific types of agricultural activity seems to facilitate breeding condition (e.g. grazing of floodplain meadows, low grazing pressure in mountain areas) (Løfdali et al. 1992, Kuresoo & Luigujõe 2000). Areas more intensively utilised by agriculture seem however to be avoided by breeding Great Snipes.

**Land abandonment.** Floodplains were traditionally used for hay collection and low intensity grazing. These activities maintained an ideal habitat for the Great Snipe. Economic and political changes have resulted in many areas to be abandoned resulting in flood-plains being invaded by bushes and subsequently by forest. This is currently ongoing in the Baltic States and Poland, while it at present seems to be of less importance in Belarus, Ukraine and Russia.

**Fire.** In some meadows fire are started in late spring to promote the growth of new fresh grass. Although lekking birds seems very robust to disturbance and resilient from moving to new sites, burning of large areas may reduce nesting opportunities.

**Change of land use.** In the future, when the economical situation will make agriculture more profitable again, floodplains may be drained and transformed in intensive agriculture land and therefore loss of suitable habitat for the species. Also, intensive grazing would result in destruction of nests or/and chicks as well as changes in vegetation composition and structure. Agriculture intensification was probably the main reason for the extinction of the species in lowland Sweden, Germany and Denmark.

**Pesticide and fertilisers.** Crop protection products are not used in Great Snipe areas, but pesticides and fertilisers from flooding rivers may affect food availability (earthworms) or promoting bushes' growth on floodplains.

**Drainage and flood control.** The water regime is the main factor regulating the floodplains. Drainage and flood control operation result in habitat loss. In Accession countries SAPARD funds are available and used for flood control and "improvements" including drainage and degradation of the floodplains as Great snipe habitats. Peat extraction often includes drainage and such draining may also make an area unsuitable for Great snipe.

**Hydropower development.** Small scale dams for hydropower stations on rivers will have dramatic effects on floodplains. In the Baltic States is not currently possible, but there are plans to start such activities. In Russia many hydropower stations in lowland are not longer profitable and there are plans to dismantle them. In Scandinavia currently the energy policy is focussed on other energy sources (windmills, oil, gas), but the construction on new dams would have an impact on the species' habitat.

**Urban, industrial and tourist development.** Riversides are popular for housing and for industrial development. This has an impact both on the extent of the floodplains, and on the flood regimes and therefore on the floodplains nearby. Development of ski resorts and infrastructure (ski lifts) in Norway and Sweden may result in habitat loss.

**Afforestation.** Floodplains are under potential threats from afforestation. SAPARD plans for Latvia include funds for transformation into forest of non-profitable agricultural areas. Flood

plains may be considered as such land. Poland is subsidising afforestation the problem may develop also in Lithuania and Estonia. In this latter country willow (*Salix* sp.) plantations, located along the rivers, are being tested for economical sustainability.

**Transport infrastructures.** Development of roads and railways built on floodplains will result in their destruction. Also the crossing of rivers may result in changes in hydrological regime of the rivers immediately upstream. Local problems are recorded in Poland and the Baltic states, but this can occur elsewhere as well.

**Oil & gas extraction/exploitation and transport.** Fossil fuels search and extraction in Northern Russia would result in habitat loss, although the impact on the species' habitat and population seems to be limited. In Lithuania, along the coast the oil industry has potential for development and therefore may become a threat to the habitat and population. Pollution from transport accidents (oil leaking from pipes) would have effects whose importance would be in relation to the location (near rivers) and quantity of oil spilled.

**Habitat management conflict.** Management policies for different species may create conflicts among the different species using the wet meadows. Managers should be aware of such conflicts and management needs to take into consideration the total biodiversity of the managed areas.

**Climate change.** Climate changes resulting in an elevation of the tree-line in Scandinavia will dramatically reduce the area of suitable habitat for this population. The same will be the case for the Russian bush tundra population if the tree line moves northwards. A reduction of meadows by a potential increase of forest cover will also dramatically effect the amount of suitable habitats for the Great snipe. For the floodplains the winter flood are predicted to come early, so during breeding time the soil will become too dry and food will not longer be available when Great snipe need it for chick production.

#### **Factor affecting habitat quality (habitat degradation)**

**Agricultural practices.** Hay collection carried out with machines results in large areas of meadows suddenly becoming no longer suitable for the species and may significantly increase predation rate. High density of grazing animal may destroy a significant number of nests and small chicks by tramping.

## Human activities affecting the Great Snipe population and their relevance by country.

H - High relevance, S - Some relevance, N - No relevance, Ph – Potentially high relevance, Ps – Potentially some relevance, ( ) – concern the southern part of the Russian population.

Human activities:	Norway	Sweden	Poland	Estonia	Latvia	Lithuania	Ukraine	Belarus	Russia	Migration*	Wintering**
<b>1. Effects on the species</b>											
Hunting	N	N	N	N	N	N	S	S	S	S	S
Accidentally shot while hunting on other species	N	N	N	S	S	S	Ps	Ps	Ps	S	Ps
Agricultural activity kill chicks/destroy nests/increase predation rate	N	N	S	S	S	S	H	S	(S)	N	N
Disturbance											
A. Tourism/Recreational use	N	N	N	N	N	N	S	N	(S)	?	?
C. Dog training/competition	N	N	N	N	N	N	N	S	(S)	N	N
Predators facilitated by humans (American mink, racoon-dog, fox, cats, crows etc)	S	S	S	S	S	S	S	S	(S)	?	?
<b>2. Affecting quantity of habitats</b>										?	?
Agricultural development											
A. Land abandonment	S	S	H	H	H	H	S,P	S,P	(H)		
B. Intensification	N	N	Ph	Ph	Ph	S,Ph	Ph	Ph	(Ph)		
Afforestation	N	N	Ph	Ph	Ph	Ph	N	N	N		
Drainage and flood control	N	N	S,Ph	S,Ph	S,Ph	S,Ph	S,Ph	S,Ph	(S,Ph)		
Hydropower development	Ps	Ps	Ps	Ps	Ps	Ps	Ps	Ps	(Ps)		
Infrastructural development (e.g. transport)	N	N	Ps	S	Ps	Ps	S	S	(Ps)		
Urban and industrial development	N	N	S	S	S	S	S	S	(S)		
Recreational development (e.g. cabins, ski lifts)	S	S	N	N	N	N	S	N	N		
Oil & gas exploitation (and transport)	N	N	N	N	N	P	S	N	S		
Potential effects of Climatic change	Ph	Ph	Ph	Ph	Ph	Ph	Ph	Ph	Ph		
<b>3. Affecting the quality of the habitats</b>										?	?
Agricultural practices	S	S	S,Ph	H	H	H	H	H	(H)		
Use of fertiliser and pesticides	N	N	Ps	Ps	Ps	Ps	Ps	Ps	(Ps)		
Contamination such as oil spills, lead shot, chemical pollution, etc.	N	N	S	S	S	S	S	S	(S)		
Deterioration by human activities (as mentioned in categories 1 and 2) in or near habitats	S	S	S	S	S	S	S	S	S		
Conflicting nature management goals	N	N	Ps	Ps	Ps	Ps	Ps	Ps	(Ps)		

\*Migration includes generally all countries (ca. 50) situated between breeding areas and tropical Africa.

\*\* Wintering includes ca. 35 countries in tropical Africa covering a belt from southern Senegal eastwards to Ethiopia and Kenya mainly used in early and late wintering, and southwards to Zimbabwe and northern Namibia and Botswana.

#### 4 Policies and Legislation relevant for the management of the Great Snipe.

Here we give an overview of relevant national and international policies and legislation. Legislation regarding forestry and agriculture, etc. is not discussed, although they may have a considerable indirect influence on the Great Snipe population.

**International policies and legislation.** For relevant signatory countries see Annex II.

Title	Work title	Year	Objective and relevance
Convention on Wetlands of international importance, especially as waterfowl habitats	Ramsar Convention	1971	Prevent further destruction of wetland habitats, by designating wetlands for inclusion on a list of "Wetlands of international importance". Conservation and wise use of these wetlands. Compensate for loss of wetlands. Consultation about implementation of the Convention.
Convention on the Conservation of Migratory Species of Wild Animals	Bonn Convention	1979	Concerted action for the conservation and effective management of migratory species. Consists of two appendices: Annex I: animals requiring strict protection. Annex II: animals for which agreements need to be made for the conservation and management these species.
Agreement on the Conservation of African-Eurasian Migratory Waterbirds	AEWA	1999	AEWA is developed under the Bonn Convention. The aim of AEWA is to take co-ordinated measures to maintain migratory waterbird species in a favourable conservation status or to restore them to such a status. AEWA stimulates the development of international as well as national Single Species Action Plans.
Convention on the Conservation of European Wildlife and Natural Habitats	Bern Convention	1979	Conservation of wild flora and fauna and their natural habitats especially those species and habitats whose conservation requires the co-operation of several states. "Special attention be given to the protection of areas that are of importance for the migratory species specified in Appendices II and III (incl. most birds) and which are appropriately situated in relation to migration routes as wintering, staging, feeding, breeding or moulting areas".
EU Council Directive on the Conservation of Wild Birds	EU Birds Directive	1979	Conservation of birds and bird habitats by European co-operation. Establish network of protected areas: Special Protection Areas (SPAs). The Birds Directive laid the foundation for the Habitats Directive.
EU Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora	EU Habitats Directive	1992	Establish strategic network (Natura 2000) of European Habitats and protect the most threatened species in Europe. Implementation behind schedule. Countries have to submit lists of "Special Areas of Conservation (SACs)". Two annexes list habitat types and species. The article 6 obligations of the Habitats Directive also have to be implemented in the Special Protection Areas of the Birds Directive.
Convention on Biological Diversity	Biodiversity Convention	1992	Maintain a sustainable diversity and spread of flora and fauna across the world. Each contracting party shall develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity.

NB: The European Directives and international conventions can have different legal implications. The special legal status of EU Directives makes it possible to enforce implementation through the European Court of Justice, whereas the legal implications of conventions depend on their translation into national legislation.



## Threat and Convention status for the Great Snipe.

World Status <sup>1</sup>	European Status <sup>2</sup>	SPEC category <sup>2</sup>	EU Birds Directive Annex <sup>3</sup>	Bern Convention Annex <sup>4</sup>	Bonn Convention Annex <sup>5</sup>	African-Eurasian Migratory Water Bird Agreement <sup>6</sup>
LR/nt	(V)	2	I	II	II	B1 (Scandinavian breeding population) B2c (Northeast Europe and Western Siberian breeding population)

<sup>1</sup> World Status as in BirdLife International (2000) *Threatened Birds of the World*. Spain and Cambridge, U.K.: Lynx Editions and BirdLife International. Categories: C = Critically endangered, E = Endangered; V = Vulnerable; D = Declining; L = Localised; R = Rare; LR = Lower Risk, DD = data deficient, cd = conservation dependent, nt = near threatened, lc = least concern, S = Secure.

<sup>2</sup> Tucker G.M & Heath M.F. (1994). *Birds in Europe: their Conservation Status*. Cambridge UK: BirdLife International (BirdLife Conservation series no. 3). (V) – Vulnerable, Status provisional, SPEC category 2 – species whose global populations are concentrated in Europe (> 50%), and which have an unfavourable conservation status in Europe.

<sup>3</sup> The species shall be subjected of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.

<sup>4</sup> Give special attention to the protection of areas that are of importance (Article 4) and ensure the special protection of the species (Article 6). For more details see the Convention text

<sup>5</sup> Animals for which agreements need to be made for the conservation and management of these species. For more details see the Convention text

<sup>6</sup> B1 - population numbering between ca. 25 000 and ca. 100 000, B2c – population numbering more than ca 100 000 individuals and considered to be in need of special attention as a result of significant long-term decline.

## National policies, legislation and ongoing activities

A – significant activity, S - some activity, N - no activity, NA - not applicable, I – included in the national list of protected species, PI – at present not included, but proposed included in the national RedBook, NI – at present not included in RedBook, NH – not huntable, H – huntable, ( ) – concerns the main fraction of the actual countries.

National policies affecting Great Snipe	Norway	Sweden	Poland	Estonia	Latvia	Lithuania	Ukraine	Belarus	Russia	Migration*	Wintering**
<b>Species</b>											
Legal protection status	I	I	I	I	I	I	PI	PI	NI	(NI)	(NI)
Hunted	NH	NH	NH	NH	NH	NH	H	H	H	(H)	(H)
Start hunting season ( ) indicate start of hunting season for Common Snipe)	(10 Sept.)	(10 Sept.)	NA	(20 Aug.)	(20 Aug.)	(20 Aug.)	ca 15 Aug.	ca 20 Jul.	ca 5 Aug.		
Research on the species ecology	A	A	S	A	S	S	N	A	N	N	N
Inventories	S	S	S	S	S	S	S	S	N	N	N
Regular population censusing and monitoring	N	N	N	N	S	A	N	N	N	N	N
<b>Natural habitats</b> (proportion of population)	100	100	0	15	0	0	0	25	80		
Site protection	S	S	NA	S	NA	NA	NA	NA	S	S	N
Monitoring use of protected sites	N	S	NA	N	NA	NA	NA	NA	N	N	N
<b>Semi-natural habitats</b> (proportion of population)	0	0	100	80	99	75	100	70	20		
Site protection	NA	NA	S	S	S	S	S	S	S	S	N
Monitoring use of protected sites	NA	NA	N	S	S	S	N	S	N	N	N
Promotion of appropriate policies (agricultural)	NA	NA	N	A	S	S	N	S	N	N	N
<b>Man-made habitats</b> (proportion of population)	0	0	0	5	<1	25	0	5	0		
Promotion of appropriate policies	NA	NA	NA	S	NA	S	NA	S	NA	N	N
<b>International co-operation</b>											
Regular international meetings to discuss research and monitoring #	N	N	N	N	N	N	N	N	N	N	N

# The OMPO (Migratory Birds of the Western Palearctic) has for several years supported research on snipes, including the Great snipe, in Lithuania, Estonia and Belarus, and have arranged one international workshop on this topic (OMPO 2000).

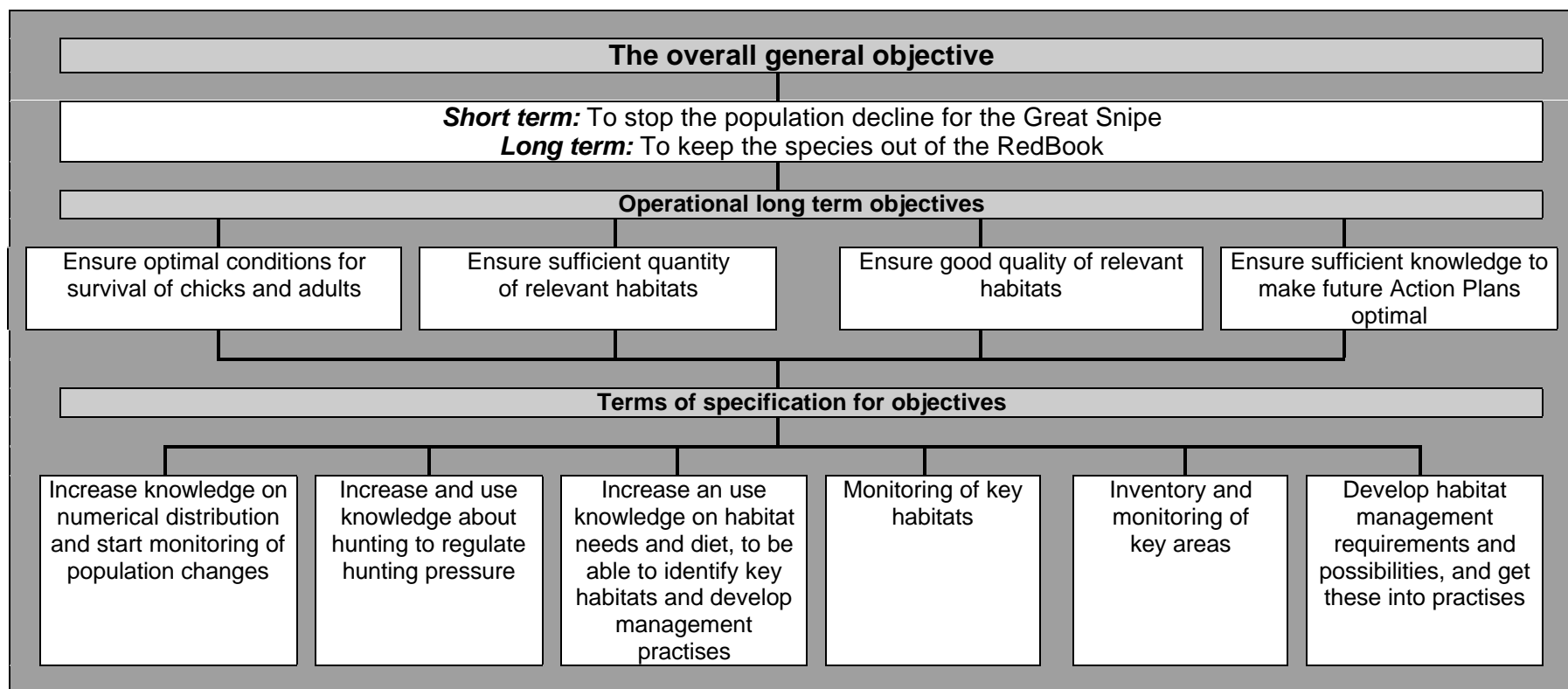
\* Migration includes generally all countries (ca. 50) situated between breeding areas and tropical Africa.

\*\* Wintering includes ca. 35 countries in tropical Africa covering a belt from Senegal eastwards to Ethiopia and Kenya mainly used in early and late wintering, and southwards to Zimbabwe and northern Namibia and Botswana.

## 5 Framework for Action

The individual countries on the Great Snipe geographical range are responsible for the success of this Action Plan. Without the commitment of the Range States and all interests groups concerned, the Action Plan will remain ineffective. In this chapter the framework of objectives and a list of subjects that need to be taken up in the National Action Plans are presented.

### Framework for Action



## Measurable objectives

Increase knowledge on numerical distribution and start monitoring of population changes	Increase and use knowledge about hunting to regulate hunting pressure	Increase an use knowledge on habitat needs and diet	Monitoring of key habitats	Inventory and monitoring of key areas	Develop habitat management requirements and possibilities and get these into practises
<p>Within three years, each country should:</p> <ul style="list-style-type: none"> <li>- Make an inventory of current distribution and population size</li> <li>- Initiate a monitoring programme including population size and production</li> <li>- Identify and quantify threats</li> </ul>	<p>Within three years, each country where hunting is allowed should:</p> <ul style="list-style-type: none"> <li>- Produce annual bag statistics for the Great snipe, including wing collection to get information on variation in fraction of adult birds in the bag.</li> <li>- Countries where Great snipe can be accidentally killed by Common snipe hunters should evaluate the extent of this, and if necessary delay start of Common Snipe hunting until 5 September.</li> </ul>	<p>Within three years, knowledge on habitat use and diet should be increased for:</p> <ul style="list-style-type: none"> <li>- migrating birds</li> <li>- wintering birds</li> <li>- the northern part of the Russian breeding population</li> </ul>	<p>Within three years, each country where the species at present breeds should:</p> <ul style="list-style-type: none"> <li>- make available a map showing the extent and distribution of habitats suitable for breeding.</li> <li>- initiate monitoring of area changes of the extent of these key habitats</li> </ul>	<p>Within three years, each country should have:</p> <ul style="list-style-type: none"> <li>- updated inventory of key areas</li> <li>- located and determine habitat threats to areas of international importance (Scandinavia, Belarus and Russia: 1 % of breeding population; Poland, Baltic States and Ukraine: 20 males)</li> <li>- give indications of how to conserve or if necessary improve the status of these areas</li> </ul>	<p>Within three years, each country should:</p> <ul style="list-style-type: none"> <li>- make a listing of international important areas that are threatened by degradation and loss, with the aim of analysing possibilities of preventing them</li> <li>- developing management plans for such important Great Snipe areas</li> </ul>

## **All National Action Plans should include:**

All actions need to have a time frame

### **Part I:**

- A national survey of geographical distribution and numbers
- Elaboration of monitoring systems, including population size, production and threats (See chapter 7)
- Evaluate effects of hunting and regulate all hunting where this activity is proved or considered unsustainable
- A quantification of habitat utilisation and diet (particularly relevant for migration, wintering and for the northern Russian breeding population)
- Mapping of the distribution of habitats suitable for breeding and initiate monitoring of area changes of these key habitats
- Identification of key sites (following the IBA criteria, see Annex I)
- A list of international important areas that are threatened by degradation and loss, with the aim of analysing possibilities of preventing them developing management plans for such important Great Snipe areas

### **Part II:**

- Public awareness and training plans (e.g. related to population monitoring and management of habitats)
- Survey of existing policies and legislation likely to have an impact on the species or the species' habitat (See chapter 4)
- Survey of relevant human activities (See chapter 3)
- Implementation of monitoring of the Great snipe population and the most relevant threats to the species
- Survey of present and/or expected threats to areas of national importance
- Proposed management options to deal with these threats (See chapter 5 and 6)
- Overall expected effects of measures taken
- A communication plan (with AEWA, governmental- and non-governmental organisations)

## 6 Action by country

To assist the Range States in developing their own National Action Plans, in this chapter per Range State objectives and management options are presented.

### The western breeding population (Norway & Sweden).

Internat. Objective	Priority	National management options / actions	Measurable objective
Increase survival	Low	<ul style="list-style-type: none"> <li>(No exploitation exists)</li> </ul>	
Sufficient quantity of habitats & Good quality of habitats	High	<ul style="list-style-type: none"> <li>Maintain the current status of habitat quantity and quality</li> <li>Improve protection status by encourage a protective status for all sites of international importance for the Great Snipe. For sites of international importance the status of SPA according to the EU Birds Directive (if the site host potential habitat for the species the site has to be identified as SPA (Birds Directive))</li> <li>Develop a proper management system for protected sites, through the development of management plans. Measures should be balanced with overall conservation objectives of the protected areas, the Great snipe being one component in the functional system beside others</li> <li>Evaluate possibilities for the maintenance and recovery of habitats</li> </ul>	<ul style="list-style-type: none"> <li>* Protected areas should accommodate 10 % of the national breeding population</li> <li>* Listing of relevant policies and regulations, and actions to minimise conflicts with human activities in future</li> <li>* Inventory of key sites and determination of habitat threats</li> <li>* Develop a management plan including listing of threatened sites and management needs</li> </ul>
Key knowledge needed	High	<ul style="list-style-type: none"> <li>Distribution and Population size</li> <li>Population changes</li> <li>Distribution of key habitats</li> </ul>	<ul style="list-style-type: none"> <li>* Update distribution maps and national estimates of breeding population</li> <li>* Develop and run monitoring of the breeding population, habitats and threats</li> <li>* Map the distribution of key habitats</li> </ul>

**The boreal part of the eastern breeding population (Poland, Lithuania, Latvia, Estonia, Belarus, Ukraine and the southern parts of the Russian Federation)**

<b>Internat. Objective</b>	<b>Priority</b>	<b>National management options / actions</b>	<b>Measurable objective</b>
Increase survival	Medium	<ul style="list-style-type: none"> <li>Stop all exploitation of the western fraction of this population and ensure no over-exploitation of the eastern fraction of the population</li> </ul>	* Ban hunting, and if needed postpone start of Common snipe hunting season until 5 Sept.
A minimum disturbance of the birds	Medium	<ul style="list-style-type: none"> <li>Stop disturbance by Pointing dogs in the breeding season</li> </ul>	* Ban Pointing dog training and competitions in Great snipe habitats in the period 1 May – 1 August
Sufficient quantity of habitats & Good quality of habitats	High	<ul style="list-style-type: none"> <li>Maintain or enhance the current status of habitat quantity and quality throughout appropriate management</li> <li>Develop a proper management system for protected sites, through the development of management plans. Measures should be balanced with overall conservation objectives of the protected areas, the Great snipe being one component in the functional system beside others</li> <li>Improve protection status by encourage a protective status for all sites of international importance for the Great Snipe. For sites of international importance the status of SPA according to the EU Birds Directive (if the site host potential habitat for the species the site has to be identified as SPA (Birds Directive))</li> <li>Evaluate possibilities for the maintenance and recovery of habitats</li> </ul>	<ul style="list-style-type: none"> <li>* Protected areas should for Poland, the Baltic States and Ukraine accommodate 50 % and for Belarus 25 % of the national breeding population. For Russia 10 % of the southern breeding population should be accommodated in protected areas.</li> <li>* Listing of relevant policies and regulations, and actions to minimise conflicts with human activities in future</li> <li>* Develop a management plan including listing of threatened sites and management needs</li> </ul>
Key knowledge needed	High	<ul style="list-style-type: none"> <li>Distribution and Population size</li> <li>Population changes</li> <li>Distribution of key habitats</li> <li>Habitat use and diet</li> <li>Management practises</li> </ul>	<ul style="list-style-type: none"> <li>* Update distribution maps and national estimates of breeding population</li> <li>* Develop and run monitoring of the breeding population, habitats and threats</li> <li>* Inventory of key sites and determination of habitat threats</li> <li>* Map the distribution of key habitats</li> <li>* Improve knowledge on habitat use and diet</li> <li>* Develop and test management practises</li> </ul>



### The bush tundra part of the eastern breeding population (northern parts of the Russian Federation)

Internat. Objective	Priority	National management options / actions	Measurable objective
Increase survival	Medium	<ul style="list-style-type: none"> <li>Ensure no over-exploitation</li> </ul>	* Ensure sustainable harvesting
Sufficient quantity of habitats & Good quality of habitats	Medium	<ul style="list-style-type: none"> <li>Maintain the current status of habitats quantity and quality</li> <li>Improve protection status by encourage a protective status for all sites of international importance for the Great Snipe. For sites of international importance the status of SPA according to the EU Birds Directive (if the site host potential habitat for the species the site has to be identified as SPA (Birds Directive))</li> </ul>	<ul style="list-style-type: none"> <li>* Protected areas should accommodate 10 % of the national breeding population</li> <li>* Listing of relevant policies and regulations, and actions to minimise conflicts with human activities in future</li> <li>* Inventory of key sites and determination of habitat threats</li> <li>* Develop a management plan including listing of threatened sites and management needs</li> </ul>
Key knowledge needed	High	<ul style="list-style-type: none"> <li>Distribution and Population size</li> <li>Population changes</li> <li>Distribution of key habitats</li> <li>Habitat use and diet</li> </ul>	<ul style="list-style-type: none"> <li>* Update distribution maps and estimates of breeding population</li> <li>* Develop and run monitoring of the breeding population (e.g. bag statistics), habitats and threats</li> <li>* Inventory of key sites and determination of habitat threats</li> <li>* Map the distribution of key habitats</li> <li>* Improve knowledge on habitat use and diet</li> </ul>

**Formerly breeding countries (Germany, Denmark and Finland).**

<b>Internat. Objective</b>	<b>Priority</b>	<b>National management options / actions</b>	<b>Measurable objective</b>
Sufficient quantity and quality of habitats	Low	<ul style="list-style-type: none"> <li>Encourage the re-establishment of former breeding areas by Great Snipe as opportunities permit</li> </ul>	* Listing of policies and regulations
Key knowledge needed	Low	<ul style="list-style-type: none"> <li>Management practises</li> </ul>	* Develop and test management practises

**Migration countries (ca. 50 countries including Mid- and Southern Europe, the countries surrounding the Caspian Sea, the Middle East and North Africa. For more details see Annex II.).**

<b>Internat. Objective</b>	<b>Priority</b>	<b>National management options / actions</b>	<b>Measurable objective</b>
Increase survival	Medium	<ul style="list-style-type: none"> <li>Stop exploitation of the western population and the south western part of the eastern population, and ensure no over-exploitation of the Russian population</li> </ul>	* Ban Great snipe hunting in western and southern Europe and western Africa, and if needed postpone start of Common snipe hunting season in these areas until 5 Sept.
Sufficient quantity of habitats & Good quality of habitats	Medium	<ul style="list-style-type: none"> <li>Maintain or enhance the current status of habitats</li> <li>Encourage a protective status for all sites of importance for the Great Snipe. For EU (or accession) countries sites of international importance should be declared SPA according to the EU Birds Directive. For other countries the sites should be included in the Emerald network (Bern Convention) and/or as Ramsar sites.</li> </ul>	* Inventory of key sites and determination of habitat threats
Key knowledge needed	High	<ul style="list-style-type: none"> <li>Distribution and Population size</li> <li>Habitat use and diet</li> </ul>	<ul style="list-style-type: none"> <li>* Update distribution maps and national estimates of migration population</li> <li>* Improve knowledge on habitat use and diet</li> </ul>

**Wintering countries (ca. 35 countries in tropical and southern Africa. For more detail see Annex II)**

<b>Internat. Objective</b>	<b>Priority</b>	<b>National management options / actions</b>	<b>Measurable objective</b>
Increase survival	Medium	<ul style="list-style-type: none"> <li>Stop all over-exploitation</li> </ul>	* Ban hunting or ensure sustainable harvesting
Sufficient quantity of habitats & Good quality of habitats	High	<ul style="list-style-type: none"> <li>Maintain or enhance the current status of habitats.</li> <li>Encourage a protective status for all sites of importance for the Great Snipe. Sites of international importance should be declared Ramsar sites.</li> </ul>	<ul style="list-style-type: none"> <li>* Inventory of key sites and determination of habitat threats</li> <li>* The Ethiopian plateau grassland seems to be very important for a large fraction of the eastern population during mid Aug. – mid Oct., and the need of a management plan for these areas should be evaluated.</li> </ul>
Key knowledge needed	High	<ul style="list-style-type: none"> <li>Distribution and Population size</li> <li>Habitat use and diet</li> </ul>	<ul style="list-style-type: none"> <li>* Update distribution maps and national estimates of wintering population</li> <li>* Improve knowledge on habitat use and diet</li> </ul>

## **7 Implementation**

### **General preconditions**

For the Action Plan to be successfully implemented, agreement on information exchange, communication and monitoring, clarity on necessary financial resources and a realistic time-schedule are a prerequisite. It is most important that individual countries will only consider measures that affect the population after a consultation process with the other involved countries has taken place. The Technical Committee of the AEWA should play a mediating role.

A special working group under the Technical Committee should be established to co-ordinate the implementation of the Great Snipe Action Plan. In this working group breeding and wintering Range States and interests groups should be represented. The Range States have a responsibility in monitoring national achievements, and communicating these to the AEWA Great Snipe Working Group and other Range States. This chapter will describe these essential preconditions for the implementation of the international Action Plan. A key challenge here will be to get these things working when only 1 of the countries accommodating breeding Great snipes have signed the AEWA (see Annex II).

### **Gap in knowledge**

As long as there is a major lack in the fundamental knowledge about the population biology (e.g. details about the breeding range, population size, migration habits, wintering range) and the ecology (e.g. habitat use and diet, particularly outside the breeding season) of the Great Snipe, it is impossible to develop an optimal Action Plan for this species. A main task for the proposed AEWA Great Snipe Working Group should be to encourage the gathering of such knowledge. Also a population model is needed for the preparation of reliable national Action Plans in the future, and should therefore be developed. The development of such a model will also identify a set of parameters, for which data are lacking for several of them, and will thereby identify key parameters to be included in the monitoring of the species that has to be initiated.

### **Monitoring**

The success of this Action Plan stands or falls with the commitment of countries to monitor the population and habitats, as well as effects of management measures on the species. Only if countries demonstrate this commitment, can proper management decisions be made. All countries are requested to initiate a regular population census, a co-operative ringing programme and to start population monitoring (including productivity) (see Kå lã s 2000, Aunins 2001a). The working group should be vital in organising this work.

### **Organisation**

In the organisation structure of the AEWA, the Agreement Secretariat plays a key role. The Agreement Secretariat co-ordinates flows of scientific information and technical advice. It also calls for meetings of the AEWA parties. The Technical Committee falls under the Agreement Secretariat. Article VII, paragraph 5 of the AEWA gives the Technical Committee the possibility to install working groups for special purposes. This article can be used for the establishment of a Great Snipe Working Group.

### **Great Snipe Working Group**

A special Great Snipe Working Group under the Technical Committee of the AEWA should be established for implementation of this Action Plan.

The GSWG should, under supervision of the Technical Committee and taking into account the role of the Agreement Secretariat, be mandated to undertake the following activities:

- Develop guidelines for population censusing and monitoring, and organise a co-operative ringing programme.

- Develop guidelines for habitat management practises
- Facilitate the development of a population model
- Assist in and co-ordinate the process of National Action Plan preparation.
- Prepare and organise the triennial meeting with actual Range States.
- Prepare and submit a review of the Action Plan to the triennial Range States' meeting and to the AEWA.
- Co-ordinate and facilitate information exchange between Range States (and between the AEWA and the Range States).
- Monitor implementation of the Action Plan through the preparation of an annual report by the WG.
- Collect country data and draft annual reports on the implementation of the Action Plan.
- Organise intermediate meetings with groups of Range States (training, emergency measures, etc.)

The GSWG should consist of a team of several technical advisors. To ensure effective communication between the Technical Committee and the working group, at least one member of the Technical Committee should also participate in the working group.

Detailed Terms of Reference based on the above description of activities will be prepared by the Technical Committee, and endorsed by the Range States before the GSWG will start its work.

### **Country actions**

In all communication between the Range States (Contracting and Non-Contracting to AEWA), the Agreement Secretariat plays a co-ordinating role. To keep communication lines clear, countries should therefore provide information to the Agreement Secretariat. This is intended to ensure that all parties will get all relevant information. In order to implement the Action Plan, the Range State Countries should commit themselves to at least the following points:

- Endorse the Terms of Reference of the working group.
- Endorse this Action Plan.
- Pinpoint focal points, responsible for the communication with the working group and relevant stakeholders in the country.
- Through the Agreement Secretariat, inform the working group about relevant issues in the country.
- Contribute information for the preparation of the annual report by the GSWG
- Prepare, in co-operation with the working group, and based on chapter 5 and 6 of this International Action Plan a National Action Plan in one year's time.
- Implement this National Action Plan.
- Prepare a review of the National Action Plans every three to five years.
- Maintain and further develop adequately funded research and monitoring programmes to deliver key data.

## Time frame for monitoring, evaluation and communication

Time path	1 <sup>e</sup> year ↓	2 <sup>e</sup> year ↓	3 <sup>e</sup> year ↓	4 <sup>e</sup> year ↓
<b>Actions</b>	<b>AEWA Technical Committee:</b> <ul style="list-style-type: none"> <li>• Approve/endorse the International Action Plan</li> <li>• Prepare Terms of Reference for the Working group</li> <li>• Facilitate information exchange</li> </ul>	<b>Working group:</b> <ul style="list-style-type: none"> <li>• Assist and co-ordinate National Action Plans</li> <li>• Monitor implementation of the national and international Action Plans and prepare annual progress report</li> <li>• Organise workshops/training</li> <li>• Facilitate information exchange</li> </ul>	<b>Working group:</b> <ul style="list-style-type: none"> <li>• Monitor implementation of the (national and international) Action Plans and prepare annual progress report</li> <li>• Organise workshops/training</li> <li>• Facilitate information exchange</li> </ul>	<b>Working group:</b> <ul style="list-style-type: none"> <li>• Prepare triennial Range States meeting</li> <li>• Monitor implementation of the national and international Action Plan and prepare three-year reports</li> <li>• Prepare Action Plan review</li> <li>• Organise workshops/training</li> <li>• Facilitate information exchange</li> </ul>
	<b>Range States:</b> <ul style="list-style-type: none"> <li>• Endorse the International Action Plan</li> <li>• Endorse the working group</li> </ul>	<b>Range States:</b> <ul style="list-style-type: none"> <li>• Prepare National Action Plan</li> <li>• Implement National Action Plan</li> <li>• Contribute to the annual progress report</li> <li>• Pinpoint national focal point</li> <li>• Contribute to workshops</li> <li>• Exchange information</li> </ul>	<b>Range States:</b> <ul style="list-style-type: none"> <li>• Implement National Action Plan</li> <li>• Contribute to the annual progress report</li> <li>• Contribute to workshops</li> <li>• Exchange information</li> </ul>	<b>Range States:</b> <ul style="list-style-type: none"> <li>• Implement National Action Plan</li> <li>• Contribute to the three-year reports</li> <li>• Contribute to workshops</li> <li>• Exchange information</li> </ul>
	↓	↓	↓	↓
<b>Products</b>	<ul style="list-style-type: none"> <li>• Endorsed Action Plan</li> <li>• Endorsed working group</li> <li>• A Web page for information exchange</li> </ul>	<ul style="list-style-type: none"> <li>• National Action Plans</li> <li>• Annual progress report Range States.</li> <li>• Annual progress report international Action Plan.</li> <li>• National Focal Points</li> <li>• Guidelines for population monitoring</li> <li>• Guidelines for monitoring of key habitats</li> <li>• Information exchange</li> </ul>	<ul style="list-style-type: none"> <li>• Annual progress report international Action Plan</li> <li>• Information exchange</li> <li>• Guidelines for management practices</li> <li>• A population model</li> <li>• A review of knowledge particularly related to migration and wintering conditions and to the breeding condition for the Russian population</li> </ul>	<ul style="list-style-type: none"> <li>• Triennial Range States' meeting</li> <li>• Three-year report Range States</li> <li>• Three year report international Action Plan</li> <li>• Information exchange</li> <li>• <b>Reviewed Action Plan</b></li> </ul>

## 8 References and the most relevant literature

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## **Terminology** (To be complemented)

In this Action Plan, the following definitions have been used:

**Equilibrium population level** - stable level of animal population size, in which birth rate and death rate are equal.

**Habitat** - environment meeting the conditions required by a particular species.

**Natural Habitat** - environment of a particular species, which has not been changed by human interference; i.c. arctic tundra.

**Semi-natural habitat** - environment of a particular species, which has been moderately modified by humans; i.c. low grazing pressure by sheep or farmed reindeers in mountain areas and arctic tundra.

**Man-made habitat** - man-made environment of a particular species; i.c. farmland, mowing and grazing of flood plains.

**Feeding areas** - areas where animals search for food.

**Range States** - (independent) countries within the range in which a particular animal species occurs.

**Fly-over countries** - those Range States where bird species only pass by on migration without actually staging for at least several days.

**Wintering grounds** - staging grounds during the winter.

**Migration staging grounds** - staging grounds used during migration.

**Key sites** - areas which are essential for the survival of a significant part of the population (conform Ramsar criteria) at any stage of its annual cycle; i.c. for this migratory bird species: breeding grounds, staging areas and wintering sites.

**Annex I: Identified European and African Important Bird Areas (IBA's) which classify for the Great Snipe. Data from the BirdLife International World Bird database, accessed in January 2002.**

Country	International name	Area	Lat	Long	Year	Season	Min	Max	Units	Quality	Abundance
Belarus	Belovezhskaya Pushcha	87000	52.75	24.07		breeding					
Belarus	Flood-plain of Sozh river	13400	52,67	31,08	1996	breeding	60	120	breeding 'pairs'	medium	frequent
Belarus	Mid-Pripyat	100000	52,15	27,00	1995	breeding	50		breeding 'pairs'		rare
Belarus	Vygonoshchanskoe	43000	52,67	26,00	1995	breeding	20		breeding 'pairs'	medium	uncommon
Estonia	Alam-Pedja wetland complex	25850	58,50	26,17	1996	breeding	50	75	breeding 'pairs'	medium	common
Estonia	Kärevere flood-plain meadow	150	58,42	26,52	1999	breeding	15	50	breeding 'pairs'	good	
Estonia	Matsalu Bay	51880	58,75	23,67	2001	breeding	80	100	breeding 'pairs'	good	rare
Latvia	Baltie Klani marshes and adjoining bogs	19329	56,85	26,97	2000	breeding	135	0	breeding 'pairs'	medium	
Latvia	Lake Burtnieks	9148	57,75	25,25	2000	breeding	20	25	breeding 'pairs'	good	
Latvia	Pededze and Sita flood-plain	1721	57,15	26,98	2000	breeding	20		breeding 'pairs'	medium	
Latvia	Ziemeļgauja Floodplain	5683	57,67	26,22	1999	breeding	6		breeding 'pairs'	unknown	
Lithuania	Cepkeliai	11212	53,98	24,50	1998	breeding	10	15	breeding 'pairs'	medium	uncommon
Lithuania	Nemunas delta	26625	55,30	21,25	1999	breeding	30	50	breeding 'pairs'	good	uncommon
Norway	Dovre fjell	50000	62,32	9,45	1989	breeding	400		breeding 'pairs'		
Norway	Hardangervidda	427200	60,20	7,62	1989	breeding	70	100	breeding 'pairs'		
Poland	Biebrza river valley	126047	53,50	22,83	1980	breeding	370		breeding 'pairs'	poor	
Poland	Gródek-Michalowo basin	4700	53,07	23,67	1995	breeding	15	30	breeding 'pairs'	poor	
Poland	Lower Bug river valley	55000	52,32	22,35	1993	breeding	50	60	breeding 'pairs'		
Poland	Narew river gaps	4200	53,12	22,18	1993	breeding	30		breeding 'pairs'		
Poland	Upper Narew river valley	8400	52,92	23,42	1993	breeding	80	110	breeding 'pairs'		
Russia	Adovo-Chugrumski wetland	21000	60,25	53,08	1995	breeding	40	60	breeding 'pairs'		
Russia	Bel'skaya flood-plain	42800	55,08	55,75	1994	breeding	50		breeding 'pairs'	good	
Russia	Central Meshchera lake-system	92700	55,25	40,17	1995	breeding	15	20	breeding 'pairs'	good	
Russia	Dedinivo flood-plain of Oka river	23120	55,17	39,30	1996	breeding	20	50	breeding 'pairs'	poor	
Russia	Faustovo flood-plains of Moscow river	9000	55,40	38,50	1985	breeding	40	50	breeding 'pairs'	medium	
Russia	Flood-plain of Vad river	65600	54,22	42,70	1996	breeding	20	40	breeding 'pairs'	medium	
Russia	Flood-plain of Volkhov river	17650	59,17	31,83	1995	breeding	50	150	breeding 'pairs'	poor	
Russia	Iremel'ski mountain	90000	54,50	59,00	1996	breeding	20		breeding 'pairs'	good	
Russia	Irendyk ridge	150000	53,33	58,50	1996	breeding	100		breeding 'pairs'	good	
Russia	Izhevsk flood-plain of Oka river	30000	54,67	41,00	1996	breeding	150	300	breeding 'pairs'	medium	
Russia	Kamsko-Yayvenski wetland	35000	59,17	56,33	1994	breeding	30		breeding 'pairs'	good	
Russia	Khvarkush and Zolotoy Kamen' ridges	130000	60,25	58,58	1995	breeding		100	breeding 'pairs'		
Russia	Kumikushski wetland	80000	60,33	55,25	1995	breeding	50		breeding 'pairs'	good	
Russia	Lake Ilmen' and adjoining marshy plain	250000	58,25	31,75	1995	breeding	200	300	breeding 'pairs'	poor	
Russia	Mouth of Svir river	65000	60,58	32,93	1995	breeding	10	60	breeding 'pairs'	poor	
Russia	Nizhnetskaya flood-plain	8000	56,75	53,83	1996	breeding	75		breeding 'pairs'		
Russia	Pereluchski Nature Reserve	6425	58,22	34,60	1991	breeding	20	40	breeding 'pairs'	poor	
Russia	Solotcha flood-plain of Oka river	12000	54,83	39,75	1996	breeding	60	100	breeding 'pairs'	medium	

**Annex I. cont.**

Country	International name	Area	Lat	Long	Year	Season	Min	Max	Units	Quality	Abundance
Russia	Stakhovski marshes	10296	56,03	32,67	1990	breeding	10	20	breeding 'pairs'	good	
Russia	Upper Mologa river (Verestovo lake)	17000	57,83	36,50	1990	breeding	20	50	breeding 'pairs'	poor	
Russia	Upper Voronezh Forest	92800	53,00	40,08	1996	breeding	10	20	breeding 'pairs'	poor	
Russia	Valley of Sysola river	110000	61,13	50,28	1996	breeding	20	30	breeding 'pairs'	medium	
Russia	Watershed of Tsna and Vysha rivers	16000	54,00	42,00	1996	breeding	10	20	breeding 'pairs'	medium	
Russia	Yamantau mountain	120000	54,33	58,25	1996	breeding	20		breeding 'pairs'	good	
Russia	Yugyd Va	1926489	64,50	58,67	1996	breeding	100	200	breeding 'pairs'	medium	
Russia	Zavidovo Nature Reserve, including 3 fish-ponds	133800	56,37	36,10	1995	breeding	20	30	breeding 'pairs'	medium	
Sweden	Lake Ånnsjön-Storlien	90000	63,27	12,55	1996	breeding	25	150	breeding 'pairs'	medium	frequent
Sweden	Taavavuoma	28400	68,50	20,70		breeding	3	10	breeding 'pairs'		
Sweden	Vindelfjällen mountains (including Lake Tärnasjön)	550000	65,90	15,97		breeding	5	10	breeding 'pairs'		
Ukraine	Korotchenkivs'ki meadows	10000	51,93	33,38	1995	breeding	6	20	breeding 'pairs'	medium	common
Ukraine	Mzha river valley	5000	49,75	36,10	1996	breeding	15	25	breeding 'pairs'	medium	
Ukraine	Pryp'yat' river valley	12500	51,87	25,38	1996	breeding	20		breeding 'pairs'	medium	
Ukraine	Styr' river valley (Kolky village)	6600	51,07	25,37	1999	breeding	10	20	breeding 'pairs'	unknown	
Ukraine	Turiya river valley	7900	51,72	24,83	1996	breeding	40	50	breeding 'pairs'		
Ethiopia	Sululta plain		9,20	38,72		passage					
Kenya	Busia grasslands	250	0,42	34,25		passage					uncommon
Norway	Nordre Øyeren and Sørumsneset	7504	59,88	11,15	1995	passage				medium	frequent
Russia	Bulgarski	25000	55,00	49,17	1994	passage	100	150	adults and juveniles	medium	
Russia	Delta of the River Don	53800	47,17	39,42	1997	passage	1000	2000	adults and juveniles	poor	
Russia	North part of Volgogradski reservoir	74250	51,65	46,50	1997	passage	500	1000	adults and juveniles	medium	
Ukraine	Syvash Bay	245000	46,17	34,58	1992	passage	10	200	adults and juveniles	medium	
Kenya	Mau Narok--Molo grasslands	40000	- 0,55	35,92		winter					uncommon
Malawi	Lake Chilwa and flood-plain	220000	- 15,25	35,67		winter					
Mozambique	Gorongosa Mountain and National Park	385000	- 18,42	34,08		winter					
Namibia	Bushmanland (Tsumkwe) Pan System	120000	- 19,62	20,62		winter					
Tanzania	Moyowosi--Kigosi Game Reserves	1300000	- 4,67	31,50	1995	winter	44		adults and juveniles		
Uganda	Queen Elizabeth National Park and Lake George	223000	- 0,17	30,00		winter					
Uganda	Semliki National Park	21900	0,83	30,08		winter					
Zambia	Kasanka National Park	39000	- 12,52	30,22		winter	300	300	adults and juveniles		
Zambia	Barotse flood-plain	600000	- 15,28	23,03		winter	300	300	adults and juveniles		
Zambia	Chisamba	35000	- 15,00	28,25		winter					
Zambia	Chitunta plain	2000	- 11,50	24,38		winter					
Zambia	Hillwood	3200	- 11,25	24,32		winter					
Zambia	Kafue flats	600000	- 15,75	27,27		winter	300	300	adults and juveniles		
Zambia	Kafue National Park	2240000	- 15,38	26,00		winter					
Zambia	Nkanga river conservation area	9700	- 16,62	27,03		winter					
Zambia	Shiwa Ng'andu	9000	- 11,20	31,75		winter					
Zambia	South Luangwa National Park	905000	- 13,03	31,57		winter					
Zambia	West Lunga National Park and Lukwakwa	410000	- 12,83	24,50		winter					

**Annex II. Signatory countries for International Conventions that are relevant for conservation of Great Snipe. (x – Member Countries, Acc - Accession Countries).**

Country	Function	Ramsar	Bonn	AEWA	Bern	EU	Biodiversity
Belarus	Breeding	x			x		x
Estonia	Breeding	x			x	Acc	x
Latvia	Breeding	x	x		x	Acc	x
Lithuania	Breeding	x			x	Acc	x
Norway	Breeding	x	x		x		x
Poland	Breeding	x	x		x	Acc	x
Russian Federation	Breeding	x					x
Sweden	Breeding	x	x	x	x		x
Ukraine	Breeding	x	x		x		x
Denmark	Formerly breeding at present Migration/Fly-over	x	x	x	x	x	x
Finland	Formerly breeding at present Migration/Fly-over	x	x	x	x	x	x
Germany	Formerly breeding at present Migration/Fly-over	x	x	x	x	x	x
Albania	Migration/Fly-over	x			x		x
Algeria	Migration/Fly-over	x					x
Armenia	Migration/Fly-over	x					x
Azerbaijan	Migration/Fly-over	x			x		x
Belgium	Migration/Fly-over	x	x		x	x	x
Bosnia & Herz.	Migration/Fly-over						
Botswana	Migration/Fly-over	x					x
Bulgaria	Migration/Fly-over	x	x		x	Acc	x
Croatia	Migration/Fly-over	x	x	x	x		x
Cyprus	Migration/Fly-over				x	Acc	x
Czech Rep.	Migration/Fly-over	x	x		x	Acc	x
Egypt	Migration/Fly-over	x	x	x			x
Eritrea	Migration/Fly-over						x
France	Migration/Fly-over	x	x	x	x	x	x
Georgia	Migration/Fly-over	x	x				x
Greece	Migration/Fly-over	x	x		x	x	x
Hungary	Migration/Fly-over	x	x		x	Acc	x
Iran	Migration/Fly-over	x					x
Iraq	Migration/Fly-over						
Israel	Migration/Fly-over	x	x				x
Italy	Migration/Fly-over	x	x		x	x	x
Jordan	Migration/Fly-over	x	x				x
Kazakhstan	Migration/Fly-over						x
Kuwait	Migration/Fly-over						x
Lebanon	Migration/Fly-over	x					x
Libya	Migration/Fly-over	x					x
Liechtenstein	Migration/Fly-over	x	x		x		x
Luxembourg	Migration/Fly-over	x	x	x	x	x	x
Macedonia	Migration/Fly-over	x	x	x	x		
Malta	Migration/Fly-over	x	x		x	Acc	x
Moldova	Migration/Fly-over	x	x	x	x		
Monaco	Migration/Fly-over	x	x	x	x		x
Morocco	Migration/Fly-over	x	x	x	x		x
Netherlands	Migration/Fly-over	x	x	x	x	x	x
Portugal	Migration/Fly-over	x	x		x	x	x
Romania	Migration/Fly-over	x	x	x	x	Acc	x
Saudi Arabia	Migration/Fly-over		x				x
Slovak Rep.	Migration/Fly-over	x	x		x	Acc	x
Slovenia	Migration/Fly-over	x	x		x	Acc	x
Spain	Migration/Fly-over	x	x	x	x	x	x
Switzerland	Migration/Fly-over	x	x	x	x	x	x
Syria	Migration/Fly-over	x					x
Tunisia	Migration/Fly-over	x	x		x		x

Turkey	Migration/Fly-over	x			x		x
Turkmenistan	Migration/Fly-over						x
United Kingdom	Migration/Fly-over	x	x	x	x	x	x
Uzbekistan	Migration/Fly-over		x				x
Yemen	Migration/Fly-over						x
Yugoslav Rep.	Migration/Fly-over	x					
Angola	Wintering						x
Benin	Wintering	x	x	x			x
Burkina Faso	Wintering	x	x		x		x
Burundi	Wintering						x
Cameroon	Wintering		x				x
Centr. Afr. Rep.	Wintering						x
Chad	Wintering	x	x				x
Congo	Wintering	x	x	x			x
Congo, Dem. Rep.	Wintering	x	x	x			x
Cote d'Ivoire	Wintering	x					x
Equatorial Guinea	Wintering	x		x			x
Ethiopia	Wintering						x
Gabon	Wintering	x					x
Gambia	Wintering	x		x			x
Ghana	Wintering	x	x				x
Guinea	Wintering		x	x			x
Guinea Bissau	Wintering	x	x				x
Kenya	Wintering	x	x				x
Liberia	Wintering						x
Malawi	Wintering	x					x
Mali	Wintering	x	x	x			x
Mauritania	Wintering	x	x				x
Mozambique	Wintering				x		x
Namibia	Wintering	x					x
Niger	Wintering	x	x	x			x
Nigeria	Wintering	x	x				x
Rwanda	Wintering						x
Senegal	Wintering	x	x	x	x		x
Sierra Leone	Wintering	x					x
South Africa	Wintering	x	x	x			x
Sudan	Wintering						x
Tanzania	Wintering	x	x	x			
Togo	Wintering	x	x	x	x		x
Uganda	Wintering	x	x				x
Zambia	Wintering	x					x
Zimbabwe	Wintering						x

### Annex III. Preliminary list of contributors (commenting on drafts, information, observations etc.)

Name	Organisation	Area	Related to	Comments
Umberto Gallo Oris	Bird Life Europe		Organiser BirdLife	Workshop participant
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Des Callaghan	BirdLife International		BirdLife Database	
Bernt Lenten	UNEP, Germany		General comments	
Kariuki Nding'ang'a	National Museum Kenya	Kenya	General comments	
Ainars Aunins	Latvian Fund for Nature	Latvia	Breeding	Workshop participant
Gleb Gavrís	Ukrainian Acad. Sci.	Ukraine	Breeding and migration	Workshop participant
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Edward Mongin	Belarusian Acad. Sci.	Belarus	Breeding and migration	Workshop participant
Vladimir Morozov	Moscow State University	Russia	Breeding and migration	Workshop participant
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Dan Munteanu	Romania Orn. Soc.	Romania	Migration	
Elchin Sultanov	-	Azerbaijan	Migration	
Michel Devort	-	France and Africa	Migration and wintering	
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Joost Brouwer	Brouwer Env. & Agr. Cons.	Africa	Wintering	
Tim Dodman	-	Africa	Wintering	
Liz & Neil Baker	Tanzanian Bird Atlas	Tanzania	Wintering	
Albert Beintema	Alterra	Mali	Wintering	
Nik Borrow	-	Gabon	Wintering	
Anthony Cizek	-	Zimbabwe	Wintering	
Patrick Claffey	-	Benin	Wintering	
Will Duckworth	-	Gabon	Wintering	
Pete Leonard	-	Zambia	Wintering	
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Nigel Redman	Christopher Helm	Kenya	Wintering	
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Eddy Wymenga	A & W Ecol. Consultants	Mali	Wintering	