*AGREEMENT ON THE CONSERVATION OF AFRICAN-EURASIAN MIGRATORY WATERBIRDS*

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**1st Meeting of the AEWA Sociable Lapwing International Working Group**

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# DRAFT INTERNATIONAL SINGLE SPECIES ACTION PLAN FOR THE CONSERVATION OF THE SOCIABLE LAPWING (*VANELLUS GREGARIUS*)

SIDE FRONT COVER

Convention on the Conservation of Migratory Species of Wild Animals (CMS)

Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)

# International Single Species Action Plan for the Conservation of the Sociable Lapwing

*Vanellus gregarius*

(Insert black & white plate)

CMS Technical Series No. xx
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Date

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With contributions from:

Milestones in the production of the plan

- initial expert workshop: 30th March – 1st April 2009, Almaty, Kazakhstan
-

Geographical scope of the action plan

Reviews

Credits

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Drawing on the inner cover
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CONTENTS TO BE COMPLETED AND FINALISED ONCE DRAFT AGREED

FOREWORD

Executive Summary

(To be completed after comments on Version 1)

# 1. BIOLOGICAL ASSESSMENT

## 1.1. Taxonomy and biogeographic populations

Phylum: Chordata
Class: Aves
Order: Charadriiformes
Family: Charadriidae
Tribus: Vanellinae
Species: *Vanellus gregarius* (Pallas 1771)

Synonyms: Sociable Plover
*Charadrius gregarius* (Pallas 1771)
*Chaetusia gregaria* (Agassiz 1846)
*Tringa keptuschka* (Lepekhin 1774)
*Tringa fasciata* (Gmelin 1774)
*Vanellus pallidus* (Heuglin 1856) (nomen nudum)
*Chettusia wagleri* (Gray 1871)
*Chettusia gregaria* (Hartert 1920)

Monotypic species. No studies have been conducted on the level of genetic variation across the distribution range, and there is no scientific evidence for distinct subpopulations. However, there are two distinct wintering areas (Fig XX): Birds wintering in NE Africa and on the Indian subcontinent, respectively, have been assumed to originate from different populations in the West and East of the breeding range (assuming that an implicit migratory divide exists). However, recent satellite tagging work suggests that there is exchange between populations across the breeding range the existence of migratory divide seems unlikely

## 1.2. Distribution throughout the annual cycle

**In January**, birds are on their wintering grounds in Sudan and N India. Single birds and small flocks are regularly observed in Israel, Oman, Iran and the United Arab Emirates.
**In February**, most birds stay in the wintering areas as mentioned above until mid-month and depart thereafter. They reach Iraq, Syria and probably N Pakistan towards the end of the month.
**In March**, the last birds leave the wintering sites. In Syria and Turkey, important concentrations build up at stopover sites between 01–20 March, peaking around 10 March. In Iraq and Pakistan, birds pass through until the end of the month, with first birds observed in Kazakhstan in the last ten days.
**In April**, the first birds arrive on the breeding grounds in the first days of the month, while passage in Azerbaijan and Uzbekistan peaks and small numbers reach S Russia and W Kazakhstan. Around mid-April, good numbers arrive in the southern breeding areas in Kazakhstan, starting incubation around the 20$^{th}$ of the month. By late April, birds are present throughout the breeding range.

**In May**, new birds arrive on the breeding grounds until the middle of the month, while significant numbers are already incubating in Kazakhstan. The first chicks hatch around 20 May in Central Kazakhstan.
**In June**, many birds are still on nests in Russia and Kazakhstan, while most of the successful breeding pairs guard chicks. Throughout the month, flocks of moulting males gather at the breeding grounds. First chicks fledge towards the end of the month.
**In July**, fledged chicks and moulting adults gather in post-breeding flocks in the breeding areas, with first dispersal movements observed around mid-month. Around 20 July strong migration starts with medium to large flocks passing through Central Kazakhstan.
**In August**, most birds leave the breeding grounds; movements through Kazakhstan are slow and protracted, with first birds observed in Uzbekistan and at key Russian stopover sites (such as Manych lowlands).
**In September**, large numbers gather during the first two weeks at Manych in SW Russia, with significant passage observed in the Caucasus region. Birds arrive at key stopover sites in Turkey and Uzbekistan during the second half of the month. The last birds depart from the breeding grounds, some are observed in S Kazakhstan and Uzbekistan.
**In October**, some birds are still in SW Russia, while large concentrations build up in Turkey, where the birds stop over until around 15 October. A few birds arrive at the wintering sites in India and Sudan in the last days of the month, and there is significant passage in Pakistan
**In November**, the wintering areas are occupied during the whole month, with most of the records from the Indian Subcontinent gathered in this period.
**In December**, birds are rather mobile at their wintering grounds in Sudan and N India. Single birds and small flocks appear in Israel, Oman, Iran and the United Arab Emirates.

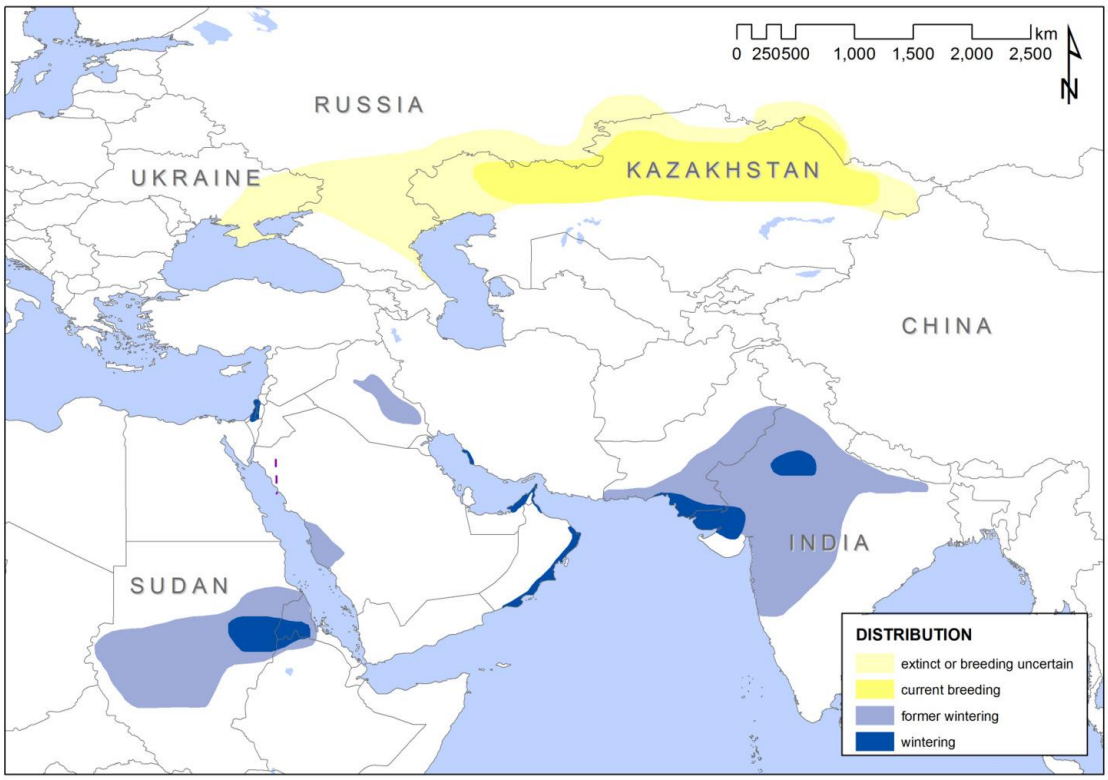


Fig. XX (previous page): Current and historic breeding and winter distribution of the Sociable Lapwing, based on more than 1,800 records collected from various sources (Sociable Lapwing World Database, unpublished).

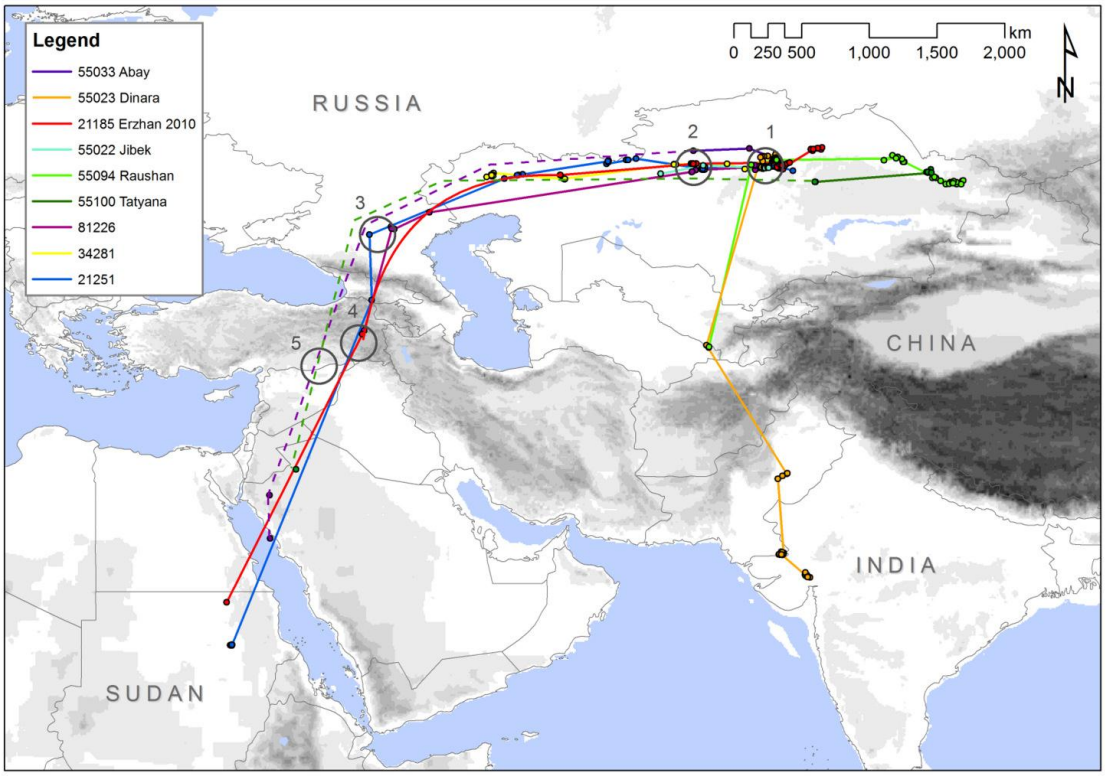



Fig. XX. Main autumn migration routes of nine Sociable Lapwings fitted with satellite tags in 2007, 2008 and 2010. Dashed lines connect locations along a known flyway, but are hypothetical.
Stopover sites are marked by circles: 1) Tengiz-Korgalzhyn region, Kazakhstan 2) Torghay lowlands, Kazakhstan 3) Manych depression, Russia 4) Muş Plain,Turkey 5) Ceylanpınar IBA, Turkey and Northern Syrian steppes.

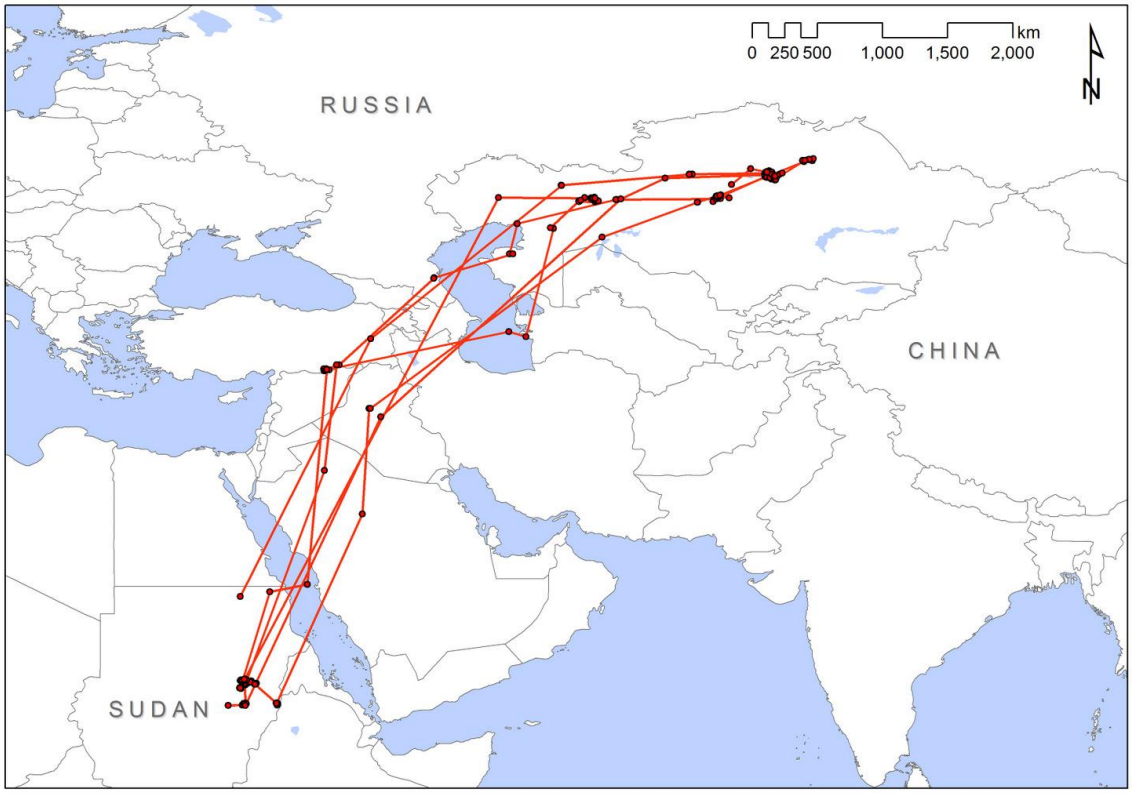



Fig. XX. Movements of a single male Sociable Lapwing, fitted with a satellite tag in Korgalzhyn region, Central Kazakhstan in June 2007 and subsequently tracked up to January 2011. This birds seems to cross the Northern Caspian Sea in autumn, and the Southern part of the Caspian Sea in spring.

### 1.3. Habitat requirements

#### 1.3.1. Breeding habitat selection and use

A detailed study on habitat selection and use in Kazakhstan has been conducted recently (Kamp et al. 2009). Across the breeding range, Sociable Lapwings are strongly associated with domestic livestock (especially cattle, sheep and goats), as large grazers create suitable habitat conditions. Grazing intensity and density of Sociable Lapwing nests are strongly correlated in Central Kazakhstan. Current grazing patterns are very much influenced by the fact that livestock is concentrated within a radius of 4–5 (max. 10) km around human settlements, thus most Sociable Lapwing colonies are found within this radius. A small number of birds were also recorded on recently burnt feather grass (*Stipa*) steppe and fallow or abandoned cereal fields.

Habitat is selected more often in the vicinity of wetlands and especially along rivers. This might be due to the fact that the birds migrate along rivers and thus discover suitable breeding habitat by rivers first, but also by the need for adults and chicks to drink and bathe on hot days.

On a smaller scale (colony level), vegetation height (very short, strongly grazed swards preferred), the cover of bare soil (optimum around 50%) and a high cover of animal dung (around 10%) are the most influential factors in habitat selection. The pronounced preference for strongly grazed areas may be driven mainly by vegetation height. Nests are often placed in dung piles. A possible

camouflaging or insulating effect of the dung has been suggested, but food availability (dung beetles, Diptera) might also be higher where dung is abundant.
Formerly occupied habitats, such as ungrazed steppe and sparsely vegetated saltpans ('solonchaks'), seem to be virtually vacated now, possibly due to an absence of large grazing animals after the collapse of the nomadic pre-Soviet and later semi-nomadic Soviet livestock breeding system in 1991, which left vast expanses of steppe virtually ungrazed.
Co-evolution with wild ungulates has been suggested repeatedly, but it seems unlikely that these animals were able to create the preferred short swards at least during the last 50 years judging from their migration phenology, numbers and foraging behaviour (Bekenov 1998).
Breeding attempts on ploughed fields have been infrequently recorded (mostly in Russia and N Kazakhstan), and then with poor breeding success.

**1.3.2. Habitat selection and use at stopover sites**
In recent years, larger flocks of birds stopping over in Central Kazakhstan (up to 470 in July 2009) have been observed on sown wheat fields (J Kamp, M. Koshkin pers. obs.). At the Russian stopover sites N of the Caucasus, the birds feed on grazed steppe and ploughed and tilled fields, but depart to freshwater and salt lakes to rest and roost (Field et al. 2007, Koshkin et al. 2010).
In Turkey, most birds were observed on arable fields with 10–12 cm high wheat seedlings or on ploughed fields without vegetation (some following ploughing tractors and feeding on invertebrates brought to the surface). Some birds also used extensively grazed steppe and lentil fields (Biricik et al. 2009). In some years, fallow cereal fields are used by large numbers of birds (Bozdogan et al. 2007).
In N Syria, mostly heavily grazed steppe areas with very sparse vegetation are visited (Hofland & Keijl 2008), rarely also semi-desert habitat and stony wadis (S Jbour pers. comm.). Sociable Lapwings were frequently observed near seasonal pools (fedahs) with lush vegetation (partly grazed) after frequent rains during survey work in Syria in spring 2010 (H Hmidan pers. comm.)
Smaller stopover sites in Russia and Kazakhstan were also found in pristine, mostly ungrazed steppe habitat.

**1.3.3. Winter habitat selection and use**
Most information on winter habitat selection is anecdotal or old. In Africa, in the second half of the 19th century, birds wintered mainly on burnt savannah and steppe, harvested cultivation (e.g. Sorghum) and cattle pastures (Heuglin 1871). Surveys in Sudan in January 2009 suggest that habitat use has not change much since then. Flocks were discovered on rain-fed cultivated land, stubble fields, moderately grazed to severely overgrazed pastures and at road margins. Insects, but also seeds and watermelon pieces (falling from passing lorries) have been identified as food sources (IM Hashim and MS Fadlalla pers. comm.).
The current wintering areas in Sudan as revealed by satellite telemetry and field surveys coincide with areas of the highest livestock densities in Africa (Wint & Robinson 2007) suggesting a high importance of grazed habitat for the species also in the wintering areas.
In India, mostly arable land (ploughed, fallow, or with young cereal plants) is used, but birds are also observed wintering at wetlands (A. Rahmani pers. comm.).

### 1.4. Survival and productivity

#### 1.4.1. Nest survival and causes of nest loss

Like most waders, Sociable Lapwings lay on average 4 (mean of 3.8 ± 0.1) eggs in a shallow scrape on the ground and tend to nest in small colonies (range of 1-8 nests) (Watson et al. 2006).
There are few robust estimates of nest survival from large enough sample sizes to allow comparison with current studies of Sociable Lapwing nesting biology. Gordienko (1991) reports a nest loss of 44% (from 26 nests) during the 1980s in Naurzum Reserve, Kazakhstan.
More recently, in 2004, Watson et al (2006) report an overall Mayfield nest survival rate of 19.3% from 58 nests in a study area centred on the settlement of Korgalzhyn, central Kazakhstan (50° 35' N, 70° 01' E). Percentage survival estimates reported by Gordienko (1991) and Watson et al. (2004) are not directly comparable. However, Gordienko (1991) found that 44% of nests with eggs ($n$ = 26) failed. Watson et als equivalent rate is 61% failure of nests found with eggs before hatch ($n$ = 56); the difference in frequencies between the two studies is not significant ($\chi^2$ = 2.4, $P$ = 0.12). Thus, there appears to have been little change in nest survival between the 1980s and the present.

Monitoring of nest survival has continued in the Korgalzhyn study area of Watson et al between 2005 – 2008, with 564 nests monitored. Of these, 283 (50%) successfully hatched and 281 failed for various reasons. Using Mayfield estimates daily survival equals 0.9604 which equates to an overall survival rate of 32%. Survival rate varies from year to year. Combining data sets from 2004 through to 2008, two years show low nest survival and three years high survival. Data from another study area in NE Kazakhstan (Pavlodar province) collected in 2007 shows low nest survival (Mayfield estimate of 17.5%) which was similar to that recorded in Korgalzhyn in the same year. One hypothesis currently being investigated is that nest survival rates fluctuate in a cycle with vole numbers, in years of high vole numbers, nest survival rates are higher than in years when vole numbers are low since predators have an abundant alternative source of food.

Causes of nest loss vary from year to year but the two main causes of loss are predation by mammals and trampling by domestic livestock. Of 641 nests in the Korgalzhyn area (2004-2008), 141 (22%) were predated, and 84 (13%) trampled. Predation (48%) rather than trampling (13%) was also the main cause of nest loss in the Pavlodar area in 2007.
Evidence from nest cameras suggests that nocturnal mammalian predators such as Red Fox (*Vulpes vulpes*), Long-eared Hedgehog (*Hemiechinus auritus*) and Steppe Polecat (Siberian Ferret) (*Mustela eversmanni*) are the key predators. Single cases of sousliks (*Spermophilus major* and *Citellus fulvus*) predating nests were also recorded on camera. The previous Species Action Plan noted that rooks and/or domestic cats and dogs were key predators contributing to the decline in breeding numbers. However, no instances of predation by rooks or cats/dogs were recorded on digital cameras, and in 5 years of intensive fieldwork, no nest loss could be attributed to these potential nest predators.

It is unlikely that the magnitude of the recent population decline can be wholly explained by low nest survival. However, attempts to manipulate grazing management (particularly sheep) in some key colonies may contribute to enhancing nest survival that may be beneficial at the population level.

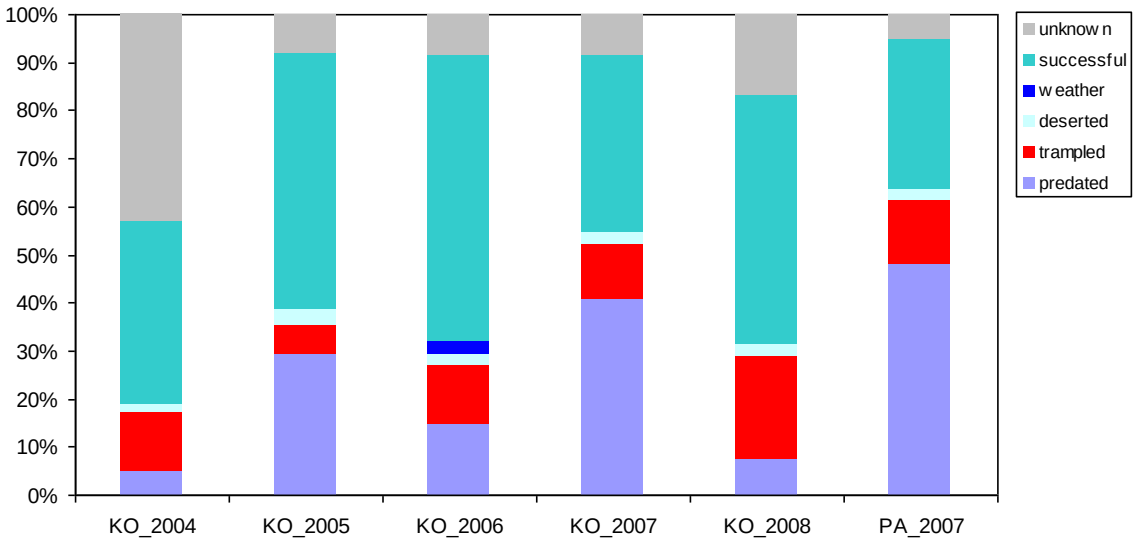



Figure XX: Annual variation in reasons for nest failure in two study areas (Korgalzhyn, 'KO' and Pavlodar 'PA') in Central and Northern Kazakhstan 2004–2008 after data from Watson et al. (2006) and R. Sheldon, J. Kamp and M. Koshkin (unpublished data).

### 1.4.2. Chick survival

No historical data exist on chick survival from hatching through to fledging. Between 2005 and 2009 an intensive programme of colour-ringing chicks has enabled individuals to be followed through to fledging in Central Kazakhstan (Sheldon, Kamp & Koshkin unpublished data). Including data from Watson et al (2006) productivity can be estimated for the period 2004-2008. Comparing Sociable Lapwing productivity estimates with those of Northern Lapwing suggests that fledging rates are sufficient to maintain population stability in 3years out of 5 (Fig XX). Thus, low productivity is unlikely to be the key mechanism underlying the recent population decline in Sociable Lapwing.

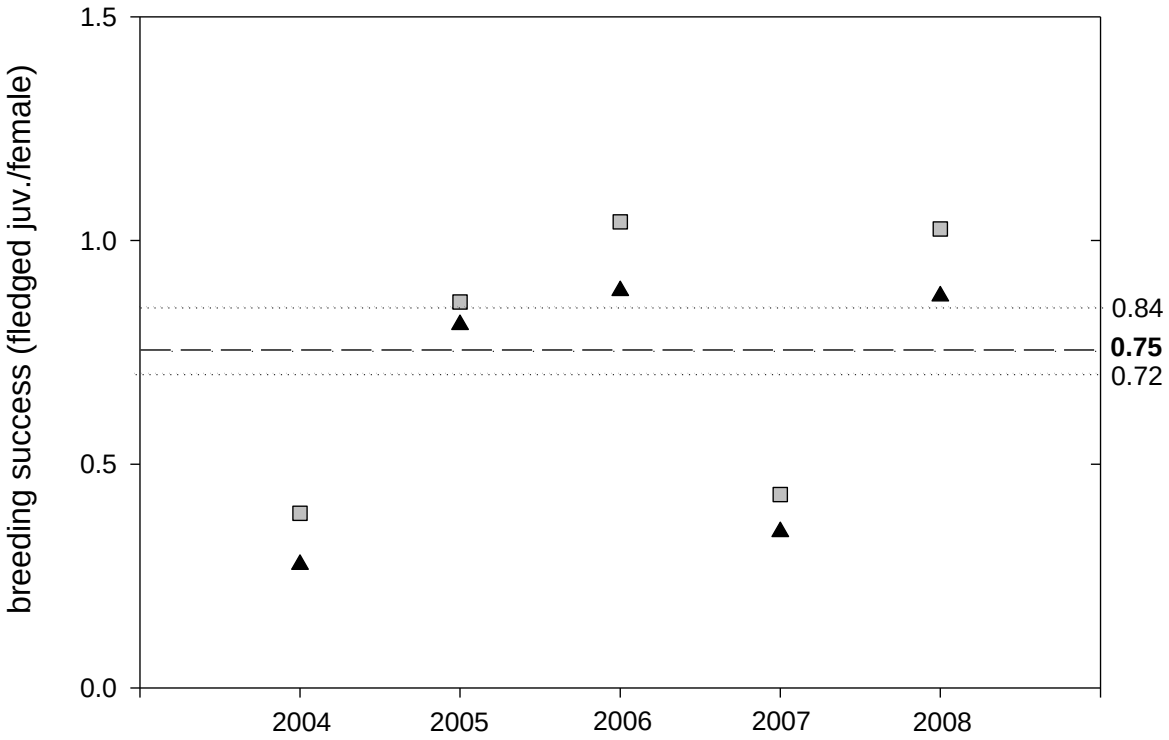



Fig. XX: Minimum and maximum number of colour-ringed fledged chicks per breeding attempt and year (squares – assuming re-nesting, triangles – assuming no re-nesting), from a study population in Central Kazakhstan (R.D. Sheldon, J. Kamp, M.A. Koshkin unpublished data). The dashed line indicates the five year mean of r = 0.75 assuming re-nesting, the dotted lines mark alternative levels of productivity needed to maintain population stability in Northern Lapwing after Peach et al. (1994) and Catchpole et al. (1999).

## 2. THREATS

### 2.1. Background.

The format for AEWA International Single Species Action Plans requires an assessment of the factors threatening the global population, according to the following criteria:

- **Critical**: a factor causing or likely to cause very rapid declines and/or extinction;
- **High**: a factor causing or likely to cause rapid decline leading to depletion;
- **Medium**: a factor causing or likely to cause relatively slow, but significant, declines;
- **Low**: a factor causing or likely to cause fluctuations;
- **Local**: a factor causing or likely to cause negligible declines in small parts of the population;
- **Unknown**: a factor that is likely to affect the species but it is unknown to what extent.

### 2.2. Overview of Species Threat Status

### 2.3. Description of key threats

In the first Sociable Lapwing Single Species Action Plan (Tomkovich & Lebedeva 2004), the following threats of high importance were listed:

- Reduced grazing by domestic livestock leading to decreased habitat availability
- Predation by corvids
- Trampling by sheep and cattle.

Grazing pressure has significantly increased since the year 2000, and large areas of apparently suitable habitat are unoccupied each year, thus reduced habitat availability is no longer considered a threat (Kamp et al. 2009).
Predation by corvids has been ruled out as a major threat according to results of recent research at the breeding grounds (1.4.1, 1.4.2).
Trampling by livestock (especially sheep) is considered an ongoing threat, however with minor effects on overall breeding success (1.4.1).
Hunting at stopover sites on the migration routes has been identified recently as a key threat to the species (see below).

**List of critical and important threats**

**(a) Direct threats, causing reduced hatching success and high mortality of chicks and adults**

**1. Hunting**

***Stopover/wintering sites*** **Importance: Critical**.

Large-scale hunting at stopover sites currently appears to be the most important threat influencing the species' survival. There is evidence from known stopover sites in north-eastern Syria and some areas in Iraq from 2008 and 2009 that Sociable Lapwings are widely hunted by local hunters and visiting falconers from the Gulf States (Hofland & Keijl 2008; A. Aidek, S. Jbour, and M. Salim pers comm). The hunting has been reported on spring migration when Sociable Lapwings congregate in large numbers; this is of particular concern as these are birds returning to breed in central Asia.
The reasons that Sociable Lapwing are targeted are unclear, but it seems that hunting pressure is a combination of subsistence hunting from locals, to sport for visiting hunters. The species is considered to be quite an easy prey for falcons, probably replacing other bird species traditionally hunted (but now much depleted) such as Macqueen's (Asian Houbara) Bustard *Chlamydotis macqueenii* and sandgrouse *Pterocles spp.*

**2. Nest trampling by livestock**

***Breeding areas*** **Importance: Medium**

Clutch trampling can reduce nest survival significantly in some years (section 1.4.1). Most trampling incidents are likely to be caused by sheep and goats due to the way dense flocks are driven at high speeds often in close proximity to breeding colonies. Horses and cattle seem to be of minor threat as these move mostly in loose herds and appear to avoid stepping on nests (J Kamp pers. obs.).

**3. Predation of eggs and chicks**

***Breeding areas.*** **Importance: Low**

Predation varies from year to year but does not appear to be a limiting factor in either nest or chick survival. Evidence collected from nest cameras suggests that nocturnal mammals are key predators, rather than domestic dogs or cats, and that corvids are not as important as previously thought.
(ROB - some more analysis required)

**(b) Indirect threats causing habitat loss and low reproductive success**

**1. Reduced habitat availability for the species**

***Breeding areas.*** **Importance: High**

A strong link between livestock grazing intensity and Sociable Lapwing nest density has been shown recently (Kamp et al. 2009), and livestock numbers are thus considered a proxy for the amount of habitat available for Sociable Lapwings. Animal stocks collapsed after the break-up of the Soviet Union in 1991, but numbers of all herded animals are strongly increasing again since the year 2000 (Kazakhstan State Statistics Agency 2009). Habitat modelling has shown that the amount of suitable habitat available for Sociable Lapwings is currently much greater than the area currently occupied (Kamp et al. 2009, Murzakhanov et al. 2008) . This is caused by current low livestock mobility and concentration effects around villages, leading to increased grazing intensity compared to Soviet times (Milner-Gulland et al. 2006). High stock densities around villages were made possible by large-scale abandonment of arable fields and seed grass land surrounding human habitation in Soviet times after 1991.
The current situation is thus rather beneficial for the Sociable Lapwing and reduced habitat availability is not considered to be problematic in the short term (5–10 years). However, there is recent evidence for a likely decrease in available habitat within the next decade: Livestock numbers in some regions of Kazakhstan are stagnating or even decreasing due to improving living standard. Furthermore, mitigation measures to avoid overgrazing around settlements are being introduced in Kazakhstan leading to higher stock mobility and less grazing pressure. Kamp et al. (submitted) modelled a 30% decline for Sociable Lapwing until 2020 based on quantitative targets to reduce grazing pressure in Korgalzhyn region, Central Kazakhstan.

***Stopover/wintering sites.*** **Importance: Medium**

(THIS SECTION NEEDS INPUT FROM CONSULTEES)
Expansion of urban and agricultural areas in Russia.
Plantations of trees in India and possibly Pakistan.
Future land use change (climate change/global food provision) if irrigation is in place/use of GM crops for semi desert areas (mostly Sudan, India, Turkey)
Northeastern part of India/southern and eastern parts of Iraq/Sudan: plans for oil and gas explorations

**2. Degradation of habitat**

***Stopover/wintering sites*** **Importance: Medium**

THIS SECTION NEEDS INPUT FROM CONSULTEES

In the Syrian steppes some areas where significant numbers of birds were recorded in 2007 appear to have been degraded through intensive grazing and drought conditions, and few birds were located there in 2010 (H Hmidan pers. comm.)

Irrigation in India might lead to habitat change with potential increase after construction of a dam in Gujarat.

**(c) Knowledge limitations**

***Breeding areas***

*1. Low return rate of colour-ringed birds.* **High**
Potentially hunting pressure leads to loss of colour-ringed birds or colour-ringed birds might return to other areas – movements within the breeding range are not fully understood.
*2. Future trends in land use and their implications for habitat availability are poorly understood.* **High**
Possible scenarios on land use change have been developed recently and linked to Sociable Lapwing population development, but only for a restricted area.
*3. The generality of the results on breeding biology and species' survival based on data collected in a relatively small study area in Central Kazakhstan is not clear.* **Medium**
*4. The limits of the species' distribution are not clear and large knowledge gaps on numbers and distribution still exist.* **Medium**

***Stopover/wintering sites.***

*1. The current hunting pressure has not been quantified reliably, future trends in hunting pressure are not clear.* **Critical**
*2. Locations of potential further wintering and stopover sites are unknown, especially on the eastern flyway.* **Critical**
*3. The migration strategy is not fully understood especially regarding differences in spring and autumn migration.* **High**
*4. Knowledge on movements within the wintering areas is poor.* **High**
*5. Knowledge of the species' ecology during migration and wintering is poor.* **Medium**

**Demographic parameters are insufficiently known to undertake PVA (high)**

*1. Robust population estimate is missing*
*2. Estimates of annual survival of adults and juveniles are currently lacking due to a low number of resightings of marked individuals*

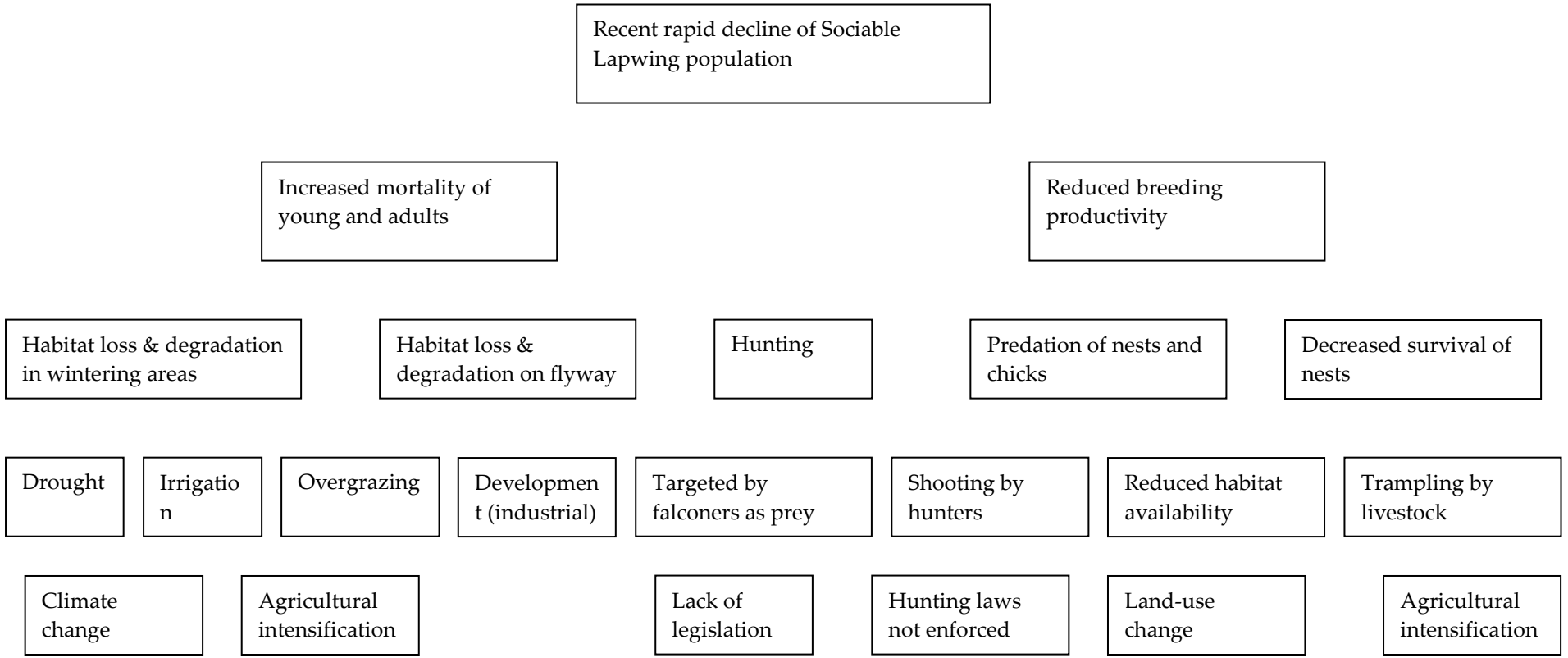
*3. Generation length is not known*
*4. The existence and size of a non-breeding population is unknown.*

**Table 1 Population size and trend by country**

| Country | Breeding numbers (ind) | Quality | Year of the estimate | Breeding population trend in the last 10 years | Quality | Maximum single counts, migrating/wintering birds in the last 10 years (ind) | Quality | Year of the estimate |
|---|---|---|---|---|---|---|---|---|
| *Kazakhstan* | 3000 -10800 | Medium (estimated) | 2006 | Stable/increasing | Good | 2100 | Good (observed) | 2009 |
| *Russia* | 200-400 | Medium (estimated) | 2006 | Unknown | | 1090 | Good (observed) | 2009 |
| *Turkey* | - | - | - | - | - | 3200 | Good (observed) | 2007 |
| *Syria* | - | - | - | - | - | 2000 | Good (observed) | 2007 |
| *Iraq* | - | - | - | - | - | 20 | Good (observed) | 2004 |
| *Sudan* | - | - | - | - | - | 38 | Good (observed) | 2009 |
| *India* | - | - | - | - | - | 90 | Good (observed) | 2011 |
| *Oman* | | | | | | 90 | Good (observed) | 2010 |
| *Azerbaijan* | - | - | - | - | - | 180 | Good (observed) | 2007 |
| **Overall** | **3200-11200** | **Medium (estimated)** | **2006** | **Stable/increasing** | **Good** | | | |

**Notes**
Quality:
Good (Observed) **= based on reliable or representative quantitative data derived from complete counts or comprehensive measurements.**
Good (Estimated) **= based on reliable or representative quantitative data derived from sampling or interpolation.**
Medium (Estimated) **= based on incomplete quantitative data derived from sampling or interpolation.**
Medium (Inferred) **= based on incomplete or poor quantitative data derived from indirect evidence.**

Problem tree




Level 1: Mechanism through which the threats operate
Level 2: Specific threats
Level 3: Immediate causes of threats
Level 4: Root causes of threats

## 3. POLICIES AND LEGISLATION RELEVANT FOR MANAGEMENT

### 3.1. International conservation and legal status of the species

Table xx (overleaf) shows the international conservation designations and legal status of the Sociable Lapwing under both the European and global instruments and mechanisms

Table xx(pxx) summarises the applicability of European and intergovernmental instruments to the principal range states (need a definition in section 1) for Sociable Lapwing as of (insert date later).

### 3.2. National policies, legislation and ongoing activities

ROB to add detail in final draft

Table xx Summary of the International conservation and legal status of Sociable Lapwing.

| Global Status[1] | European Status[2] | SPEC category[2] | EU Birds Directive[3] | Bern Convention[4] | Bonn Convention[5] | AEWA[6] | CITES[7] |
|---|---|---|---|---|---|---|---|
| Critically Endangered | Critically Endangered | 1 | I | II | I | A1a, 1b & 1c | |

Source

1 Birdlife International (2004). Threatened Birds of the World 2004. CD-ROM, Cambridge, UK

2 Birdlife International (2004). Birds in Europe: population estimates, trends and conservation status, (2nd Edition). (Birdlife Conservation Series No. 12). Wageningen, The Netherlands.

3 The species shall be subject to special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. For more details see the Directive text (insert web-link)

4 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 (insert web-link)

5 Animals for which agreements need to be made for the conservation and management of these species. For more details see the Convention text (insert web-link)

6 (insert web-link)

7 (insert web-link)

Table xx Summary of applicability of major international conservation instruments to principal range states for Sociable Lapwing

| Principal range state for Sociable Lapwing | Member state bound by EU Directives and policies | Beneficiary of EU European Neighbourhood Policy | Party to AEWA | Party to CMS | Party to Bern | Party to CBD | Party to Ramsar |
|---|---|---|---|---|---|---|---|
| Azerbaijan | No | Yes | No | No | Yes | Yes | No |
| Eritrea | No | | No | Yes | N/a | Yes | No |
| Ethiopia | No | | No | Yes | N/a | Yes | No |
| India | No | | N/a | Yes | N/a | Yes | Yes |
| Iran | No | No | No | Yes | N/a | Yes | Yes |
| Iraq | No | No | No | No | N/a | Yes | Yes |
| Israel | No | | Yes | Yes | N/a | Yes | Yes |
| Kazakhstan | No | No | No | Yes | N/a | Yes | Yes |
| Oman | No | | No | | N/a | Yes | No |
| Pakistan | No | | N/a | Yes | N/a | Yes | Yes |
| Russian Federation | No | Strategic partnership | No | No | Yes | Yes | Yes |
| Saudi Arabia | No | | No | Yes | N/a | Yes | No |
| Sudan | No | | Yes | | N/a | Yes | Yes |
| Syria | No | Yes | Yes | Yes | N/a | No | Yes |
| Turkey | Candidate | No | No | No | Yes | Yes | Yes |
| Turkmenistan | No | No | No | No | N/a | Yes | Yes |
| United Arab Emirates | No | | No | No | N/a | Yes | Yes |
| Uzbekistan | No | | Yes | Yes | N/a | Yes | Yes |

Source

## 4. FRAMEWORK FOR ACTION

This section identifies and defines the overall conservation **Goal,** and the **Objectives**, the **Results** and the **Actions** of the Plan.

**Goal**
The overall conservation Goal is to restore the Sociable Lapwing to favourable conservation status and remove it from the threatened categories of the IUCN Red-list & column A of the AEWA Table 1.

**Objective**
The Action Plan objective is to reverse the recent negative population trend leading to a population size of 8-10,000breeding pairs by 2019.

**Results**

*Result 1*
Baseline annual survival rate identified and increased by 2019

*Result 2*
Reproductive success is maximised through maintained nest survival rates higher than 35% (5 year rolling mean) and overall productivity higher than 0.75 fledged chicks per female (5 year rolling mean).

*Result 3*
All key sites along the flyways are protected and adequately managed

*Result 4*
All identified knowledge gaps are filled by 2019

*Result 5*
International co-operation is maximised through the full engagement of all principal range states in the framework of the Action Plan and AEWA

**Actions**

Action 1.1
Minimise the loss of Sociable Lapwings by hunting along the flyways through creation/efficient enforcement of legislation

Action 2.1
Reduce the number of nest trampling incidents during breeding season through improved livestock management

Action 3.1

Protect and manage key staging areas

Action 3.2
Ensure that Sociable Lapwing habitat requirements are included in relevant governmental land-use policies in all key range states.

Action 4.1
Identify additional staging areas and stop-over sites on the western flyway

Action 4.2
Identify the breeding origins, migration routes and key staging areas on the eastern flyway

Action 4.3
Evaluate the extent of hunting pressure in Syria and Iraq

Action 4.4
Identify further wintering sites in Sudan and elsewhere in north-east Africa and India

Action 4.5
Conduct further research on the demographic parameters

Action 4.6
Conduct research on the migration strategy through satellite tracking and colour ringing on the breeding grounds.

Action 4.7
Identification of new breeding areas through satellite tracking of birds caught on the wintering grounds.

Action 4.8
Conduct co-ordinated counts of breeding areas in Kazakhstan and Russia to improve the world population estimate

Action 4.9
Determine the effects of possible land-use changes on breeding numbers and distribution

Action 4.10
Determine the effects of possible land-use changes in the wintering grounds

Action 4.11
Identify the current climate space of Sociable Lapwing in Kazakhstan and Russia to predict the potential impacts of climate change on future distribution

Action 4.12

Identify the ecological requirements on the stop-over sites and wintering grounds

Action 5.1
Accession to AEWA and CMS of all principal range states

Action 5.2
Convene AEWA Sociable Lapwing International Working Group to co-ordinate the implementation of the Action Plan.

Table xx. Prioritisation and timescale of actions

Priority scale:
-Essential
-High
-Medium
-Low

Time scale:
Immediate: to commence within the next year
Short: to commence within the next 3 years
Medium: to commence within the next 5 years
Long: to commence within the next 10 years
Ongoing: an action that is currently being implemented and should continue
Completed: an action that was completed during preparation of the action plan

| **Result** | **Action** | **Priority** | **Timescale** | **Organisations responsible** |
|---|---|---|---|---|
| 1. Baseline annual survival rate identified and increased by 2019 | Action 1.1<br>Minimise the loss of Sociable Lapwings by hunting along the flyways through creation/efficient enforcement of legislation<br><br>Applicable to: **SY, IQ** | Essential | Immediate | Government institutions in charge of nature conservation and hunting |
| | Action 1.2<br>Analyse data from colour-ring project in Kazakhstan<br><br>Applicable to: **KZ** | Essential | Immediate | RSPB and ACBK |
| 2. Reproductive success is maximised through maintained nest survival | Action 2.1<br>To reduce the number of nest trampling incidents during breeding | High | Short | Government institutions in charge of nature conservation and livestock |

| | | | | |
|---|---|---|---|---|
| rates higher than 35% (5 year rolling mean) and mean chick survival higher than 0.75 fledged chicks per female (5 year rolling mean). | season through improved livestock management<br><br>Applicable to: **KZ, (RU)** | | | |
| 3. All key sites along the flyways are protected and adequately managed | Action 3.1<br>Protect and manage key staging areas<br><br>Applicable to: **All range states** | High | Medium/long | Government institutions in charge of nature conservation |
| | Action 3.2<br>Ensure that Sociable Lapwing habitat requirements are included in relevant governmental land-use policies in breeding and wintering areas<br><br>Applicable to: **KZ, RU, IN, SD** | High | Medium/long | Government institutions in charge of nature conservation |
| 4. All identified knowledge gaps are filled by 2019 | Action 4.1<br>Identify additional staging areas and stop-over sites on the western flyway<br><br>Applicable to: **KZ, RU, TU, SY, IQ** | High | Short/medium | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |
| | Action 4.2<br>Identify the route and key staging areas on the eastern flyway<br><br>Applicable to: **KZ, IN** | High | Short/medium | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |

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|---|---|---|---|---|
| | Action 4.3<br>Evaluate the extent of hunting pressure in Syria and Iraq<br><br>Applicable to: **SY, IQ** | Essential | Immediate | Government institutions in charge of nature conservation and hunting<br>National & International conservation NGOs |
| | Action 4.4<br>Identify further wintering sites in Sudan and elsewhere in north-east Africa and India<br><br>Applicable to: **SU, ER, ET, IN** | High | Short/medium | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |
| | Action 4.5<br>Further research on the demographic parameters<br><br>Applicable to: **all range states** | Medium | Medium | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |
| | Action 4.6<br>Research on the migration strategy through satellite tracking and colour ringing birds on the breeding grounds<br><br>Applicable to: **KZ** | Essential | Immediate | Government institutions in charge of nature conservation.<br><br>ACBK |
| | Action 4.7<br>Identification of new breeding areas through satellite tracking of birds caught on the wintering grounds | Medium | Medium | Government institutions in charge of nature conservation.<br>National & International |

| | | | | |
|---|---|---|---|---|
| | Applicable to: **SU, IN** | | | conservation NGOs |
| | Action 4.8<br>Conduct co-ordinated counts of breeding areas in Kazakhstan and Russia to improve the world population estimate<br><br>Applicable to: **KZ, RU** | High | Short | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |
| | Action 4.9<br>Determine the effects of possible land-use changes on breeding numbers and distribution<br><br>Applicable to: **KZ, RU** | Medium | Medium | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |
| | Action 4.10<br>Determine the effects of possible land-use changes in the wintering grounds<br><br>Applicable to: **SU, IN** | Low | Long | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |
| | Action 4.11<br>Identify the current climate space of Sociable Lapwing in Kazakhstan and Russia to predict the potential impacts of climate change on future distribution | Low | Long | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |

| | | | | |
|---|---|---|---|---|
| | Applicable to: **KZ, RU** | | | |
| | Action 4.12<br>Identify the ecological requirements on the stop-over sites and wintering grounds<br><br>Applicable to: | | | Government institutions in charge of nature conservation.<br>National & International conservation NGOs |
| 5. International co-operation is maximised through the full engagement of all principal range states in the framework of the Action Plan and AEWA | Action 5.1<br>Accession to AEWA of all principal range states<br><br>Applicable to: **IQ, KZ, RU, TU** | High | Short | Government institutions in charge of nature conservation.<br><br>AEWA Secretariat |
| | Action 5.2<br>Convene AEWA Sociable Lapwing International Working Group to co-ordinate the implementation of the Action Plan<br><br>Applicable to: **all range states** | Essential | Immediate | AEWA Secretariat |

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