



**CONVENTION ON
MIGRATORY
SPECIES**

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Gandhinagar, India, 17 - 22 February 2020
Agenda Item 27.1

**PROPOSAL FOR THE INCLUSION OF
THE LITTLE BUSTARD (*Tetrax tetrax*)
IN APPENDIX I AND II OF THE CONVENTION**

Summary:

The European Union and its Member States have submitted the attached proposal for the inclusion of the Little Bustard (*Tetrax tetrax*) in Appendix I and II of CMS.

Proposal for Inclusion of Species on the Appendices of the Convention on the Conservation of Migratory Species of Wild Animals

A. Proposal: Inclusion of the Little Bustard *Tetrax tetrax* on Appendix I and Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals.

B. Proponent: The European Union and its Member States

C. Supporting Statement:

1. Taxon

- | | |
|--------------------------|--|
| 1.1 Class | Aves |
| 1.2 Order | Otidiformes |
| 1.3 Family | Otididae |
| 1.4 Genus/species | <i>Tetrax tetrax</i> (Linnaeus, 1758) |
| 1.5 Scientific synonyms: | <i>Otis tetrax</i> (Linnaeus 1758, France) |
| 1.6 Common names: | English: Little Bustard
French: Outarde Canepetière
Spanish: Sisón Común |



Male Little Bustard. Copyright Juan Varela.

2. Overview

The Little Bustard is a species with Palearctic distribution and two geographically separated breeding populations, the western population (found in France, Italy, Portugal, Spain and Morocco) and the eastern population (from Turkey, Ukraine, Georgia and the SW Russian Federation through Kazakhstan to Kyrgyzstan and extreme NW China and extreme N Iran). It is listed as *Near Threatened* on the IUCN Red List because it is experiencing a rapid overall population decline, driven by acute declines in the west of its range, owing mainly to habitat loss and degradation in the western populations, as well as hunting pressure in the eastern ones (BirdLife International 2017).

3. Migration

3.1 Kinds of movement, distance, the cyclical and predictable nature of the migration

Western Population:

The species is partially migratory in the north of the Iberian Peninsula, performing long-range winter migration, from northern to central and southern areas, and sedentary in the centre and south of it (García de la Morena *et al.* 2015). Birds from central France winter in Spain and Portugal mainly south of Tagus river (mean a migration distance of 880 km; (Villiers, *et al.* 2010)), while birds from southern France are resident (Villiers *et al.* 2010). Passage of French migrating birds is detected, in small numbers, through the northern coast of Spain and Pyrenees (García de la Morena *in litt.*). The Sardinian birds are sedentary (Iñigo and Barov 2010). The highly endangered population in NW Morocco is resident (Palacín *et al.*, 2009).

Eastern Population:

The eastern population is fully migratory with traditional wintering sites on the Crimea peninsula, in Transcaucasia and south and east of the Caspian Sea. During the non-breeding season Little Bustards accumulate in large flocks. Migration bottle-necks have been recently discovered in Azerbaijan, concentrating a significant part of the eastern flyway population (Heiss 2013, 2016). Wintering populations occur in various steppe, semi desert and agricultural landscapes (Gauger 2007, Sehhatibet *et al.* 2012, Yousefi *et al.*, 2017).

3.2 Proportion of the population migrating, and why that is a significant proportion

The population in central France migrates to Spain and Portugal during winter (Villiers *et al.* 2010). Part of the populations in the Iberian Peninsula show a north-south winter migration and a relevant proportion perform a summer migration, typically to northerly or high-altitude areas, but also to irrigated land areas (75 per cent of radio and satellite-tagged Little Bustards (García de la Morena *et al.*, 2015)). This movement leads important changes in Little Bustard distribution through the annual cycle (García de la Morena, 2015), with a high percentage of the western population concentrated in the Central and Southern Peninsula during winter (García de la Morena *et al.*, 2006). Irrigated lands can hold important congregations in the summer time (Silva *et al.*, 2007; García de la Morena, 2015). The eastern population is fully migratory (Gauger 2007), although the migration flyways are still partially unknown and the population flows between breeding and wintering grounds are not known exactly (Botha *in litt.*).

4. Biological data (other than migration)

4.1 Distribution (current and historical)

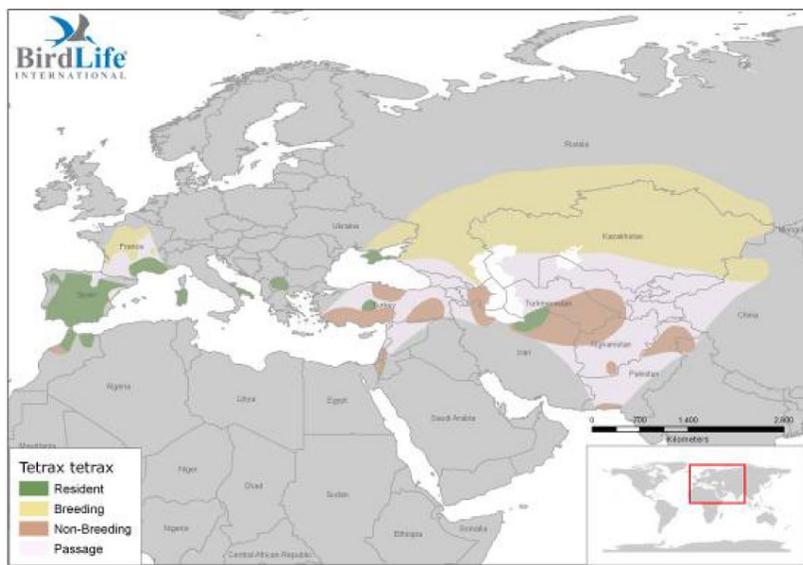


Figure 1 Distribution of the Little Bustard (taken from Iñigo and Barov 2010)

The species has two widely separated breeding populations. In its eastern range it occurs in the **Russian Federation, Georgia, Kyrgyzstan, Kazakhstan, Ukraine**, north-west **China**, northern **Iran** and **Turkey**. Its western range covers mainly **Spain** and **Portugal**, with smaller populations in **Italy, France** and a virtually extinct population in **Morocco** (Palacín & Alonso 2009, BirdLife International 2017).

Eastern populations winter from Turkey and the Caucasus to Iran, and erratically elsewhere in south Asia. **Azerbaijan** holds the main wintering quarters, followed by northern Iran. Western populations winter in the Mediterranean zone, with the Iberian Peninsula holding the most important wintering figures (BirdLife International 2017).

4.2 Population (estimates and trends)

Both western and eastern populations have declined dramatically since the 19th century and remain threatened by land reclamation and agricultural intensification over most of their range (Jolivet & Bretagnolle 2002, García de la Morena et al. 2005, Marcelino et al. 2011, Sehhatiasabet et al. 2012, Silva et al. 2018), Although the eastern population has recovered to some degree (Kamp *in litt.*). The population in Kazakhstan is estimated to be ca 20,000 individuals which may be increasing ((Martin et al. 2018).

The global population is placed in the range of 100,000–499,999 individuals (BirdLife International 2017). The European population (outside the Russian Federation and European Kazakhstan) was recently estimated to be 122,000-240,000 individuals with a declining trend of 30-49 per cent in three generations (30.9 years) (BirdLife International 2015), assumed to be stronger after recent national censuses in Spain and Portugal, which indicate overall declines of over 50 per cent in 10 years in Iberia (Morales *in litt.*).

In particular in Andalucía (southern Spain), in the decade 2007-2016 there has been a decline of 25-30% in the breeding population. The number of breeding males is around 4000-4200. Considering a sex-ratio of 1.4 males per female, the total population in Andalucía is 6850-7000 individuals. Population density has gone from 1,36 males/sq² in 2007 to 0,97 in 2016. Regarding wintering birds, there is a one third reduction in the wintering population which is

notorious in the eastern provinces and in areas of the valley of the lower Guadalquivir river. It is also very evident the reduction in the average size of the wintering groups, which were more numerous and stable in the past.

Regional censuses in Kazakhstan and the Russian Federation (Fedosov *et al.* 2017, Koshkin 2011, Korovin 2014) and count data from wintering grounds in Azerbaijan and Iran (Gauger 2007, Heiss 2013) suggest that the eastern part of the range supports a population of the similar size to the Iberian one (BirdLife International 2018).

4.3 Habitat (short description and trends)

The Little Bustard inhabits dry grassland and arable land. In Western Europe, it occurs in areas of low-intensity arable cultivation and pastoral land, selecting areas with habitat such as mosaics of pasture, stubble fields, long-rotation fallow land, legume and cereal crops (Morales *et al.* 2013, Santos *et al.* 2016) or vast continuous and extensive areas of fallow and pasture lands (Moreira *et al.*, 2012). The Little Bustard prefers larger fields, where it selects areas with high plant species richness, which provides arthropod abundance and a heterogeneous vegetation structure, which are important for male displaying and female breeding sites (Morales *et al.* 2008, Silva *et al.* 2010a, 2014a, Faria *et al.* 2012a). Nevertheless, the presence of individuals of the same species (i.e. conspecific attraction) has been proven as main driver of space use in the species (Tarjuelo *et al.* 2013, Devoucoux *et al.* 2018).

Outside the breeding season (from summer to winter) the species selects stubbles and fallows, but irrigated lands can also play an important role for feeding, especially legume crops such as alfalfa *Medicago sativa* (Silva *et al.*, 2004; 2007; Morales & Delgado, 2012; García de la Morena, 2015). Vegetation structure (i.e. microhabitat) is determinant for habitat selection both during breeding and non-breeding seasons, which is important for habitat management for Little Bustards (Morales *et al.*, 2008; Silva *et al.*, 2004; Faria & Silva, 2010; García de la Morena, 2015). In the eastern populations, the Little Bustard uses every type of habitat from natural steppe to arable fields, with highest densities found in old abandoned and fodder grass fields and lowest in arable land (Koshkin 2011). Wintering birds in Azerbaijan prefer semi-desert and steppe areas under winter pasturing and avoid areas of intensive agriculture (Gauger 2007).

4.4 Biological characteristics

The Little Bustard has an estimated lifespan of 10 years (Von Frisch 1976). Breeding occurs from February to June. Males display at lek sites, and females may breed closer to male lek sites than expected by chance (Tarjuelo *et al.* 2013). Clutches range from two to six eggs with an incubation time of 20-22 days (Collar *et al.* 2018). In Spain, early-laid clutches have a greater chance of success, possibly associated with different ranging patterns, which depend on arthropod availability (Lapiedra *et al.* 2011). The fledging period is 25-30 days or possibly longer, while young remain with females into the first autumn (Collar *et al.* 2018). Diet is mainly herbivorous (leaves and shoots), with a significant use of wild plants and leguminous species (Jiguet 2002, Bravo *et al.* 2017), although insects are important for adults during the breeding period and critical for chicks during rearing period (Jiguet 2002). The species has been observed to form mixed-species flocks with Pin-tailed Sandgrouse *Pterocles alchata* in the Iberian regions and France (Martin *et al.* 2010).

4.5 Role of the taxon in its ecosystem

The Little Bustard is a characteristic species of grassland and arable land. It needs a diversity of habitats throughout the yearly cycle to survive and rich plant and invertebrate resources to feed and reproduce. It is sensitive to the use of pesticides and to agriculture intensification. It is an important indicator of environmental quality and sustainable agriculture and biodiversity. It can

also be considered an umbrella species for dryland habitats, so that protecting and ensuring survival of Little Bustards will benefit the conservation and sustainability of the whole agroecological community on which it depends. Due to high its consumption of weed species (Bravo *et al.* 2017), the Little Bustard could be a potential controller of their population. Furthermore, it provides important recreation and aesthetic services for naturalists, ornithologists and bird watchers.



Little Bustard. Copyright Ricardo Gomez Calmaestra.

5. Conservation status and threats

5.1 IUCN Red List Assessment

- 2017 – Near Threatened (NT)
- 2015 – Near Threatened (NT)
- 2012 – Near Threatened (NT)
- 2008 – Near Threatened (NT)
- 2004 – Near Threatened (NT)
- 2000 – Lower Risk/near threatened (LR/nt)
- 1994 – Lower Risk/near threatened (LR/nt)
- 1988 – Threatened (T)

5.2 Equivalent information relevant to conservation status assessment

Little Bustard is listed as Near Threatened in the IUCN Red List because it is experiencing a moderately rapid overall population decline, driven by rapid declines in the west of its range,

owing mainly to habitat loss and degradation; it almost meets the requirements for listing as threatened under criteria A2abcd+3bcd+4abcd.

It is important to highlight that the Little Bustard is among the European bird species that suffered the largest range decline during the 20th century in Europe. It went extinct in Germany, Poland, Hungary and the Balkan Peninsula.

Resolution 11.33 on Guidelines for Assessing Listing Proposals to appendices I and II of the CMS resolves that, by virtue of the precautionary approach and in case of uncertainty regarding the status of a species, the Parties shall act in the best interest of the conservation of the species concerned and, when considering proposals to amend appendix I or II, adopt measures that are proportionate to the anticipated risks to the species. Good examples for this include the Red-footed Falcon and the European Roller, both of which were listed under appendix I proposed by the EU at Hungary's initiative, at the COPs in Bergen (2011) and Quito (2014), respectively.

A taxon assessed as 'Vulnerable' or 'Near Threatened' would not normally be considered for listing in Appendix I unless there is substantive information subsequent to the IUCN Red List assessment that provides evidence of deteriorating conservation status, and information about the conservation benefits that an Appendix I listing would bring.

Conservation status of Little Bustard is deteriorating rapidly in the western populations and an Appendix I listing would mean a strong signal to conserve and manage its habitat, and to prevent the adverse effects of activities or obstacles that seriously impede the migration of the species, mainly electric lines. The ploughing of long-term and rotational fallows is a main threat to breeding success in Iberia, which has led to declines of 25-30% in the breeding population in recent years.

Addition to Appendix I may also help conservation efforts in central and eastern Europe. The potential return of the Little Bustard into central and eastern Europe depends on the Ukrainian and South Russian populations, whose status is most likely strongly declining, in parallel with the better-known collapse of the Great Bustard in the same countries.

On this ground and on the basis that future IUCN assessments will most likely declare the species as endangered, the listing of Little Bustard under Appendix I at the CMS COP in 2020 seems justified. Listing on Appendix II is also pertinent to promote the needed international cooperation to protect this migratory bird.

5.3 Threats to the population

The primary cause of its decline in the west has been the conversion of dry grassland and low-intensity cultivation to intensive arable agriculture, especially where this conversion has included planting of monocultures or perennial crops, irrigation or afforestation or intensive pastoral systems. The fragmentation of traditional habitats, by means of agricultural intensification or infrastructure development, negatively affects habitat availability and quality for the species, as well as male density (García de la Morena *in litt.* 2007, García de la Morena *et al.* 2007, Silva *et al.* 2010b) as displaying males exhibit a preference for old and same-year fallows, which offer shelter and food (Morales *et al.* 2005, 2008, Delgado *et al.* 2010). The use of pesticides could reduce food availability (García de la Morena *in litt.* 2007).

Harvesting with modern farm machinery, operated at high speed and often during the night, is a key threat to females and nests in Europe and a main cause for the observed male-biased sex structure and low fecundity (Iñigo and Barov 2010). The ploughing of long-term and rotational fallows is another main threat to breeding success in Iberia (Morales *et al.* 2013). Farming

operations accounts for 40-70 per cent of clutch failure in north-eastern Spain and south-western France (Lapiedra *et al.* 2011, Inchausti and Bretagnolle 2005, Bretagnolle *et al.* 2011).

Reduced food supply during the nesting period is an important threat to the Little Bustard. The chicks are raised on insect food, whose abundance is of key importance. Prolonged times in search of food leads to worsened physiologic condition of the brood and mother and also has effect on fecundity and survival of these eggs and chicks (Lapiedra *et al.* 2011). Insect numbers, at a microhabitat/field level depend on pesticide use, habitat heterogeneity, field size and crop unification; access to food is impaired by too short or too dense vegetation (e.g. overgrazing/ abandonment) (Iñigo and Barov 2010, Ponce *et al.* 2011, Faria *et al.* 2012b).

Conversion to intensive arable agriculture remains a major cause of continuing declines in Europe (E. García *in litt.* 2007). The eastern populations that breed mainly in southern Russia and Kazakhstan had probably profited from massive cropland abandonment after the collapse of the Soviet Union in 1991 (Gauger 2007), as population densities are higher on abandoned than on used cropland (Koshkin 2011, Kamp, Urazaliev *et al.* unpublished data). However, little quantitative information on population trends is available. The observed recultivation of abandoned cropland after the year 2000 was predicted to cause declines in the eastern population in the near future (Kamp *et al.* 2011), but following high recultivation rates from 2000 to 2008 in Kazakhstan, reclamation of abandoned cropland has stagnated since ca. 2008 (Kamp *et al.* 2015, Dara *et al.* 2018). Recultivation of southern Russian farmland has been insignificant, and the total extent of abandoned farmland was estimated to reach 48-60 million ha as late as 2018 (Lesiv *et al.* 2018). Given this massively increased habitat availability compared to Soviet times, combined with anecdotal evidence, significant population increases since 1991 seem highly likely in the Russian Federation and Kazakhstan.

Collisions with distribution lines can be a major local source of non-natural mortality (Janns 2000, Marcelino *et al.* 2017). In Iberia approximately 3.5 per cent of the breeding population is estimated to collide annually with distribution lines. In more remote areas such as Kazakhstan collision seems not to be as relevant. High tension distribution lines may also reduce habitat suitability and increase habitat fragmentation (Silva *et al.* 2010b). The possibility of collisions with aircraft has created conflict and resulted in the culling of individuals in France in 2013 - although this has been stopped (Anon. 2013). The species also suffers from illegal hunting (Y. Andryuschenko *in litt.* 1999).

In Iberia, illegal killing was identified as the second main anthropogenic threat of adult mortality (Silva *et al.* 2010a). The release of farm-reared gamebirds could eventually introduce new pathogens to wild populations of Little Bustards (Villanúa *et al.* 2007). In Azerbaijan, disturbance from intensive land use (mainly heavy grazing), habitat loss to infrastructure development and poaching are considered to be the key threats to the species (Gauger 2007, P. Goriup *in litt.* 2016, Iñigo & Barov 2010). Climate change effects could lead to shorter rainy seasons and reduced winter precipitation in Southern Europe which could have a detrimental effect on habitat quality for the species (Delgado *et al.* 2009, Delgado and Moreira 2010) and temperature increase can impair breeding performance (Silva *et al.* 2015).

5.4 Threats connected especially with migrations

Collision with distribution lines has been identified as a threat for migrating populations. Morales *et al.* (2005) recommended that effective conservation strategies should aim to improve productivity, enhance female survival, and minimize mortality during migration (e.g. promoting insect-rich nesting substrates, avoiding killing females and nest destruction at harvesting,

reducing the risk of collision with distribution lines, and controlling poaching). Furthermore, Morales *et al.* (2005) recommended that effective conservation strategies should also aim to minimize mortality during migrations (e.g. reducing the risk of collision with distribution lines).

Little Bustards were found at a greater risk of colliding with distribution lines during the post-breeding and wintering seasons, as the birds perform longer and higher flights outside the breeding season (Silva *et al.* 2014b). The most dangerous are distribution lines crossing vast agricultural and pastoral landscapes. Especially in Azerbaijan, with its current economic boom, the increase in infrastructure and subsequent distribution lines pose a threat to the Little Bustard (Gauger 2007). In the case of the Great Bustard (*Otis tarda*), it has been proven that migratory populations are more prone to collision with distribution lines than are resident ones (Palacín *et al.* 2016).

Morales *et al.* (2005) also recommended controlling poaching as a method to reduce mortality during migration and wintering. Shooting is still a significant cause of mortality during migration, particularly in Middle East countries but also in western populations. In Azerbaijan, commercial hunting and poaching from motor vehicles is the most destructive factor in the decline of Little Bustards, both during migration and wintering (Patrikeev 2004, Heiss 2016). Numbers of killed birds can hardly be estimated and more research on this topic should be done. Even if the loss of individuals is not high considering the large flocks of little bustards, hunting may seriously affect the population through disturbance (Gauger 2007). In Iran, little bustards are thought to be heavily persecuted, concentrating next to the border, possibly benefiting from strict non-hunting imposition by the military (Yousefi *et al.*, 2017). In Iberia, illegal killing was estimated to produce annual mortality rate of 2.4 -3% (Marcelino *et al.* 2017).

In Spain there are cases of non-natural mortality due to collision with power lines, poaching and birds hit by cars, but the main reason for the decline seems to be related with the end of the subsidies for the fallow lands from 2010 as shown in Figure 2. However, there must be some other additional factors since monitoring in areas where there is no significant habitat change such as Villafáfila in Castilla-León or areas in Aragón, show that there is also a decline from that same year. This is affecting other steppe birds like the Great Bustard.

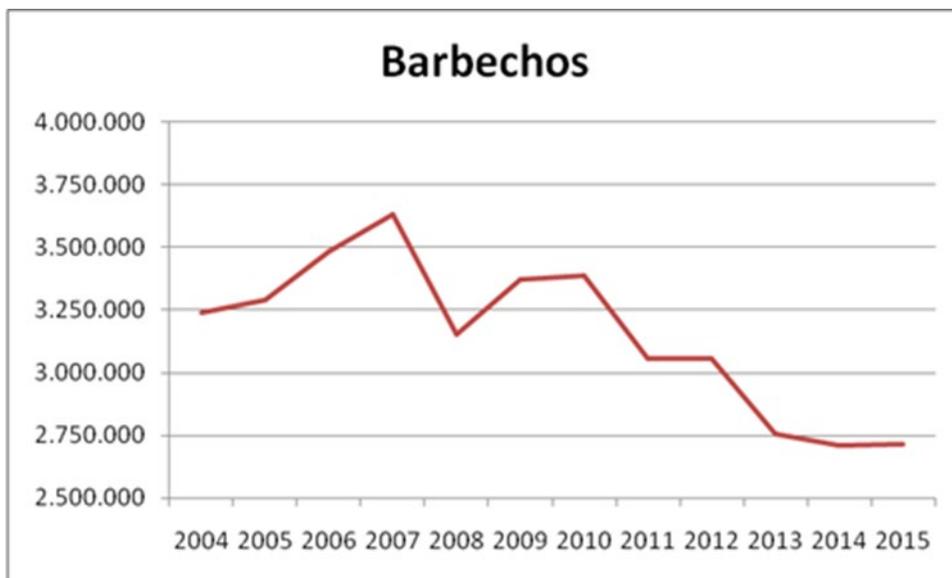


Figure 2. Variation in the surface of fallow land (barbechos=fallow) in Spain.

This situation is consistent with the results of the threats analysis from the Action Plan for the European Population (Iñigo and Barov 2010).

5.5 National and international utilization

The species is protected throughout its range and hunting is not allowed.

6. Protection Status and species management

6.1 National protection status

The Little Bustard is protected by national legislation and is included in the Red Data Books of all countries where it occurs (Gauger 2007, Iñigo and Barov 2010). In Spain it is included as *Vulnerable* in the Spanish Catalogue of Threatened Species and a national strategy is under development. Despite its full legal protection, inadequate law enforcement is a problem in several countries (e.g. Turkey, Ukraine and Italy) (Iñigo and Barov 2010).

6.2 International protection status

The Little Bustard is listed as “Near Threatened” under the Global IUCN Red List (BirdLife International, 2017). It is included in Annex I of the EU Birds Directive, Appendix II of the Bern Convention and Appendix II of CITES.

6.3 Management measures

National action plans have been developed in France, Italy and Portugal. In Spain, national legislation requires regional administrations to develop “Conservation Plans” when the species is included in the “Spanish Catalogue of Endangered Species” at the category “Vulnerable” (Iñigo and Barov 2010). Andalucía has adopted a Recovery Plan for Steppe Birds which outlines the most important areas for action. The species has been the subject of several LIFE Nature projects in Portugal, Spain, France and Italy. France and Spain have attempted a joint programme of reinforcement of the populations in Central and Western France by release of captive-bred chicks during 2006-2009

6.4 Habitat conservation

European Range States have designated 142 Special Protection Areas (SPA) specifically for Little Bustard and overall, they occur in more than 750 SPA (covering half the European breeding population) (Iñigo and Barov 2010). However, active habitat management for the conservation of the Little Bustard has only seldom taken place, probably with the exception of central and western France (Bamière et al., 2011, Bretagnolle et al., 2011) and Cataluña (Mañosa et al. 2015)

6.5 Population monitoring

In France, Spain and Portugal national surveys take place every 4-5 years as part of national monitoring programmes. Monitoring of the species has to be improved further in Italy (Iñigo and Barov 2010).

The need for a nationwide survey in Iran has been recognized (Sehhatiasabet *et al.* 2012), and work on numbers and habitat use in Kazakhstan is also urgently needed.

It is important that surveys are coordinated in order to apply the same methodology and timing.

7. Effects of the proposed amendment

7.1 Anticipated benefits of the amendment

Inclusion in Appendix I and II of CMS would help establish methods across all ranges to reduce threats to the Little Bustard, specifically to promote extensive agriculture and pastoral systems, eliminate illegal hunting and prevent collision with distribution lines. In the European Union actions must be implemented as a priority in the Special Protection Areas (SPAs) under the Natura 2000 Network. Once listed under CMS the species should be selected for concerted actions.

7.2 Potential risks of the amendment

None.

7.3 Intention of the proponent concerning development of an Agreement or Concerted Action

The intention is to collaborate with Range States and develop a Species Action Plan to further assist conservation measures across the whole species range.

8. Range States (in capital CMS Parties)

Native:

AFGHANISTAN; ARMENIA; Azerbaijan; China; CROATIA; FRANCE; GEORGIA; INDIA; ISLAMIC REPUBLIC OF IRAN, ; IRAQ; ISRAEL; ITALY; KAZAKHSTAN; KYRGYZSTAN; Lebanon; MOROCCO; PAKISTAN; PORTUGAL; Russian Federation (Central Asian Russia, European Russia); SPAIN; SYRIAN ARAB REPUBLIC; TAJIKISTAN; NORTH MACEDONIA; TUNISIA; Turkey; Turkmenistan; UKRAINE.

Regionally extinct:

ALGERIA; AUSTRIA; BELARUS; BULGARIA; CZECH REPUBLIC; GERMANY; HUNGARY; MONTENEGRO; POLAND; REPUBLIC OF MOLDOVA; SERBIA; SLOVAKIA

Vagrant:

BELGIUM; CYPRUS; DENMARK; FINLAND; IRELAND; Japan; LATVIA; LUXEMBOURG; MALTA; NETHERLANDS; NORWAY; Oman; Palestine; SWEDEN; SWITZERLAND; UNITED ARAB EMIRATES; UNITED KINGDOM

Present - origin uncertain:

JORDAN; LIBYA; ROMANIA; UZBEKISTAN

Information from BirdLife International 2017.

9. Consultations

EU consultations with the EU Member States took place in spring and summer 2019. For reasons of timing, no consultations were held with other CMS parties.

10. Additional remarks

11. References

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