

The Little Bustard *Tetrax tetrax* in Iraq, Syria, Lebanon and Jordan

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Summary: In this report records of the Little Bustard *Tetrax tetrax* in Iraq, Syria, Lebanon and Jordan are listed and assessed. Little Bustard is considered to be a scarce to rare passage migrant and winter visitor to parts of these countries, which lie at the southern border of its winter range. A significant increase in sightings over the last two decades is presented; all these records are of hunted first-winter birds and adult females, suggesting that females and young birds move further south in winter than adult males. We find the main threats to this species in the region to be illegal hunting and habitat loss, and argue for the need for further research and especially for the improved regulation of hunting.

INTRODUCTION

The Little Bustard *Tetrax tetrax* has two geographically disjunct and genetically distinct breeding populations: a western and an eastern group (Morales & Bretagnolle 2022). The western birds are resident or migrants in western Europe and north-west Africa. The eastern population is either resident or consists of migrants that spend the winter in Türkiye, the Caucasus and Iran, with Azerbaijan holding one of their main wintering quarters. Small numbers of this eastern population apparently overwinter erratically in parts of the Middle East (BirdLife International 2018). The preferred natural habitat is generally grassland steppes throughout the year, with an ability to use less intensively managed agricultural areas (Silva *et al* 2022).

Much of the region covered in this review, which apparently represents the southern border of the Little Bustard's wintering range, has received limited ornithological attention. Information about the species' occurrence as a passage migrant, winter visitor and even former breeder in Iraq, Syria and Lebanon is limited in the literature (and non-existent for Jordan), with a few records available in various publications including bird checklists and reports by visiting ornithologists and local hunters (Weigold 1913, Goodbody 1945, Misonne 1956, Flach 1959, Jeffery 1978, Baumgart *et al* 1995, Ramadan-Jaradi & Ramadan-Jaradi 1999, Ramadan-Jaradi *et al* 2020). Evans (1994) mentioned three sites in northern Syria where the Little Bustard is likely to be a regular winter visitor, but did not provide further evidence. Based on a review of available records and observations, we discuss the status of and threats to the species as well as the need for developing the capacity and conditions for further research.

METHODS

Data were collected from the literature, complemented by interviews with locals (*eg* rangers in Jordan), records from birdwatchers, and reports and photos sent to us by hunters in Syria and Lebanon (we increased our communication with hunters in response to the invitation to prepare this review). There have been no survey efforts or projects targeting this species in these countries so far. Except for KA in Iraq, we ourselves have not recorded the species recently in our respective countries.

RESULTS

Records from Iraq span the years 1918–2019, mostly during winter and spring (February–April). In Syria the records are for the period 1912–2024 while those in Lebanon stem from the period 1958–2016 (between October and December). Prior to 1957, Little Bustards were also recorded during April–June, indicating local breeding, but all records from

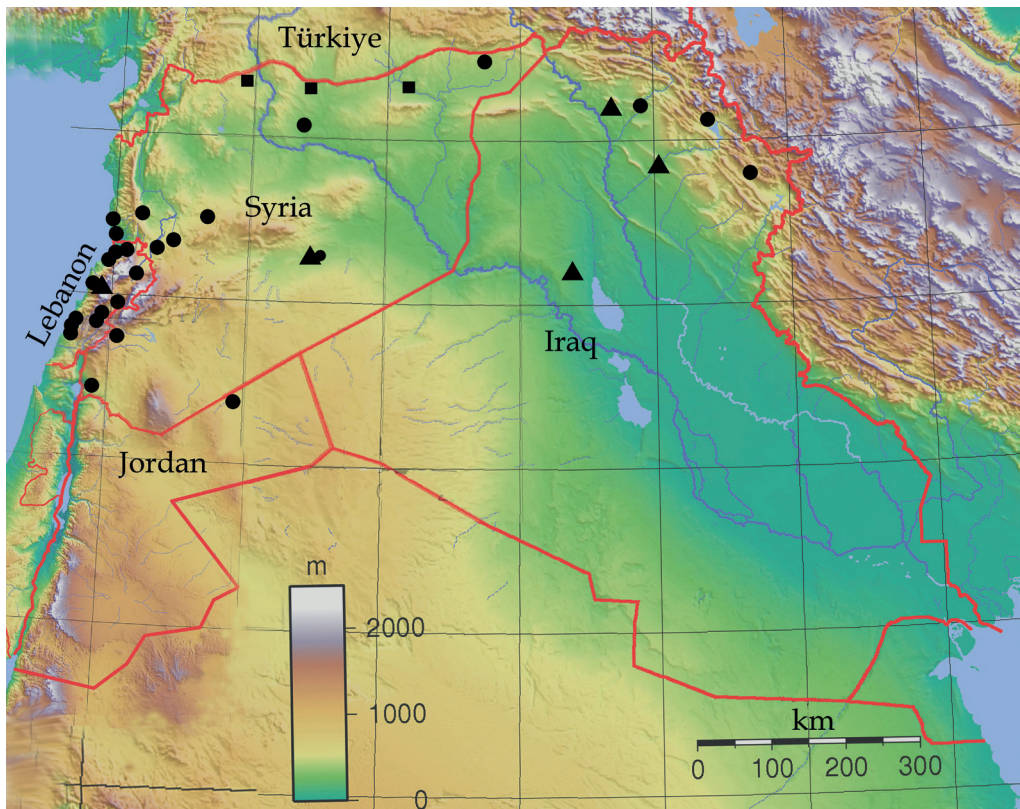


Figure 1. Records of Little Bustard *Tetrax tetrax* in Iraq, Syria, Lebanon and Jordan. Triangles: pre-1960 records; circles: post-1960 wintering/passage migrant records; squares: former breeding sites. Relevant records in Palestine, near the Jordanian border, are not shown in this map (see text).

1975 onwards have been of migrants and possible winter visitors during the months of October–February.

Although there were no surveys focusing specifically on this species, the number of records, both recent and historical, allows us to reach some conclusions about the Little Bustard’s status and used habitats. Nevertheless, all the data must be considered with caution, given that regular surveys and birdwatching activities were and are still impossible in many parts of the region due to security issues near borders, violent conflicts and limited resources and trained personnel to carry out extensive surveys. Figure 1 shows the locations of records of Little Bustards in the countries covered by this report.

Iraq

The Little Bustard has been reported as a scarce passage migrant and rare winter visitor in Iraq (Salim *et al* 2012). The areas with most records lie in the north-western parts of the country. A comparison with records published before 1950 indicates a decline in numbers. The highest count was of 40 near Wardak in February 1942 (Allouse 1953). Moreover, four individuals were recorded in the Ramadi Desert in March 1918 (Thornhill 1918), and one was hunted near Mosul in 1926 (Ticehurst *et al* 1926).

More recently, after approximately six decades without observations, three Little Bustards were observed north-west of Dukan Lake in May 2009. An additional six were recorded near the Tanjero river in April 2018. The highest single count in recent years

was of eight Little Bustards sighted north-west of Erbil in March 2019. All records were in open steppe (NW Iraq) and desert (Ramadi) habitats. The record in May indicates possible breeding, although other evidence of breeding in northern Iraq is lacking from both the historical literature and recent sightings.

Hunting is the main threat to the Little Bustard in Iraq. In addition, intensive agriculture is transforming the landscape and there is excessive use of pesticides at the local scale. According to the Environmental Protection and Improvement Law No. 27 of 2009 of Iraq's Ministry of Environment, and Wildlife Protection Law No. 17 of 2010 of the Ministry of Agriculture, breeding and migratory bird species are generally protected from hunting, which should be limited to certain species in prescribed hunting seasons and areas. However, there are significant challenges to the implementation of these laws due to a lack of awareness and knowledge about the conservation status of each species. Political instability in the region also hinders effective enforcement and public engagement in conservation efforts. None of the areas in which Little Bustards have been recorded in Iraq is currently protected, which indicates a need for action in terms of the protection of steppe habitat and its avifauna. At least one of the sites is listed as an IBA/KBA (Dukan Lake), but several other IBAs in northern Iraq are also potentially relevant for wintering Little Bustard (eg Mosul Lake, Dohuk Lake, Darbandikhan Lake), and conservation actions could be prioritised in these in the future.

Syria

Misonne (1956) reported Little Bustards breeding at Tell Abiad in north-eastern Syria near the Turkish border. Indirect evidence of local breeding in the first half of the last century comes in records of the species in spring and early summer between Aleppo and the Euphrates in April 1911 (Weigold 1912, 1913) and at Tell Tamer in May 1945 (Goodbody 1945).

The Little Bustard is also a rare winter visitor and a scarce passage migrant in Syria. Records of non-breeding birds include a skin found 40 km east of Palmyra in 1948–1950 (Jeffery 1978) and a female killed near Salamiyah (east of Hamah) in 1975–1982 (Baumgart *et al* 1995). Zakaria (1983) also reported this species as a winter visitor in small numbers east of Homs in the 1950s and 1960s. However, it was presumed to be absent in 2000–2003 in the vicinity of Palmyra and its surroundings (Serra *et al* 2005), and later to be extinct in the country (Murdoch & Betton 2008).

However, photos of hunted birds confirm the species' continued occasional presence in Syria. These recent records include a female hunted 60 km east of Palmyra in October 2007, a female hunted in Arab Ash-shate' south of Tartous in October 2023, a female hunted in Al-Qahtaniyeh in north-east Syria and a female/juvenile hunted in Kabsh east of the Euphrates, both in October 2024 (Plate 1A). Other birds killed in 2024 include a juvenile on 12 November north-west of Damascus, a female/juvenile on 25 November east of Mesiaf (Plate 1B), a juvenile east of lake Qattinah on 15 December (Plate 1C), and five females on 19 December in the southern coastal region (Plate 1D).

Although we have received photos of 12 birds killed, the number is likely to be much higher. Two hunters from the southern coastal area confirmed that this species is regularly sighted during autumn and winter, although its numbers fluctuate annually. The hunters from the coastal area do not know that it is a species of bustard; they call it *sansal* in Arabic (AA pers obs). These recent records suggest that the Little Bustard is still a rare winter visitor along the coast, in southern and perhaps central Syria. Small numbers probably also winter in northern Syria near the Turkish border where access for birdwatchers and researchers has been difficult or impossible since 2011. It is generally assumed that the Little Bustard has been overlooked in Syria during the last decade due to the war and other security issues. Moreover, because this species is unlikely to fly over the open sea



Plate I. Some of the Little Bustards killed in Syria in 2024 (A): in Kabsh, east of the Euphrates (anonymous hunter; via AA); (B): east of Mesiaf © Ahmad Rahmoun; (C): east of lake Qattinah © Salman Al-Qadi; (D): in southern coastal region (anonymous hunter; via AA).

Table I. Population estimates for breeding, passage, and wintering Little Bustards in Iraq, Syria, Lebanon and Jordan. 'Migration' covers pre-migratory gatherings and stopover flocks. Quality of estimate: 1 = low, 5 = high. ? = trend cannot be established due to insufficient records. † = extirpated

| Country | Season | Number of birds | Important sites | Quality of estimate | Population trend | | |
|-------------------------------|-----------|-----------------|-----------------|---------------------|------------------------------------|-----------|-----------|
| | | | | | 1950–1990 | 1990–2020 | 2020–2023 |
| Iraq | Breeding | 0 | N/A | 0 | May have bred prior to 1950s | † ? | † ? |
| | Migration | 10–100 | 6 | 2 | ↘ | ? | ? |
| | Wintering | 15–150 | 2 | 3 | ↘ | ↘ ? | → ? |
| Syria | Breeding | 0 | N/A | 3 | Extirpation of breeding population | † | † |
| | Migration | 10–100 | 1 | 2 | ↘ | No data | ↘ ? |
| | Wintering | 10–100 | 3 | 2 | ↘ | No data | ↘ ? |
| Lebanon | Breeding | 0 | N/A | 2 | N/A | N/A | N/A |
| | Migration | 5–50 | | 2 | ↘ ? | ↘ ? | ↘ ? |
| | Wintering | 2–20 | 1 | 2 | ↘ ? | ↘ ? | ↘ ? |
| Jordan | Breeding | 0 | N/A | 2 | N/A | N/A | N/A |
| | Migration | 1–10 | 1 | 2 | ? | ? | ? |
| | Wintering | 1–10 | 1 | 2 | ? | ? | ? |
| Totals for all four countries | Breeding | 0 | N/A | Average = 2 | Breeders disappeared | † ? | † ? |
| | Wintering | 30–280 | 4+ | Average = 2 | ↘ | ↘ | ↘ ? |

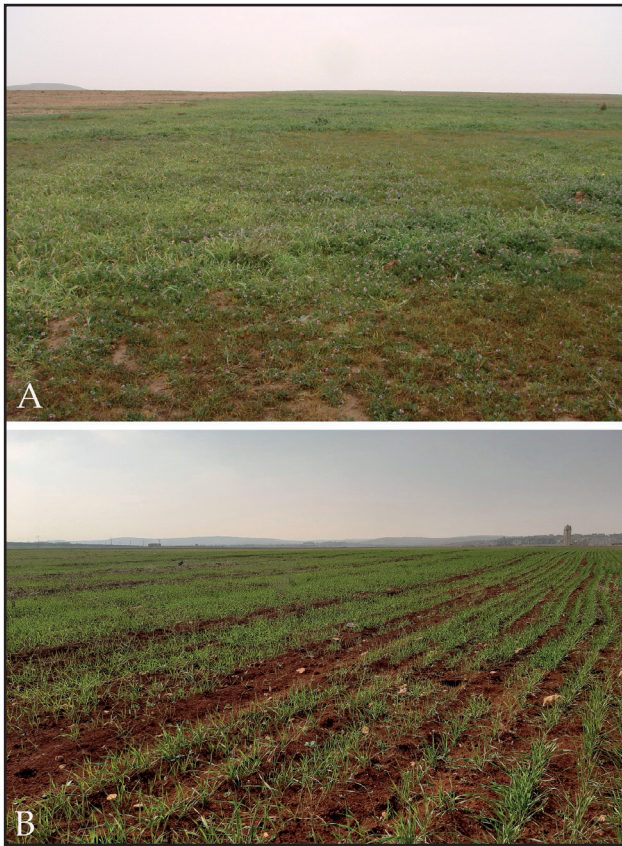


Plate 2. Former breeding habitats of Little Bustard in north-north-east Syria. (A) Grassland steppe and fallow fields used as rangeland (this area still being a habitat for Asian Houbara), north of Deir ez-Zor, March 2010; (B) rain-fed, extensive wheat and barley fields in what used to be steppe habitat, north-east of ar-Raqqa, February 2022.
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from the north or north-west, birds observed in Lebanon and Palestine during autumn and winter must pass through Syria.

In the occupied part of the Golan Heights, southern Syria, the Little Bustard is a winter visitor (Shirihai 1996). Seventeen birds were observed at Bnei Israel Reservoir, Golan, on 14–20 March 2005 (Balmer & Betton 2005), and one bird on 20 October 2005 (Balmer & Betton 2006). The area used by wintering Little Bustards probably extends beyond the occupied area to the entire Golan Heights and its surroundings.

The typical habitat where the species was breeding in northern Syria used to be a steppe composed of low shrubs, grasses and herbs, mixed with agricultural fields, while the area east of Palmyra, east of Homs and Hama where the species has been recorded as a passage migrant and possible winter visitor is rolling or flat semi-desert or arid steppe (Barkoudah *et al* 2002). The area east of Mesiaf near the coast and around Homs consists of agricultural land and low hills. One record north-west

of Damascus is within a rocky mountainous area at 1500 m asl, but elsewhere records are from 50–650 m asl. Although this species prefers flat areas during the breeding and winter seasons, it may cross mountain ranges during migration, as indicated by a further record in a mountainous area in Lebanon (see below).

The northern regions of Syria, also known as Syrian Mesopotamia, were once home not only to the Little Bustard but also to breeding Great Bustard *Otis tarda* and Asian Houbara *Chlamydotis macqueenii* (Aharoni 1932, Goodbody 1945, Brown 1946, Kumerloeve 1968). Records indicate that all bustard species ceased breeding in Syria around 1960. The disappearance of breeding bustards near the Turkish border may be attributed to agricultural expansion and hunting in that area (Plate 2). Motor pumps became the principal means of extracting water for irrigation by the early 1950s, freeing farmers from riverside agriculture and enabling them to cultivate the entire stretch of bottomland and terraces (Hole & Smith 2012). Zakaria (1983) mentioned that all species of bustards in Syria have been exposed to heavy hunting since the 1950s–1960s, and that they were doomed to extinction if not protected. Today, the main threat to migrants and birds attempting to overwinter remains hunting, in addition to less favourable conditions caused by the

transformation of large areas of grassland steppes to farmland and the degradation of steppe habitats through drought and overgrazing. None of the sites where the Little Bustard has been recorded is located in a protected area. The Ras-el Ayn IBA in northern Syria was within the former breeding range and may possibly be important for wintering birds. Recent winter records are close to two IBAs: Bahrat Homs and Jabal Bilas.

Despite the existence of laws prohibiting hunting in Syria, this activity has evolved significantly from being the hobby of a few to a widespread practice, leading to the indiscriminate elimination of various bird and mammal species. This trend was exacerbated by the onset of civil war in 2011 (Aidek 2024). The current regulation established under Law No. 14 of 2023, superseding the previous Decree No. 152 of 1970, governs wild animal hunting, but despite these laws and the issuance of several other decisions to ban hunting for a whole year or several years, hunting has never been stopped. In many cases this is because the supposed enforcers of the hunting law are those doing the hunting (AA pers obs). Widespread corruption of the police and security personnel under the previous Assad government made it easy for hunters simply to bribe officials.

Lebanon

Prior to 2013 the Little Bustard was considered a vagrant, with a single record south-east of Saida in October 1958. However, in the four years 2013–2016 the species was recorded at nine different sites on ten dates, all in November or December, as follows: one bird, Jiyeh electricity plant, December 2013; one, Anjar, one, Saida, and one, Tal Znoub (West Beqaa'), all November 2014; one, Ras Baalbek, December 2015; one, Al Arida, one, Blat area (Jbeil, Byblos), three shot and (next day) two seen, Akkar plain, and one, Sareen El Fawqa (Saraain El Faouqa), 15 km south-west of Baalbek, all December 2016. Since then, single birds were hunted on the Akkar plain and the Minyeh coastal plain, both in November 2022. Most habitats where these records were made are open, flat plains, or rolling terrain with a mix of dwarf shrub, grassland steppe vegetation and extensive agricultural fields (SA, FI & GR-J pers obs). Birds were encountered at altitudes ranging from c10 m (coastal plains) up to 900 m asl (in the Beqaa').

These records now suggest the Little Bustard is a scarce passage migrant. Wintering is also very likely, although the birds are likely to be highly vulnerable to uncontrolled hunting (Ramadan-Jaradi *et al* 2020; <https://www.komitee.de/en/campaigns-and-operations/lebanon/>). The main threats to the species in Lebanon are excessive illegal hunting and disturbance by activities such as intensive agriculture and urbanisation (AA, FI pers obs). Under Lebanon's hunting law No. 580, which was updated in 2004, the hunting season is declared every year by the Ministry of Environment and implementation and enforcement are carried out by the national Internal Security Force (<https://www.komitee.de/en/campaigns-and-operations/lebanon/bird-shooting-in-lebanon/the-lebanese-hunting-law/>). However, the law is poorly implemented due to regional conflict, political instability, economic collapse and lack of resources, as nature protection under contemporary conditions is not considered a priority. None of the sites where the Little Bustard has been recorded in Lebanon is located in a protected area.

Jordan

The Little Bustard has not yet been officially recorded in Jordan. Nevertheless, according to recently interviewed rangers working at the Burqu' Nature Reserve in north-eastern Jordan, the species is a very rare passage migrant during October–December, with a 'few single birds seen' in the last few years, most recently in December 2023. Only single individuals have been observed, according to one of the rangers, and these were only flying through or apparently staging in the area, which lies in the Hamada desert of Ruweished, close to

the Syrian border. The ranger described the bird he saw, distinguished it from the Asian Houbara and referred to it in Arabic as the 'Azerbaijani Bustard', which is the name used by hunters from the Gulf region for the Little Bustard (Collar & Kessler 2021).

Andrews (1995) speculated that the Little Bustard occurs as a rare winter visitor in the extreme north of Jordan. If so, that would include the less accessible basalt steppe, flat/hilly semi-desert and Hamada desert. Andrews based his assumption on records of wintering birds in the Golan Heights (up to c60 birds in the 1980–1990s; Shirihai 1996) close to the Jordanian border. The area along the Syrian border, east of Um Al-Quttayn, appears to have suitable steppe habitats and further east along the Syrian border there are flat to hilly desert areas with mudflats and shallow wadis that are often flooded in winter, at altitudes of 500–900 m asl. Part of these areas near the border are of limited access to hunters due to military presence. Other parts are apparently visited by hunters from the Gulf region during autumn, winter and spring, although hunting in these areas is generally prohibited. Additionally, there are records of single birds in Palestine, just west of the River Jordan, during the winter season, in addition to passage migrants in other parts of the West Bank (Awad *et al* 2022). This indicates that birds wintering in Palestine cross the northern parts of Jordan and/or Lebanon during their migration.

Hunting, trapping and trading of most wild birds are generally prohibited in Jordan (Jordanian Agriculture Law, Article 56, 2015). Rock Doves *Columba livia*, Eurasian Collared Doves *Streptopelia decaocto*, Laughing Doves *Spilopelia senegalensis*, Quail *Coturnix coturnix*, Chukar *Alectoris chukar* and Sand Partridge *Ammoperdix heyi* are permitted to be hunted in specified areas, seasons and years. However, the seasonally recommended schedules and permitted hunting bags are based on the opinions and undocumented field observations of rangers and some members of the National Wildlife Committee, and the subsequent Minister's decision. This system does not seem to operate with clear and standard procedures for assessing wild bird populations and the magnitude and impacts of hunting activities in Jordan. Moreover, many other species are hunted illegally in various parts of Jordan which are not designated for hunting, including species that are rare or threatened. This indicates a weakness in law implementation (Eid & Handal 2018). Hunting in Jordan has become a widespread hobby among Jordanian men in recent years; however, many hunters are not well trained in using shotguns and bird identification, while many do not even possess a hunting permit.

DISCUSSION

Breeding of the Little Bustard occurred locally in the north of Syria and possibly Iraq, close to the Turkish border, until the 1950s (Weigold 1913, Goodbody 1945, Misonne 1956). More recently, after many decades with very limited observations, the species has been recorded as a scarce passage migrant and winter visitor in northern Iraq and rare passage migrant and possibly regular winter visitor to parts of Lebanon and Syria, with currently unsubstantiated reports from local rangers in Jordan.

All the photographs available are of adult females and first-winter birds. In other areas of the Little Bustard's range, females and their young are observed to gather into pre-migratory flocks (Tarjuelo *et al* 2013, Morales *et al* 2022). Females might be more sensitive to colder weather being slightly smaller and thus move further south during challenging weather. This could lead to irruptive movement of females (both adult and young) to the Levant region in some years. In any case, the lack of observations of adult males in these southern reaches of the Little Bustard's Middle Eastern wintering range may reflect a case of differential migration, with females and young birds migrating further than males, as has been observed in Eastern Great Bustards *Otis tarda dybowskii* (Wang *et al* 2023).

Records of passage migrants and winter visitors probably involve birds from the closest breeding areas, which lie in Türkiye and areas north of the Caucasus (BirdLife International 2018, Morales & Bretagnolle 2022). There have been no systematic surveys to estimate Little Bustard numbers in the area under review owing to armed conflicts. Moreover, resources are often lacking to develop capacity and carry out long-term and extensive surveys. Only small groups and single birds have been recorded recently in Iraq, Syria and Lebanon, and it is possible that the species has been overlooked in Jordan and in the northern areas near the less accessible northern Syrian border.

This lack of monitoring and surveys is not likely to be the major explanatory factor for the low number of observed birds. Little Bustards wintering in the Middle East, especially in Syria and Lebanon, face severe challenges. First, they are very likely being decimated or even exterminated by unregulated, excessive hunting. Indeed, all recent records in Syria and Lebanon are of hunted birds. This threat is rooted in the lack of awareness about the importance of wild birds and their habitats, very few sites designated as protected areas where hunting is prohibited, and generally weak implementation of laws in all countries covered in this report. There is a clear lack of capacity and awareness at various levels, and standard procedures prepared by wildlife experts to regulate hunting to a sustainable level are ignored. Furthermore, habitat loss and agricultural intensification are also major threats to wintering birds and may have played a role in the disappearance of breeding birds along the Syrian-Turkish borders during the 1950s and 1960s. In the past, large steppe areas were used as rangeland and rain-fed cereal fields. This was managed by a rotational system in which some fields remained fallow in some years and were partly used as rangeland. Such extensive agriculture has been shown to benefit Little Bustards in the Iberian Peninsula (Silva *et al* 2022). A transformation to intensive agriculture has been going on since the 1950s in Syria and other countries of the region (Holes & Smith 2012). Thus, although hunting and habitat loss are considered the main threats throughout the Little Bustard's range (Silva *et al* 2022), they are probably even more acute in the Middle East.

We recommend the following actions to address the threats described above. First, to properly assess the surviving populations, it is necessary to conduct coordinated surveys and establish a database for the countries of the Levant. This would require sufficient resources for developing capacity in the region, and could be part of an action plan for the protection of bustard species in the OSME region. Second, to tackle illegal hunting, we need effective law implementation while stepping up the protection of key areas for bustards and other birds. Educational programs for hunters, government officials and decision-makers may be crucial in this regard. Hunters especially should be trained in the identification of birds and regularly informed about rare and threatened species at the regional and global levels, something that AA has sought to do on social media in Syria when hunters have posted pictures of their kills. Fostering the awareness of local people has proved more effective than relying solely on legal restrictions (Aidek 2024).

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