



RDS CONSERVATION

Assessing the importance of Pakistan for wintering
populations of the Critically Endangered Sociable Lapwing
June, 2017



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June, 2017

Cover photograph: Picture of Tesfaye, tagged with satellite transmitter, at the wintering grounds in Dadu, Sindh province, Pakistan taken by Mohammad Saleem Khan; March 2017.

All photographs used in this report are taken during the project's implementation by the project personnel during 2017 unless otherwise specified. The report is produced for the donor and can be used as a reference giving credits to the organisation and the authors.

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1. Introduction:

1.1 Global status of Sociable Lapwing

The Sociable Lapwing *Vanellus gregarius* migrates southwards after breeding in the Central Asian steppes of Kazakhstan and southern Russia between 47° and 53° N. The species has two main migratory routes, with birds heading west through Kazakhstan before continuing south through the Middle East into northern Africa. A second route passes through Uzbekistan and Turkmenistan before birds arrive in Pakistan and India (Figure 1). The autumn migration of these birds starts in August from Kazakhstan and Russia. In the middle of August birds reach Uzbekistan, southern Kazakhstan and Turkmenistan (AEWA, UNEP and BirdLife, 2004). The birds then winter in Pakistan and India from October through to March, before returning to the breeding grounds.

The current breeding population is estimated to be between 3200-11200 individuals (Sheldon *et al* 2012). The species has undergone a significant and rapid population decline and is currently classified as Critically Endangered by the IUCN (BirdLife International 2017). It is listed in Column A of the action plan under the African-Eurasian Migratory Water Bird Agreement (AEWA) and in Annex I of the Convention on Migratory Species (CMS). Given the relatively high breeding success (Sheldon *et al* 2013) it is likely that the key threats to this species are associated with the migration route and/or wintering grounds. Along the Middle Eastern migratory route, illegal hunting is known from Syria, Iraq and Kuwait. However, it is not clear what threats are likely to occur on the less known eastern migratory route. Given the recent large numbers of Sociable Lapwing recorded in Turkmenistan and Uzbekistan (Donald *et al* 2016) then it seems likely that Pakistan is of increased importance as a passage and/or wintering area for the species.

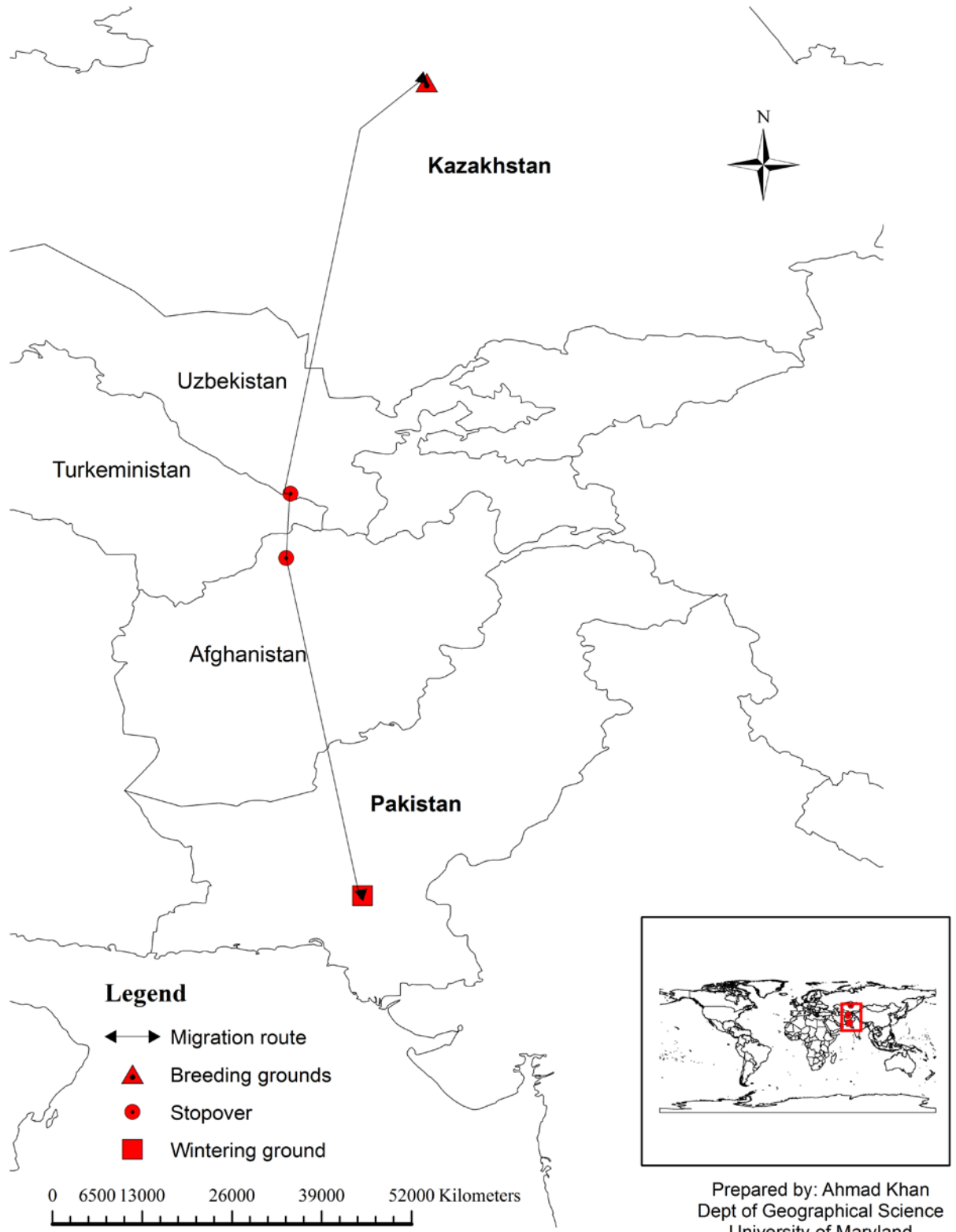


Figure 1: Migration route of Sociable Lapwing between Kazakhstan and Pakistan

1.2 The Sociable Lapwing in Pakistan

In Punjab, during World War 1, it was reported as common in riverine areas during the winter (Whistler, 1922). On October 17, 1947, a flock of 12 were sighted on the shores of Khabbeki Lake and again a flock on November 11, 1947 on the banks of the Chenab River near Jhang. They were recorded as passage migrant in April 1911 through Kohat and Bannu districts. A few were recorded on the grassy banks of the Chitral River with a spring passage in May and a flock of 4 or 5 in the Bumboret nullah at the end of the May (Fulton, 1904). The only Balochistan records are from Chaman on the Afghanistan border (Biddulph, 1881). Only 1 or 2 were seen each year in Gilgit main valley when they passed through at the beginning of April in full breeding plumage (Biddulph, 1881). Three birds were observed on the eastern grassy edge of Hamun-e-Mashkhel in November 1990 (Mirza 2007). Two Sociable Lapwings along with a flock of five White-tailed Lapwings were observed at Qaderabad Head Works on river Chenab in autumn in 2007 (Mirza 2008). A dead, dried but intact bird with full plumage was accidentally found by Mr. Naeem Awan, Wildlife Department, Government of Azad Jumu and Kashmir in mid-June, 2008 from Neelam Valley (34° 48' 52" N; 74° 20' 47" E) at 2,142 m altitude and this was identified by Z. B. Mirza (Z.B. Mirza pers. comms). Similarly, a flock of 5 individuals was recorded at the edge of Phandar Lake, Gilgit-Baltistan (36.171764 N° 72.947931° E) on the 11th July, 2008.

At the beginning of the 20th Century, Ticehurst considered it fairly common in northern Sindh (Ticehurst, 1923a), but it was never encountered in the mid-1960s by Holmes and Wright during three years of touring in that region (Holmes and Wright, 1968). A flock of 6 was seen on February 14th, 1972 on ploughed land in Jacobabad district and one individual was seen in breeding plumage on December 11, 1980 in Nagar Parkar, district Tharparkar (Roberts, 1991).

The historical records from Pakistan are a result of mostly non-targeted surveys and records from birdwatchers, and it wasn't clear if the Sociable Lapwing wintered in Pakistan or continued further south. To fill this gap, the RSPB

initiated survey work in Punjab in 2010 (Khan 2012). Additional survey work in 2013/14 located small numbers of birds in Khyber Pakhtunkhwa, Punjab and Sindh (Khan 2014). In February 2016, further surveys were conducted, synchronous with the migration of satellite tagged birds, Maysa and Thesfaye. Following the tracks of the birds, a small population was tracked to winter in Dadu district of Sindh, and Jaffarabad district of Balochistan (Khan 2016). This established that at least 200 birds winter there, and two different flocks were reported, one wintering in Dadu in Sindh province and the other in Usta Muhammad in Balochistan province. During these surveys, discussions with local communities reported hunting and habitat degradation as the key threats to the bird. Furthermore, the local people reported that there had been a significant drop in the wintering population of sociable lapwing in recent years, although there were no data to substantiate this.

Further work is required to assess the population size across other parts of Pakistan, as well as a greater understanding the threats to the species, especially from hunting. This project with funding from Sheikh bin Zayed Species Conservation Fund and Royal Society for Preservation of Birds played a key role in collecting significant data on the species in its wintering range in Pakistan, interacting with the local community to assess the level of threats and conducted a starter level awareness levels on the species importance, global status and future prospects. This reports compiles the findings of the 2016/17 project, and makes recommendations for the future.

2. Study Area

The project focussed on the recently reported population (Khan 2016) of sociable lapwing wintering in Pakistan. The project focused on three sites, Dadu and Khairpur Nathan Shah in Sindh province and Usta Muhammad area in Jaffar Abad and Naseer Abad districts of Balochistan province (see Figure 2). In addition, effort was made to collect information from other areas that were reported as potential habitats and from where sightings of the species were reported in the past. These included the back waters of Taunsa, Rangla Complex wetlands, seepage ponds in Muzaffar Garh district, and water drainage ponds (small lake area) in Rahim Yar Khan in Punjab. We also used the locations of satellite tagged birds provided by the RSPB.

Usta Muhammad in Jaffar Abad and Naseer Abad, Balochistan: The study area focused on Ahmed Abad and surrounding areas in Usta Muhammad subdivision of Jaffar Abad district and the adjoining areas of Naseer Abad district in Balochistan province. Ahmed Abad is a small village in the west of Usta Muhammad city, the second largest in Balochistan with a population of about 165,000. The village is surrounded by open fields with a network of canals. These canals are not only a source of irrigation water but also drinking water for the local community and livestock. The area has a shallow water table with highly saline water. The waterlogging in low ground supports growing of rice and makes it unsuitable for second crop. In fields on raised grounds wheat, sorghum and mustard is planted. These fields, when ploughed and watered, are a prime source of food for sociable lapwing. The surveys were focused on the agricultural areas around Ahmed Abad. The nearby barren areas in the adjoining areas were surveyed, when local community reports indicated that sociable lapwings are sighted in those area.

Dadu and Khairpur Nathan Shah in Sindh: Here, the project focused on the potential wintering habitat of sociable lapwing in the east of MNV drain in Dadu district. Wintering sociable lapwings were recorded near Bahawalpur, which is

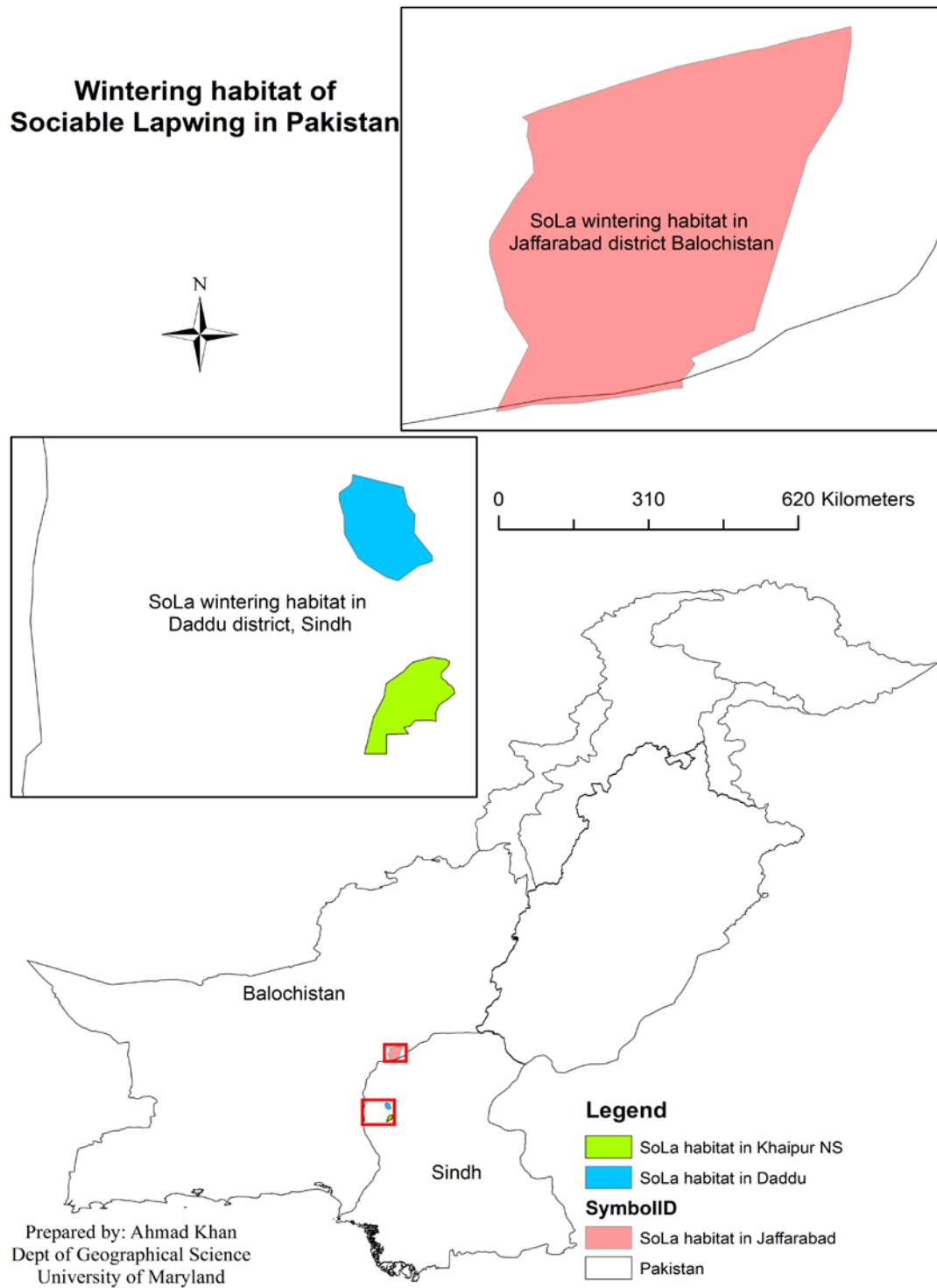


Figure 2: Location of wintering habitat of sociable lapwing in Sindh and Balochistan provinces

a small town of about 10,000 people and located at two to three kilometres to the east of MNV drain (Khan 2016). The MNV drain takes the seepage water to the sea. The area is located at about 7 km from Runn of Kuch, where a series of small lakes and wetlands are inhabited by water birds during winter months.

3. Project activities

3.1 Surveys and findings

To collect information on the wintering population of the sociable lapwing in its wintering range in Pakistan, three surveys during December to March were conducted over the project period. The surveys were focused on wetlands and feeding sites usually in freshly ploughed and sown wheat fields (Table 1). During the surveys, pictorial evidence was recorded with a geotag capable Sony cybershot HX50V. A Bushnell 8x30 binoculars, a note book and a lead pencil were used to take notes. Anecdotal information was collected from the local community about the birds' behaviour, and the timing of arrival and departure during migration.

Table 1: Summary of surveys conducted under the project			
Survey date	Areas surveyed	Province	Findings
December 21 – 25, 2016	Dadu, Khairpur Nathan Shah	Sindh	Sociable Lapwing sighted
December 26 - 28 2016	Usta Muhammad, Jaffarabad	Balochistan	Indirect evidence collected
February 5 – 8, 2017	Dadu, Khairpur Nathan Shah	Sindh	Sociable lapwing sighted

February 9 – 12, 2017	Usta Muhammad, Dera Murad Jamali, Village Sadiq Khan Umrani	Balochistan	Sociable lapwing sighted
February 20 – 24, 2017	Muzaffar Garh, Head Muhammad Wala, Rangla Wetlands Complex, Taunsa Barrage	Punjab	Sociable lapwing indirect evidence collected
March 01 – 03, 2017	AliPur, Chachran, Rahim Yar Khan	Punjab	Indirect evidence of sociable lapwing collected
March 04 – 6, 2017	Dadu, Allah Bachaya, Khair Pur Nathan Shah	Sindh	Sociable lapwing sighted
March 6 – 8, 2017	Naseer Abad, Jaffar Abad districts	Balochistan	Sociable lapwing sighted
March 9 – 10, 2017	Kand Kot, Ghaus Pur, Rohjan, Rahim Yar Khan	Sindh / Punjab	Potential sites visited and anecdotal evidence collected

3.1.1 Findings of the first survey, December 2016

During the surveys, a wintering population of about 510 birds in Sindh, split in two distinct sub-groups, was recorded in Sindh (Table 2). One sub-group wintered in Dadu and the other in Khairpur Nathan Shah (Figure 2). The highest count recorded in Dadu was 365 birds (Figure 3), while the one in Khairpur Nathan Shah was 145 birds. These two separate large flocks were counted on the same day although it is possible they could be the same birds, suggesting a population size between 365-510 individuals. During the survey period, a total of 14 separate flocks were observed ranging from 2-365 individuals (average of 64) and are summarised in Table 2.

The single large flock of 365 sociable lapwing represents the largest flock recorded in Pakistan (and possibly anywhere in winter).

According to information collected from the villagers, sociable lapwings first appear in the area during November, and are attracted to freshly harvested and ploughed fields, where they find insects and seeds. The birds feed in the fields during the day time, while flock on shallow wetlands during early morning and later in the evening (Figure 4). The birds remain here until the last week of March



Figure 3: Sociable lapwings on a pond in Dadu, Sindh

and first week of April. While, the birds in Khairpur Nathan Shah remain in the fields until the wheat grow up and fields are covered. The sociable lapwing migrates from here in late February (Figure 5).

In Balochistan, during the the first survey period there were no direct sightings of sociable lapwings in Jaffar Abad and Naseer Abad districts. However, the local community reported sighting of about 40 birds during November. Information from the villagers suggest that sociable lapwing inhabit dry and stony raised highlands away from the previously reported wintering site of the Ahmedabad, mostly agricultural land. However, the local community reported that sociable lapwing comes to the area in October/November, remains here for a couple of weeks. After the first couple of weeks most of the birds leave the area until February. The birds come back in February and remain here until March/April. However, they reported that small number of birds is seen throughout the season, which may not be more than 10 birds.

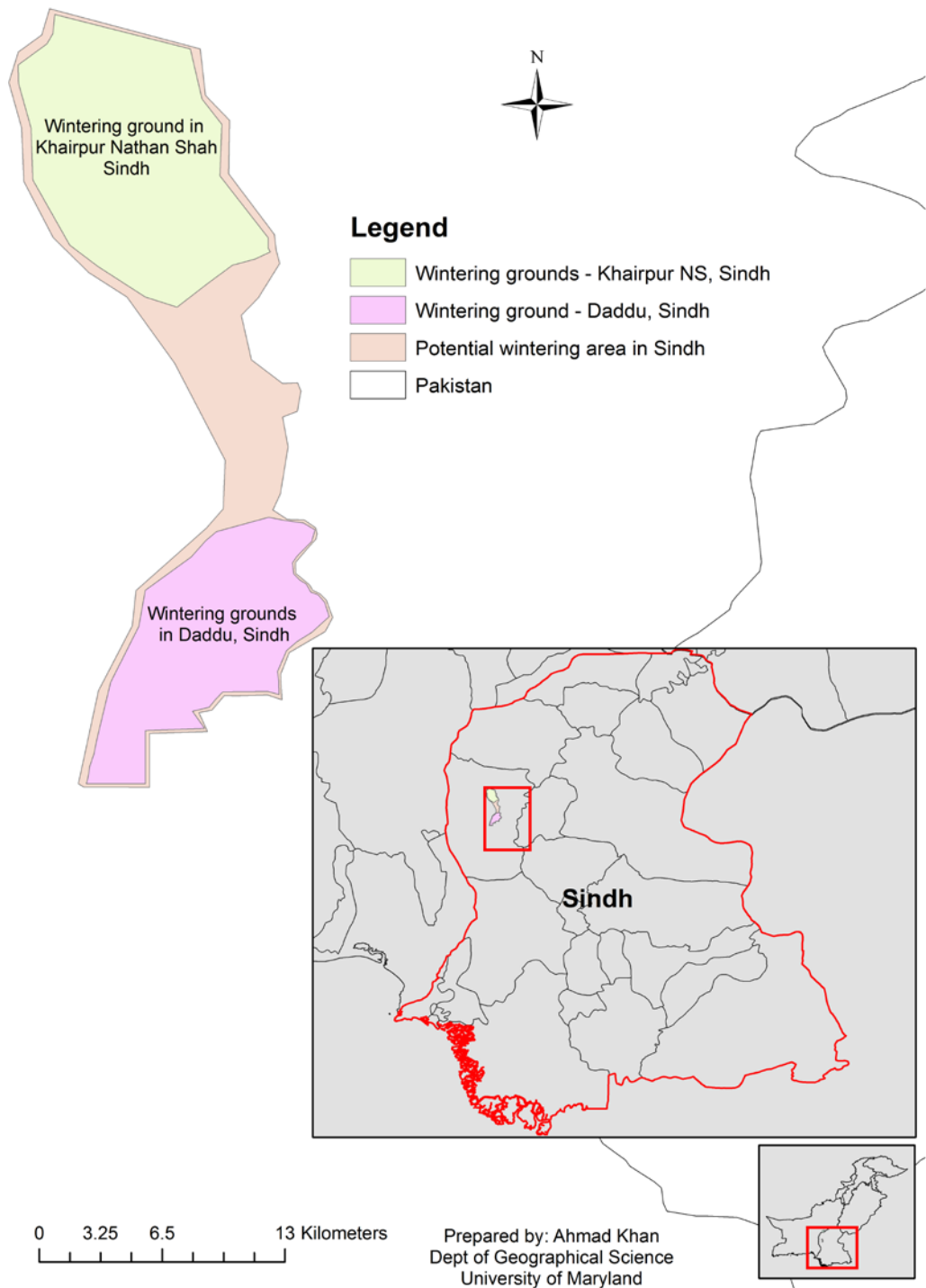


Figure 4: Wintering habitat of Sociable Lapwing in Sindh

Table 2: sightings of sociable lapwing during winter surveys in Sindh				
Date/Time	Province	Location	SoLa count	Activity
Dec 23, 2016 2 pm	Sindh	Dadu/Pulghi	12	Flying
Dec 24, 2016 08 am		Dadu/Allah Bachaya	365	Feeding
Dec 24, 2016 09 am		Dadu/Allah Bachaya	145	Flying
Dec 24, 2016 10:50 am		Dadu/Allah Bachaya	125	Sunbathing
Dec 24, 2016 03 pm	Sindh	Khairpur Nathan Shah	15	Feeding
Dec 24, 2016 325 pm		Khairpur Nathan Shah	145	Flying
Dec 24, 2016 340 pm		Khairpur Nathan Shah	07	Feeding
Dec 24, 2016 04 pm		Khairpur Nathan Shah	12	Sunbathing
Dec 24, 2016 0530		Khairpur Nathan Shah	05	Feeding
Dec 24, 2016 06 pm		Khairpur Nathan Shah	19	Flying
Dec 24, 2016 616 pm		Khairpur Nathan Shah	2	Feeding
Dec 25, 2016 10:35 am		Khairpur Nathan Shah	3	Feeding
Dec 25, 2016 10:45 am		Khairpur Nathan Shah	2	Sunbathing
Dec 25, 2016 11:00 am		Khairpur Nathan Shah	35	Flying

3.1.2 Findings of the Second survey, February 2017

To monitor the wintering population in Sindh and Balochistan, a second survey was carried out in February 2017. In this survey, the largest flock of 290 birds was counted which was feeding in a wheat field. A total of 12 Sociable Lapwing flocks were recorded and are summarised in Table 3.

Table 3: sightings of sociable lapwing during winter surveys in Sindh				
Date/Time	Province	Location	SoLa count	Activity
Feb 07, 2017 3 pm	Sindh	Dadu	35	Wading in a shallow pond
Feb 08, 2017 09:25 am		Dadu	06	Sunbathing
Feb 08, 2017 09:35 am		Dadu/Allah Bachaya	08	Sunbathing
Feb 08, 2017 09:49 am		Dadu	15	Flying
Feb 08, 2017 11:14 am		Dadu	36	Feeding
Feb 08, 2017 11:24 am		Dadu	20	Flying
Feb 08, 2017 11:56 am		Dadu	60	Feeding
Feb 08, 2017 12:25 pm		Dadu	09	Feeding
Feb 08, 2017 12:42 pm		Dadu	17	Sunbathing
Feb 08, 2017 01:17 pm		Dadu	200 ¹	Sunbathing
Feb 8, 2017 01:25 pm		Dadu	180 ¹	Sunbathing
Feb 8, 2017 02:00 pm		Dadu	290 ¹	Feeding

¹These birds were the same but counted on 3 separate occasions as they moved between field units

After intensive search in Jaffar Abad and Naseer Abad districts of Balochistan, 40 sociable lapwings were sighted in the raised arid and mostly barren land on February 10th. The wheat fields, where wheat was grown, were intensively searched from February 9th till 12th, but no sociable lapwing was found there. However, the local community reported that sociable lapwings do visit the fields. It seems likely that the sociable lapwings are using different areas for resting and feeding. This supports the satellite tracking that shows migration of the birds from Khairpur Nathan Shah to Jaffar Abad District in Balochistan. This confirms that the birds sighted in Jaffar Abad/Naseer Abad are not a separate group, but is the

group that winters in Khairpur Nathan Shah. However, there are chances that a small number of birds occur here.

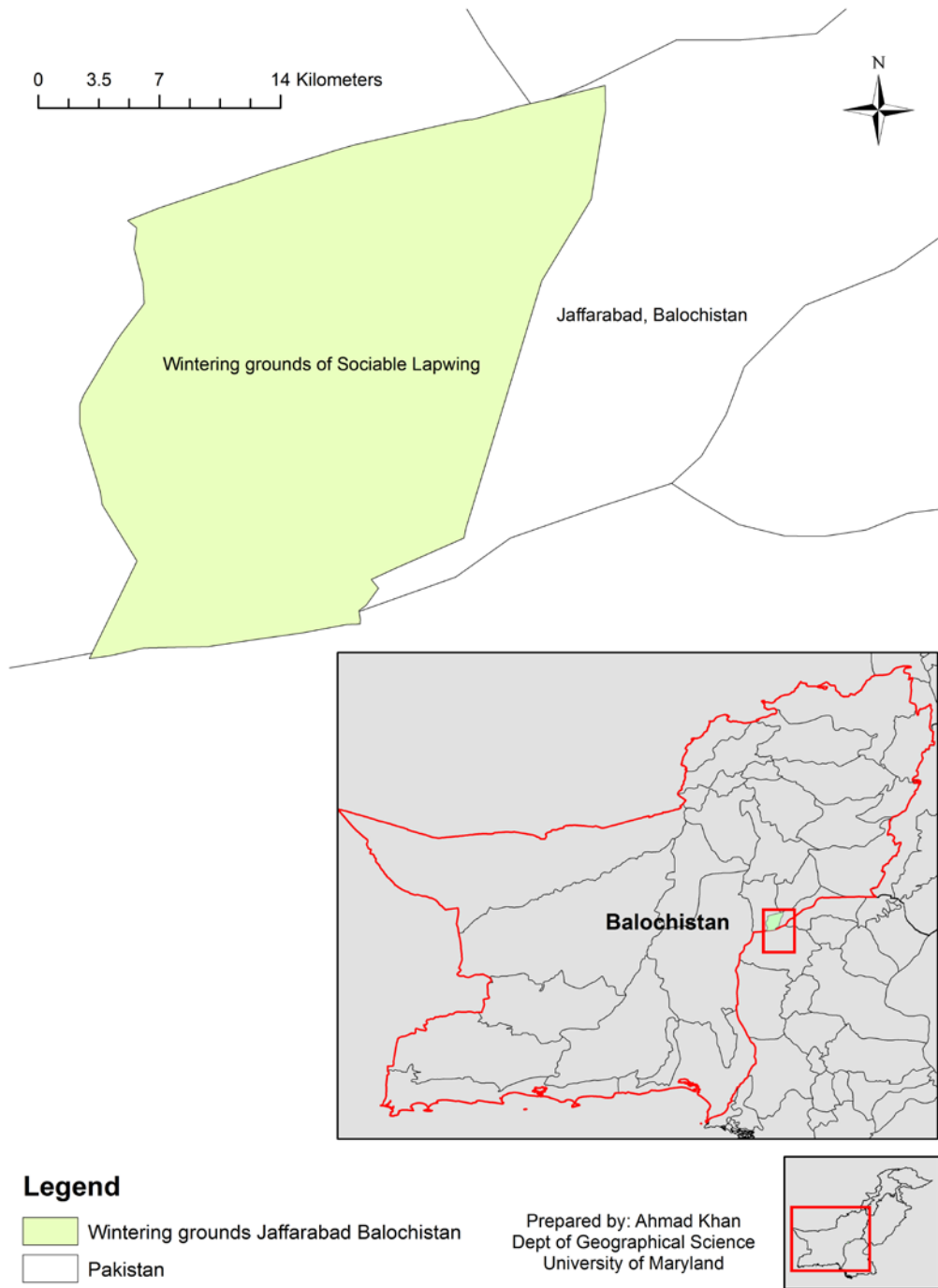


Figure 5: Location of Sociable Lapwing wintering grounds in Balochistan

3.1.3 Findings of the third survey, February/March 2017

A third monitoring survey of the sociable lapwing was conducted to assess the presence of the birds towards the end of the wintering season. In this survey, the flocks sizes recorded were small. The largest flock was 20 against the 200+ recorded in the first two surveys. The sightings made during this survey are presented in Table 4.

Table 4: sightings of sociable lapwing during winter surveys in Sindh: March 2017				
Date/Time	Province	Location	SoLa count	Activity
Mar 04, 2017 11:20 am	Sindh	Dadu/Allah Bachaya	08	Resting
Mar 04, 2017 11:33 am		Dadu	09	Flying
Mar 04, 2017 01:21 pm		Dadu	14	Sunbathing
Mar 04, 2017 01:25 pm		Dadu	07	Sunbathing
Mar 05, 2017 11:33 am		Dadu	07	Flying

In Balochistan, the search resulted in sighting a few flocks of the birds in the fields. The result of the survey is presented in the table 5.

Table 5: Sociable lapwing sightings on winter grounds in Balochistan: March 2017				
Date/Time	Province	Location	SoLa count	Activity
Mar 06, 2017 10:00 am	Sindh	Naseer Abad/ Shori/ Basti Chatrani	20	Flying
Mar 06, 2017 01:33 pm		Naseer Abad/ Shori/ Lehri	08	Sunbathing
Mar 06, 2017 02:33 pm		Naseer Abad/ Shori/ Lehri	14	Sunbathing
Mar 06, 2017 04:40 pm		Naseer Abad/ Shori/ Neaz Lehri	06	Sunbathing

In this survey, we also conducted survey in other potential habitats, from where people reported sightings. This includes Ghaus Pur in Kand Kot and Gudu in Sindh. The areas that were searched from Punjab included Head Muhammad Wala, Rangla Wetlands Complex, Taunsa Barrage, Ali Pur, Chachran, Small lake area in Rahim Yar Khan, Chotal Merani, Sher Dir Merani in Punjab. The indirect evidence suggests that sociable lapwings are found on these sites. These could be passage migrants.

Conclusion:

Although the maximum single count of Sociable Lapwings was 365 individuals, it doesn't seem unreasonable to estimate that up to 500 birds could have wintered in our study area in 2016/17. This makes Pakistan a key wintering range state for the species and further conservation efforts are a high priority. Given that approximately 6000-8000 Sociable Lapwings have been recently recorded using this eastern flyway, then there must be other wintering populations to be discovered in Pakistan or India.

3.2 Awareness raising and communication

3.2.1 Awareness raising seminar with local community

One day seminars with the local community of Dadu and Khaipur Nathan Shah were held on May 27th and 28th, 2017 (Figure 6). The seminars were attended by elders, hunters, and school children from the local community. A total of 27 participated in Dadu, while 19 persons attended in Khaipur Nathan Shah (Figures 6). The main objective of the seminars was to create awareness among the local community about the sociable lapwing, its global status, wintering of the species in the area, and role of the local community in conserving the species. The participants were also educated on identification of the sociable lapwing and its difference with white-tailed lapwing.

The local community took interest in the seminars and showed keen interest in understanding how they can help. However, the major constraint expressed was the need for expertise and facilitation from a relevant organization, assistance in conservation and further education about the species ecology, and ecosystem.



Figure 6: Seminar with local community about importance of sociable lapwing

3.2.2 Poster on sociable lapwing

To raise awareness about sociable lapwing among the local community, hunters, school children and government organizations, a poster was designed, 1000 printed and distributed among the local communities and custodian government departments (Figure 7). The poster was highly appreciated by the local community. The local community provided feedback that educational literature like the poster will play a key role in highlighting conservation of the sociable lapwing.

From the seminars and the distribution of the Sociable Lapwing poster the project team are confident that future conservation initiatives in the region could be successful.



Figure 7: The poster produced and distributed among key stakeholders primarily local community

3.3 Conservation of the birds on wintering grounds in Pakistan

3.3.1 Illegal hunting

The sociable lapwing wintering habitat in Balochistan's Jaffar Abad and Naseer Abad district is located in the tribal belt, where governance is dominated by the traditional norms and rules. Keeping guns is a local norm and a sign of social status along with need to address inter-communal conflicts. This also promotes hunting in the area, and sociable lapwing is not spared. The local community reported hunting of birds in general and sometimes sociable lapwings too.

The local community in Khairpur Nathan Shah also reported hunting of birds, including sociable lapwing. The information collected from there suggest that

sociable lapwing inhabits fields that are near to settlements, and thus it is easier to target sociable lapwing than other birds. However, the local community also showed a concern over the decreasing number of birds in general and sociable lapwing in particular (Figure 8).



Figure 8: Used rounds of shotgun after firing, found in the area

In Dadu, the people reported that no hunting is done here primarily that people are not accustomed to it and secondarily it is under civil administration where guns are not permitted in general.

Based on feedback from the local community and anecdotal reports, it appears that hunting is probably a major threat to the sociable lapwing in our study area. Although the Sociable Lapwing is a Critically Endangered species, the provincial wildlife laws in Pakistan, except the Punjab Wildlife Act of 1975, do not list it as a protected species (Shafiq, 2005). The legal protection is therefore not extended

to the species, which is an urgent need, as identified. The enforcement staff of Sindh Wildlife Department, the custodian government line department for wildlife conservation in Sindh, has marginal presence in the sociable lapwing wintering sites in Dadu district, while the districts in Balochistan are under tribal management, so enforcement of the wildlife laws is not effective to address wildlife conservation. These two issues need addressing according to the local social and administrative set up. It is possible that future efforts could be made with tribal leaders to reduce hunting of threatened species, including the Sociable Lapwing.

3.3.2 Habitat degradation and alteration

According to the local community, there has been enormous change in habitat features and ecosystem of the area that has been used by the sociable lapwing. The cropping system has altered, the timings of cropping have changed, the agricultural systems have been modified and revised, and the water management has changed. Previously, the area maintained a shallow water level over a significant part of the year, particularly winter months. The recent changes in water management, canal water regulation, and surface flow diversion, that habitat doesn't form for longer period of time. Then people have started sowing wheat on the lands, where mustard was usually sown previously. This has changed the cropping pattern.

The other major change is the application of pesticides, insecticides and herbicides on the crops. This has adverse impacts on birds' population in general and sociable lapwing in particular that inhabits and uses agricultural fields. The local community is not educated on the proper use, safe disposal and controlling adverse impacts of the chemicals they apply on agricultural crops. In addition, population growth, development initiatives and landscape alternation affects the sociable lapwing wintering here.

3.3.3 Awareness and lack of conservation capacity

The local community, particularly during the seminar, expressed their need for raising awareness on conservation issues in general and critically endangered species like sociable lapwing in particular.

There is also need expressed for capacity building in monitoring and wardening of the sociable lapwing's wintering population in Dadu district in Sindh, and also the districts of Jaffar Abad and Naseer Abad districts of Balochistan. Due to the prevalent social system in Naseer Abad and Jaffar Abad districts, a formal seminar was not conducted. However, informal meetings with individuals, particularly local tribal head were held. One of the influential of the area committed that he will help with protecting the birds here. There is need for a consistent effort on awareness raising and capacity building to promote conservation of the species here.

4. Recommendations

Based on the findings of this project, we suggest that Pakistan is a key range state for the Sociable Lapwing and the following recommendations should be considered:

- Extend this project over the next wintering period (2017/18) to identify further important Sociable Lapwing sites and to continue monitoring the ones already identified.
- Collect standardised habitat-use data to understand Sociable Lapwing requirements on the wintering grounds.
- Combining further survey work and habitat data assess the potential for establishing new Protected Areas or IBAs (or updating existing ones).
- Undertake further awareness raising activities about Sociable Lapwing conservation in Sindh and Balochistan.

- The provincial wildlife laws may be reviewed under a consultation with key conservation experts of the area to recommend revisions for enlisting the sociable lapwing as protected bird under the laws and to provide protection.
- Considering sociable lapwing as a flagship species in the area, make recommendations for addressing conservation, development and socio-economic issues.
- Build capacity of the staff of custodian wildlife departments in sociable lapwing ecology, ecosystem management, and conservation for promoting consistent conservation initiative.

5. Project contribution to the AEWA/CMS International Single Species Action Plan for the Conservation of the Sociable Lapwing.

This project has made some significant contributions to the actions outlined in the AEWA/CMS Species Action Plan:

- Contributed to understanding the route, staging areas and wintering locations of the eastern flyway
- An initial contribution to understanding some basic habitat requirements of the species
- Identification of hunting as a potential and significant threat with some clear recommendations to tackle the issue in future.

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