

Waterbird Census of Hormozgan Province, Iran, 2023

and Comparing the Results with 2022

اداره کل حفاظت محیط زیست استان هرمزگان
Department Of Environment
Islamic Republic of Iran



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1. Introduction

This census was conducted collaboratively by the Department of Environment in Hormozgan Province and the AvayeBoom Bird Conservation Society. The project focused on monitoring waterbird habitats in the province and studying the population and diversity of waterbirds within these areas.

A secondary goal of the project was to facilitate knowledge transfer and initiate joint activities in research and wildlife conservation between legal guardians and non-governmental organizations. Additionally, the project aimed to train local volunteers in Hormozgan province. Prior to the project's commencement, all interested and qualified individuals were invited to participate. Over the past two years, at least ten volunteers have actively worked alongside project experts in the field. This involvement not only helped to enhance the quality of the project but also equipped these individuals with the skills necessary to implement similar projects in various habitats across the country in the future.

2. General results

The census recorded a total of 64,123 waterbirds across 97 different species. Among these, 19 species were not strictly waterbirds but were water-dependent. The species with the highest counts included the Great Cormorant (5,616), the Lesser Black-backed Gull (3,725), and the Greater Sand Plover (3,208).

Several species listed as near threatened or endangered on the IUCN Red List were also observed and counted, including the Dalmatian Pelican (Vulnerable - VU), Common Pochard (Vulnerable - VU), Great Stone Plover (Near Threatened - NT), Black-tailed Godwit (Near Threatened - NT), Bar-tailed Godwit (Near Threatened - NT), and Eurasian Curlew (Near Threatened - NT).

The highest bird counts were observed in the following regions: Koor-e Kooran (12,474 birds), Rud-e Shur (7,364 birds), and the eastern coast of Bandar Abbas (6,155 birds). The total area surveyed during the census was 175,135 hectares, with an average of 76% of these areas being covered by the census.

Table 1- General census results by region (2022 and 2023)

No	Site name	Site area (hectares)	Coverage percentage at 2023	number of birds counted in 2023	Coverage percentage at 2022	number of birds counted in 2022
1	East of Bandar e Abbas city	1920	80	6645	80	7329
2	Rud-e Shur	7257	50	7364	-	-
3	The west coast of Bandar e Abbas	568	40	263	-	-
4	Bandar- Pol-KeshtiSazi	17245	70	1171	-	-
5	Mangrove protected area	83081	70	12574	70	17159
6	Kolahi Site	7923	75	794	75	709
7	Tiab Site	5454	80	4009	85	3994
8	Namaki Site	4275	80	4291	80	2806

9	Kargan Site	9499	20	1133	60	3364
10	Kolugh Kalam Wetland	1505	100	0	95	1166
11	Nahoor	646	70	174	-	-
12	Khargooshi	998	75	1835	75	1107
13	Brizk	1324	80	1751	80	2312
14	Khoor-e Ziarat	4550	65	480	65	2895
15	Khoor-e Azini	3409	80	1384	75	3149
16	Khoor-e Khalasi	1533	90	1453	70	3573
17	Khoor-e Shahreno	1244	90	737	80	2223
18	Khoor-e Soorglam	1938	70	709	65	3003
19	Bahal wharf	231	95	3689	-	-
20	Khoor-e Meydani	13781	35	5307	-	-
21	Googsar Coast	154	100	140	-	-
22	Vanak Coast	3342	90	1323	-	-
23	Sim Coast	150	90	1845	100	484
24	Sedich-Abd	361	80	329	-	-
25	Jask Coast	577	90	564	100	1273
26	Jask estuary	1399	90	1839	90	154
27	Nian Dam	114	80	56	100	36
28	Shamil Dam	626	80	1733	100	283
29	Sadich	361	80	531	-	-
30	Khoor-e Soru	568	-	-	80	1464
31	Khoor-e Sayeh Khosh	6921	-	-	80	1075
32	Khargi	4275	-	-	75	1984
33	Takhtriz	2613	-	-	65	1700
34	Sirik Coast	232	-	-	90	494
35	Gaz River	4877	-	-	65	1200
36	Minab Dam	114	-	-	100	537
37	Khoor-e Kashani	977	-	-	30	2044
38	Khoor-e Pahno	1584	-	-	40	1047
39	Had estuary	2252	-	-	70	1372
40	Khoor-e Noktarash	1739	-	-	70	739
41	Khoor-e Neyzehee	2271	-	-	65	2306
Total Number				64123		72904

• The habitats marked with "-" were not counted that year.

• The number of birds counted in the east of Bandar e Abbas City site is related to the east of Bandar e Abbas along with Gursuzan.

Table 2- The general results of the census by the number of species and birds (2022 and 2023)

Title/ Year	2023	2022
Total Birds	64123	72904
Total Species	97	102
Total Waterbirds Population	63847	72494
Total Waterbirds Species	78	85
Total Raptors Population	194	265
Total Raptors Species	14	13
Total Other Water-dependent Birds Population	82	145
Total Other Water-dependent Birds Species	5	4

Table 3- General census results by different groups of birds (2022 and 2023)

Group of Birds	Number	
	2023	2022
Podicipedidae	156	191
Pelecanidae	812	1204
Phalacrocoracidae	5616	8655
Ardeidae	1940	2890
Ciconiidae	8	4
Threskiornithidae	214	253
Phoenicopteridae	1619	1569
Anatidae	598	1079
Rallidae	823	121
Dromadidae	2495	2839
Haematopodidae	2867	2103
Recurvirostridae	159	177
Burhinidae	29	52
Charadriidae	7286	5629
Scolopacidae	27902	34796
Stercoraridae	0	1
Laridae	9033	7794
Sternidae	2289	3137
Pandionidae	45	68
Accipitridae	111	150
Alcedinidae	39	99
Motacilidae	43	46
Procellariidae	1	0
Other Hunter Birds	38	47

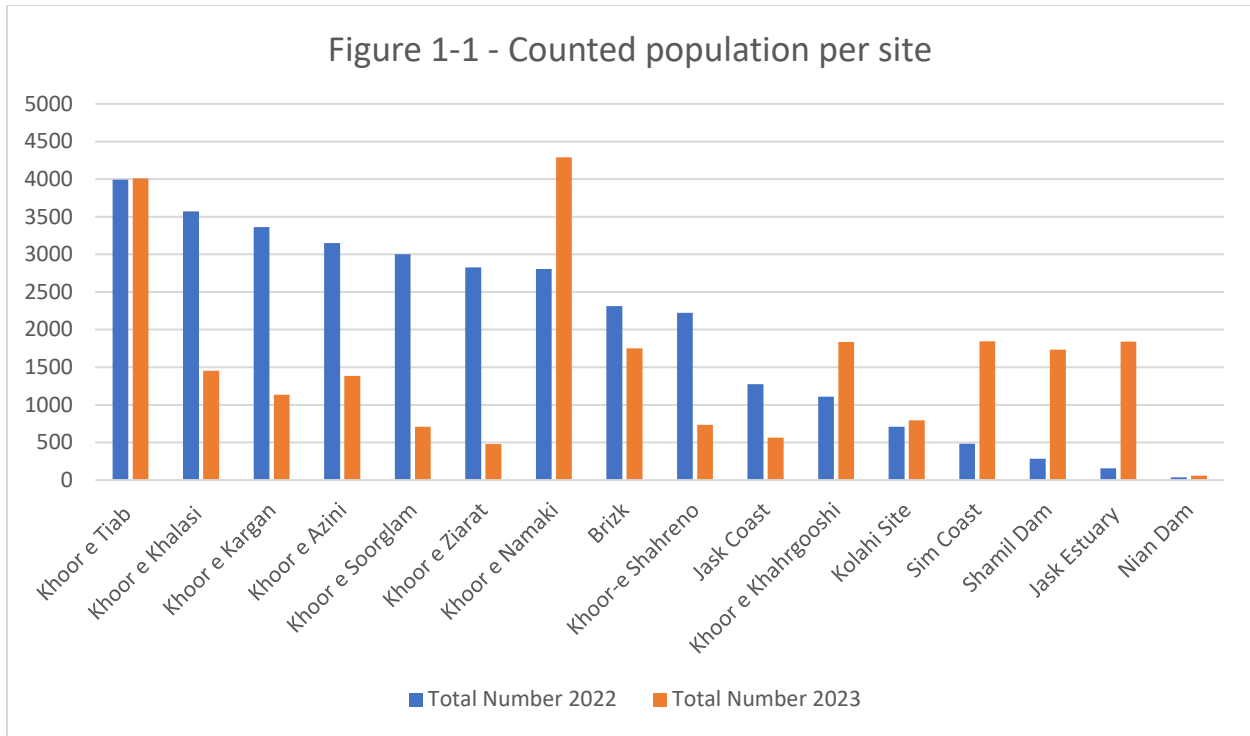


Figure 1-1 – Counted waterbirds population in sites which counted in both 2022 and 2023

A comparison of population counts conducted at the sites which counted in both years is shown in figure above. 31,295 birds were counted at these 16 sites in 2022, and 24,612 birds in 2023, indicating a 21% decrease.

Several sites have seen a significant decline in population, such as Khoor-e Khalasi, Khoor-e Kergan, Khoor-e Azini, Khoor-e Soorglam, and Khoor-e Ziarat.

Table 4- Counted waterbirds population in sites which counted in both 2022 and 2023

Site	Total Number 2022	Total Number 2023	Site	Total Number 2022	Total Number 2023
Khoor-e Tiab	3994	4009	Khoor-e Shahreno	2223	736
Khoor-e Khalasi	3573	1453	Jask Coast	1273	564
Khoor-e Kargan	3364	1133	Khoor-e Kahrgooshi	1107	1835
Khoor-e Azini	3149	1384	Kolahi Site	709	794
Khoor-e Soorglam	3003	709	Sim Coast	484	1845
Khoor-e Ziarat	2825	480	Shamil Dam	283	1733
Khoor-e Namaki	2806	4291	Khoor-e Jask	154	1839
Brizk	2312	1751	Nian Dam	36	56

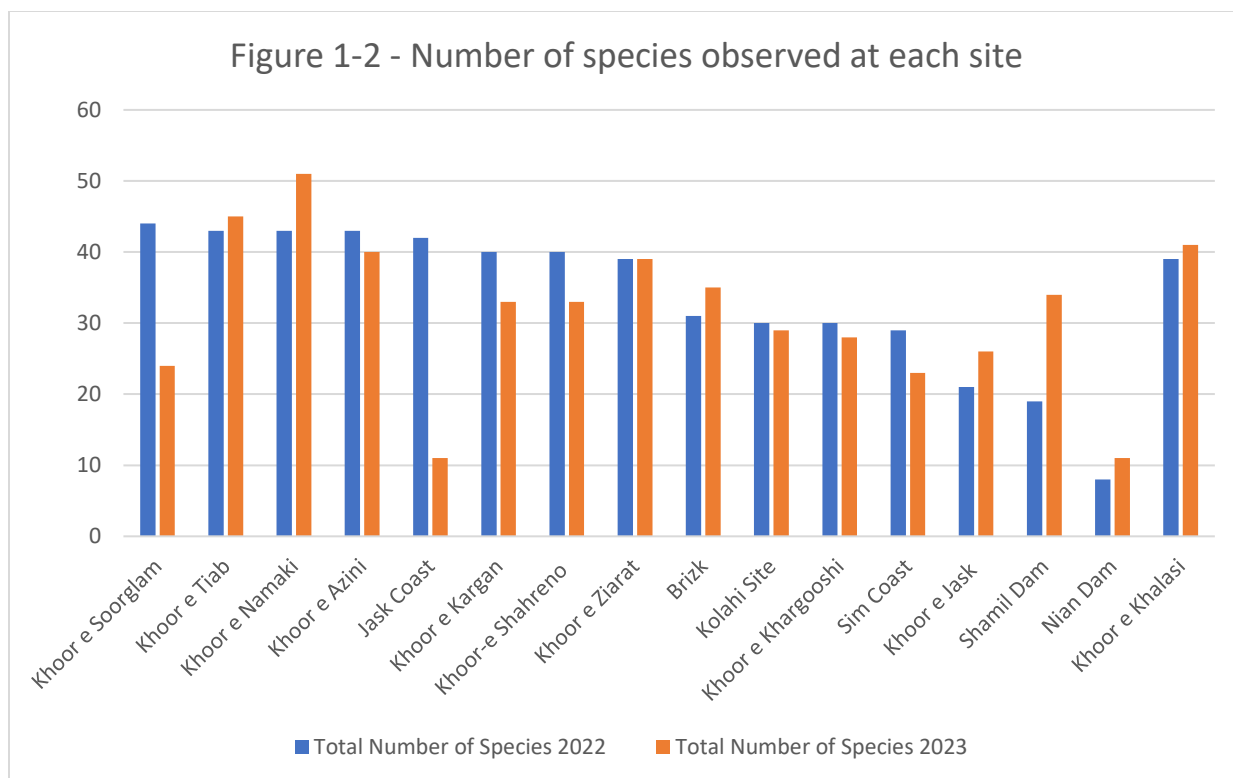


Figure 1-2 - Number of species observed in sites which counted in both 2022 and 2023

This figure illustrates the diversity of species at these 16 sites. The figure clearly shows that the two sites of Khoor-e Soorglam and Jask Coast are facing a critical situation. These sites must establish a strong conservation foundation.

Table 5- Number of species observed in sites which counted in both 2022 and 2023

Site	Total Number of Species 2022	Total Number of Species 2023	Site	Total Number of Species 2022	Total Number of Species 2023
Khoor-e Soorglam	44	24	Brizk	31	35
Khoor-e Tiab	43	45	Kolahi Site	30	29
Khoor-e Namaki	43	51	Khoor-e Khargooshi	30	28
Khoor-e Azini	43	40	Sim Coast	29	23
Jask coast	42	11	Khoor-e Jask	21	26
Khoor-e Kargan	40	33	Shamil Dam	19	34
Khoor-e Shahreno	40	33	Nian Dam	8	11
Khoor-e Ziarat	39	39	Khoor-e Khalasi	39	41

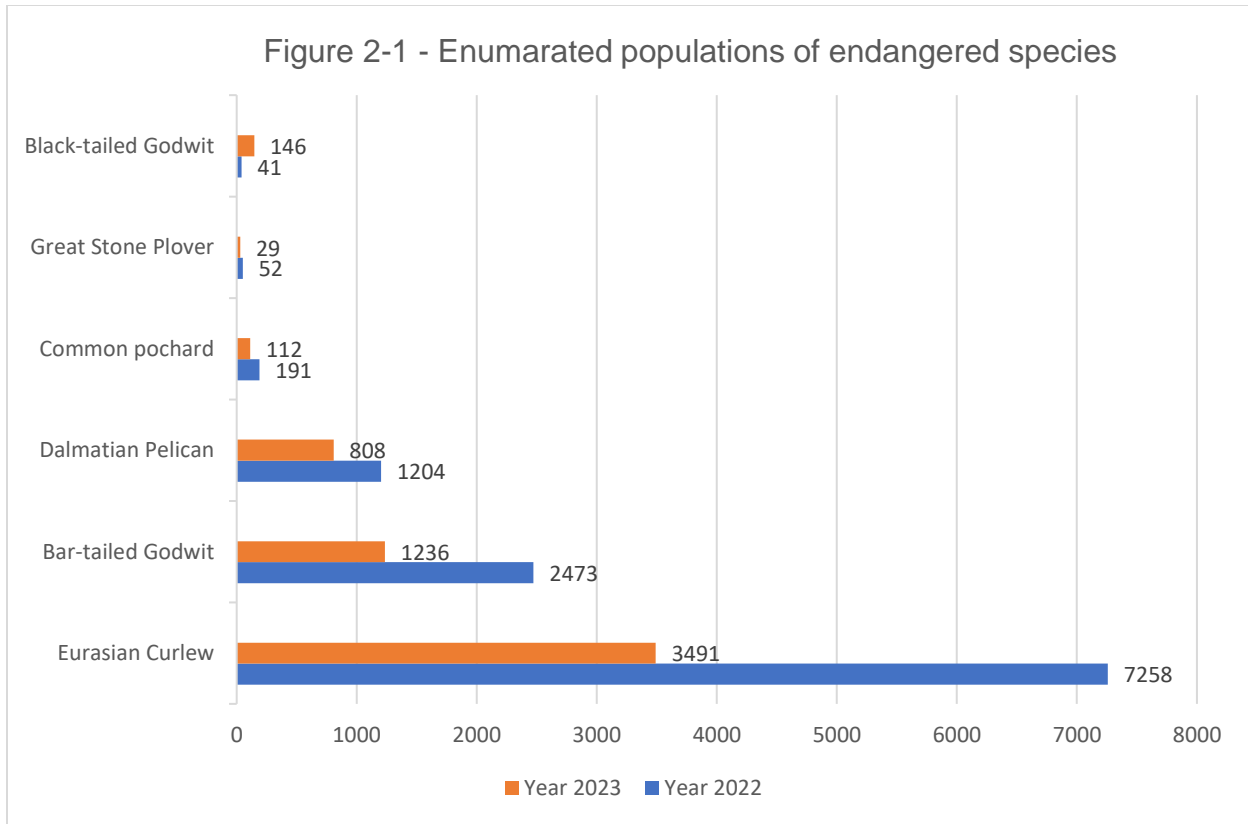


Figure 2-1 Populations of endangered species

The figure above compares the population counts of each endangered species in 2022 and 2023. In 2022, the total count of these species was 11,219 individuals. By 2023, this number had decreased to 5,822 individuals, representing a significant population decline of 48%. The data indicate a decrease in the population of five species, while only the Black-tailed Godwit has shown an increase.

Table 6- Populations of endangered species

The name of the Species	Year 2022	Year 2023
Eurasian Curlew	7258	3491
Bar-tailed Godwit	2473	1236
Dalmatian Pelican	1204	808
Common pochard	191	112
Great Stone Plover	52	29
Black-tailed Godwit	41	146
The total number of endangered species	11219	5822

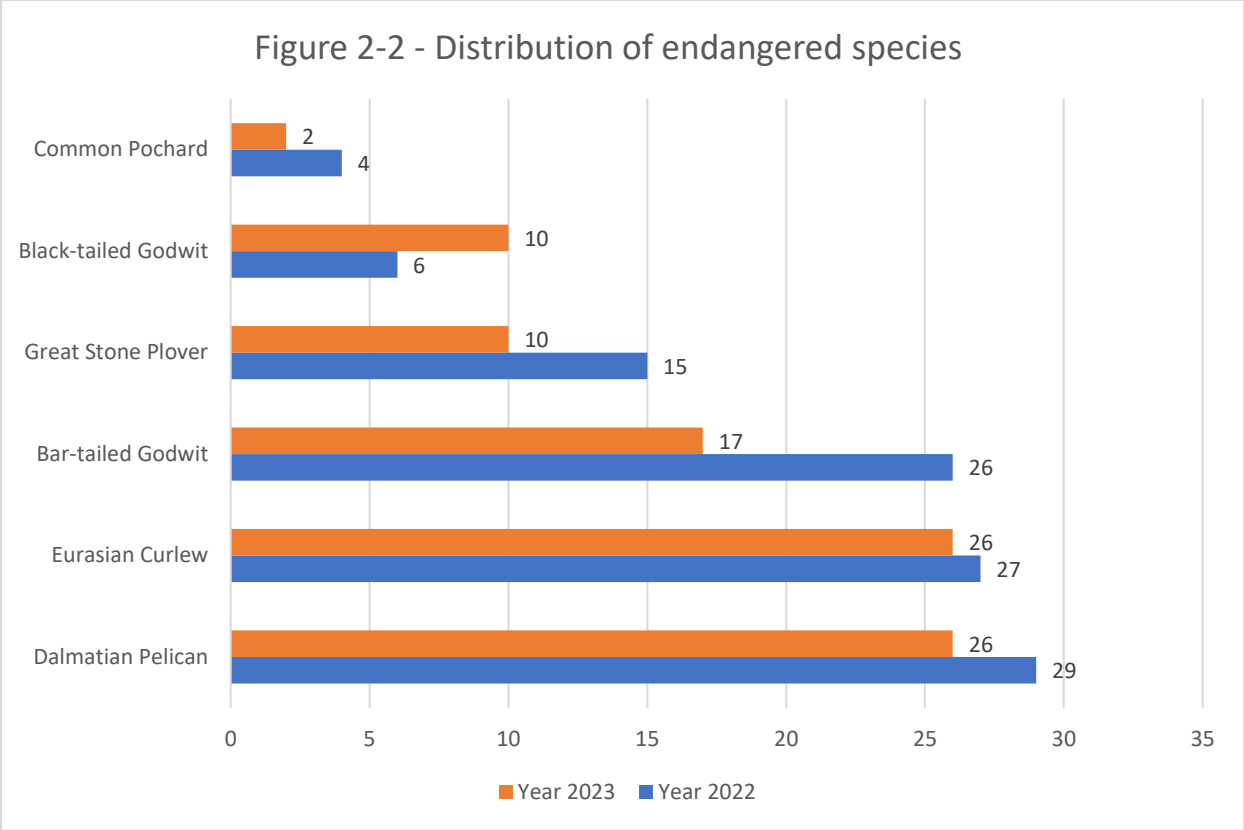


Figure 2-2 – Number of sites where endangered species were observed

In the figure above, number of sites where endangered species were observed in the years 2022 and 2023 has been examined.

It was observed that all of these species (except the Black-tailed Godwit) were seen in fewer sites in 2023 than in 2022.

Table 7- Number of sites where endangered species were observed

The name of the Species	Year 2022	Year 2023
Dalmatian Pelican	29	26
Eurasian Curlew	27	26
Bar-tailed Godwit	26	17
Great Stone Plover	15	10
Black-tailed Godwit	6	10
Common pochard	4	2

Figure 3-1 - Population of species in the census of 2022

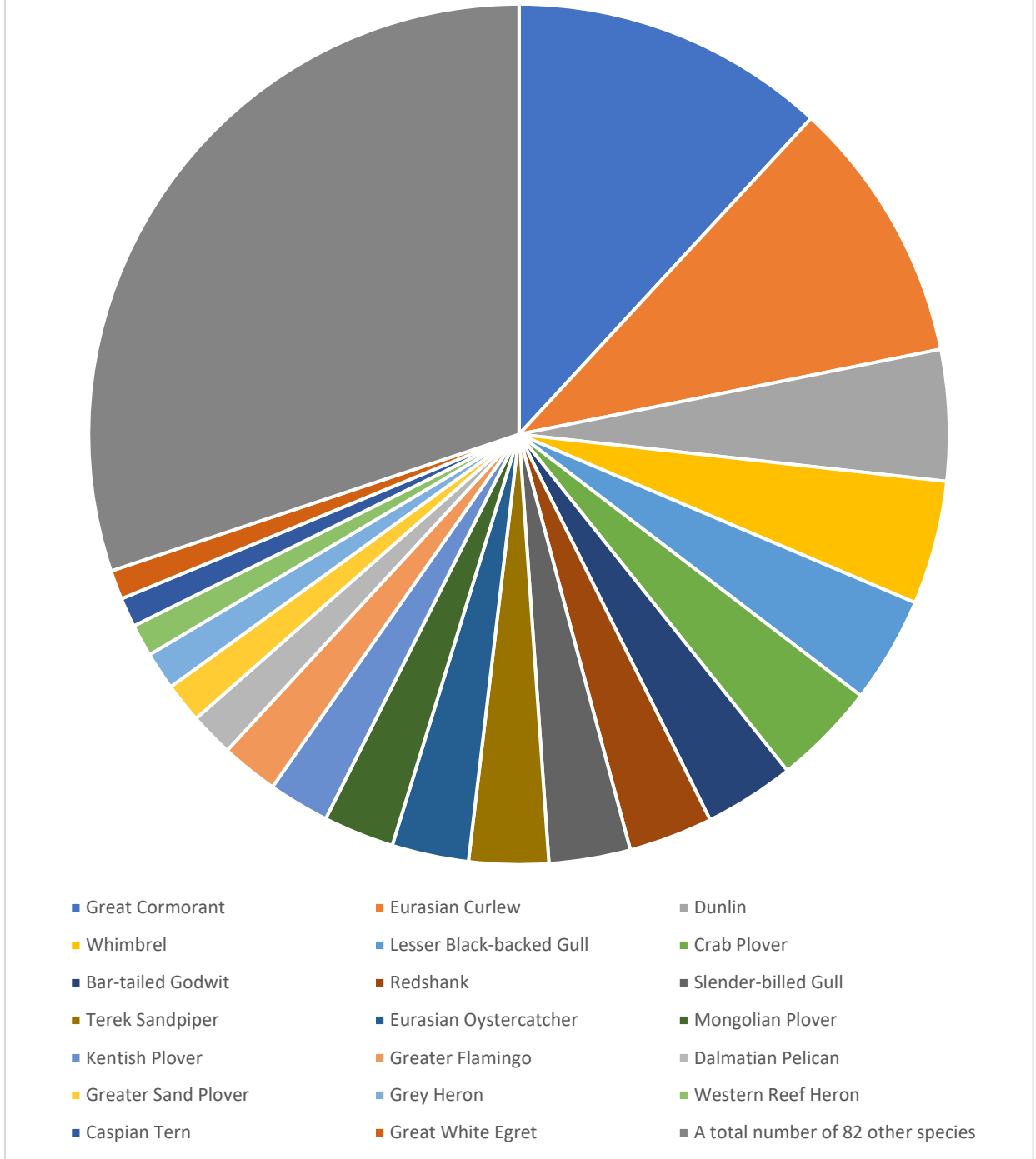


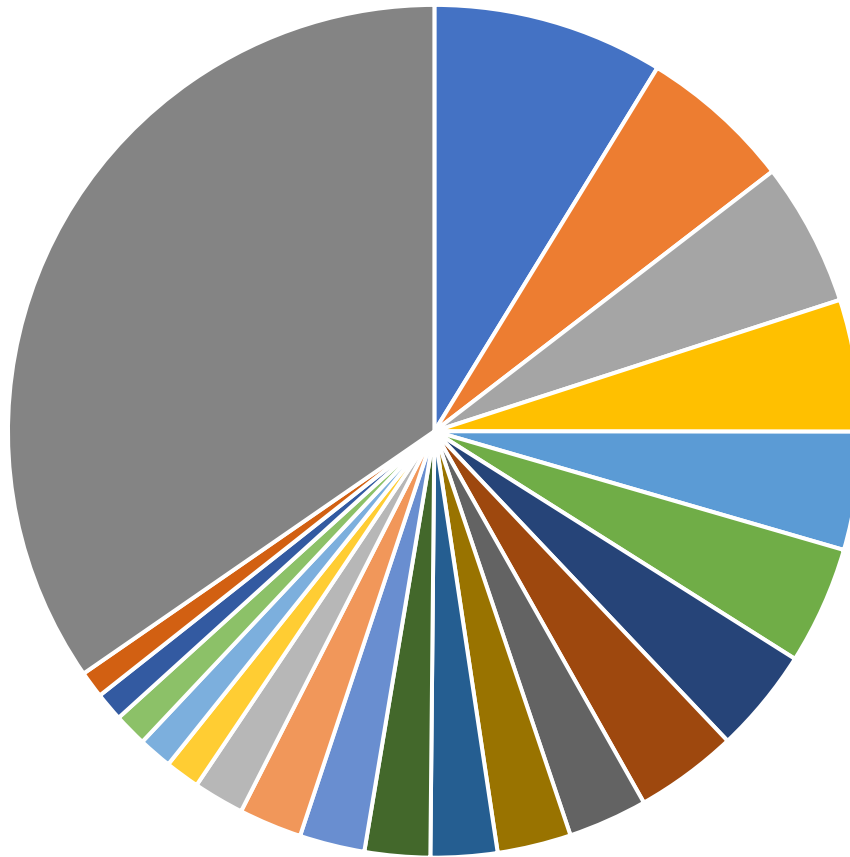
Figure 1-3 – Species with the highest population size in 2022 census

This figure shows the 20 most populous species in 2022 census. With 8655, 7258, and 3586 individuals respectively, the Great Cormorant, Eurasian Curlew, and Dunlin were the three species with the greatest population in 2022.

Table 8- Species with the highest population size in 2022 census

The name of the Species	Population in 2022
Great Cormorant	8655
Eurasian Curlew	7258
Dunlin	3586
Whimbrel	3391
Lesser Black-backed Gull	2912
Crab Plover	2839
Bar-tailed Godwit	2473
Redshank	2301
Slender-billed Gull	2230
Terek Sandpiper	2177
Eurasian Oystercatcher	2103
Mongolian Plover	1936
Kentish Plover	1673
Greater Flamingo	1569
Dalmatian Pelican	1204
Greater Sand Plover	1093
Grey Heron	1038
Western Reef Heron	883
Caspian Tern	806
Great White Egret	799
A total number of 82 other species	21978

Figure 3-2 - Population of species in 2023 census



- | | |
|--------------------------------------|----------------------------|
| ■ Great Cormorant | ■ Lesser Black-backed Gull |
| ■ Eurasian Curlew | ■ Greater Sand Plover |
| ■ Red-necked Phalarope | ■ Eurasian Oystercatcher |
| ■ Slender-billed Gull | ■ Crab Plover |
| ■ Terek Sandpiper | ■ Mongolian Plover |
| ■ Greater Flamingo | ■ Redshank |
| ■ Dunlin | ■ Whimbrel |
| ■ Bar-tailed Godwit | ■ Kentish Plover |
| ■ Common Coot | ■ Dalmatian Pelican |
| ■ Great Black-headed Gull | ■ Grey Heron |
| ■ A total number of 76 other species | |

Figure 3-2 - Species with the highest population size in 2023 census

This figure shows the 20 species with the largest population in 2023. As of 2023, the Great Cormorant, the Lesser Black-backed Gull, and the Eurasian Curlew were the species with the highest numbers of individuals, with 5616, 3725, and 3491 individuals respectively.

Table 9- Species with the highest population size in 2023 census

The name of the Species	Population in 2022
Great Cormorant	5616
Lesser Black-backed Gull	3725
Eurasian Curlew	3491
Greater Sand Plover	3208
Red-necked Phalarope	2870
Eurasian Oystercatcher	2867
Slender-billed Gull	2547
Crab Plover	2495
Terek Sandpiper	1926
Mongolian Plover	1794
Greater Flamingo	1619
Redshank	1590
Dunlin	1584
Whimbrel	1532
Bar-tailed Godwit	1236
Kentish Plover	842
Common Coot	823
Dalmatian Pelican	808
Great Black-headed Gull	698
Grey Heron	653
A total number of other 76 other species	22198

3. Timings and Sites

The census of waterbirds in Hormozgan province was conducted over a period of 20 days, from January 24th to February 13th, 2023, across 31 wetlands. The census covered areas from Khoor-e Khooran in the west to Khoor-e Meydani in the east. However, from January 31st to February 8th, strong winds disrupted sea travel, significantly affecting the movement of boats and necessitating a temporary halt to the census activities.

The selection of sites for the census was guided by several factors, coordinated with the General Department of Environment in Hormozgan Province, and influenced by budgetary and logistical constraints. The criteria included:

- Priority as announced by the General Department of Environment in Hormozgan Province.
- Whether the site is a protected area or an internationally recognized wetland.
- The feasibility of conducting comparative studies with data from previous years.

- Accessibility to the wetlands.
- Prevailing weather conditions, with a particular focus on wind.
- The capability to cover at least 30% of each site given the available transportation facilities.
- The timeline of the census is given below.

Table 10- Census timeline

NO	The name of Province	The name of Habitat	Census date (2023)	Census Date (2022)
1	Bandar e Abbas	East of Bandar e Abbas city	24-1-2023	9-1-2022
2	Bandar e Abbas	Rud-e Shur	23-1-2023	-
3	Bandar e Abbas	Gursuzan Site	26-1-2023	-
4	Bandar e Abbas	West Coast of Bandar e Abbas	26-1-2023	-
5	Bandar e Abbas	Port- Pol-KeshtiSazi	26-1-2023	-
6	Bandar e Khamir	Mangrove protected area	28&29-1-2023	12,13&14-1-2022
7	Minab	Kolahi Site	11-2-2023	24-1-2022
8	Minab	Tiab Site	10&11-2-2023	25-1-2022
9	Minab	Namaki Site	10&11-2-2023	25-1-2022
10	Minab	Kargan Site	9-2-2023	26-1-2022
11	Minab	Kolugh Kalam Wetland	9-2-2023	29-1-2022
12	Jask	Nahoor	13-2-2023	-
13	Sirik	Khargooshi	12-2-2023	27-1-2022
14	Jask	Brizk	12-2-2023	27-1-2022
15	Sirik	Khoor-e Ziarat	12-2-2023	28-1-2022
16	Sirik	Khoor-e Azini	12-2-2023	28-1-2022
17	Jask	Khoor-e Khalasi	13-2-2023	9-2-2022
18	Jask	Khoor-e Shahreno	13-2-2023	9-2-2022
19	Jask	Khoor-e Soorglam	14-2-2023	10-2-2022
20	Jask	Bandar-e Bahal	14-2-2023	-
21	Jask	Khoor-e Meydani	15-2-2023	-
22	Jask	Googsar Coast	15-2-2023	-
23	Jask	Vanak Coast	15-2-2023	-
24	Jask	Sim Coast	15-2-2023	11-2-2022
25	Jask	Sedich-Abd	15-2-2023	-
26	Jask	Jask Coast	14-2-2023	12-2-2022
27	Jask	Khoor-e Jask	14-2-2023	12-2-2022
28	Bandar e Abbas	Nian Dam	25-1-2023	25-2-2022
29	Bandar e Abbas	Shamil Dam	25-1-2023	25-2-2022
30	Jask	Sedich	15-2-2023	-

4. Census Method

The census sites were primarily monitored by boat, with methods tailored specifically to each site. During high tide, birds were mostly identified and counted from the boat using binoculars, with the identification process influenced by the state of the tide. During low tide, experts could disembark onto tidal mudflats at parts of the sites where access was possible. From these points, which were chosen for their optimal field of view and favorable lighting conditions to minimize bird silhouettes, birds were counted using telescopes.

For non-wetland coastal areas, a 4WD vehicle was employed. Moving at a speed of 35 to 45 km/h (averaging 40 km/h) and maintaining a distance of 40 to 60 meters from the shoreline, experts identified and counted birds with binoculars. The census included not only waterbirds but also other water-dependent species such as kingfishers, as well as raptors, provided their flight paths clearly intersected with the wetland or monitored area.

In instances of high bird densities where counting became challenging, two experts would count simultaneously, and an average of their counts was recorded. Disagreements in species identification were resolved through photography with a superzoom camera; identification was confirmed when at least three experts reached a consensus on the species. The General Department of Environment in Hormozgan Province provided aerial maps of the wetlands, which helped in naming and locating regions. These names are used in this report. GPS technology was used to record the paths followed by the experts and the hotspots of bird presence for future research.

5. Tools

The following tools are used in this census project:

1. Hawke Endurance 10*42 binoculars
2. Swarovski EL 8*42 binoculars
3. Swarovski SLC 8*42 binoculars
4. Bresser 42*10 binoculars
5. Swarovski 65*20-60 telescope
6. Swarovski 20-60*80 telescope
7. Swarovski 95*20-60 telescope

8. Nikon P1000 camera

9. Canon SX60 camera

10. Nikon P900 camera

11. Canon 7D camera + 100-400 lens

12. Garmin 65S GPS

Road transportation was provided by Foton Tunland 4WD vehicles and Nissan Roniz cars regularly, and other vehicles were used temporarily in each region as needed. Marine monitoring was conducted using motor fishing boats on a rental basis. Boats were rented from boatmen who were sufficiently familiar with the area.

6. Sites



Image 1- The range of monitored sites based on the map of wetland areas of Hormozgan province, created in the General Department of Environment in Hormozgan province.

6.1. East Bandar e Abbas Intertidal Area

Introducing the area:

The east coast of Bandar e Abbas city is a muddy and tidal area located near Bandar e Abbas Airport in the Velayat Park area. In this area, there is also a small mangrove forest, which has led to the concentration of the population of birds and increased their diversity.

Type of habitat management: free zone

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
low tide	Sunny

Method and coverage:

80% coverage level, 9 experts
8:05 am - 11:05 am

To conduct a bird census in this area, the experts walked from the beginning of the muddy area to the end of the path, counting birds along the way with binoculars and telescopes.

This area was counted twice during the census. Due to the presence of the human population in the region and low tide conditions, the first census data was discarded.



Image 2- Using the roof of the vehicle to increase elevation to find diving birds, including Grebs



Image 3- The team of census experts on the coast of Bandar e Abbas city

Important considerations and suggestions:

- During non-working hours and days, this area is used by people to rest and relax. The census should be conducted during working hours and during the day to obtain the most accurate results.
- Walking in muddy areas and mangrove forests requires maximum care. Due to the presence of some individuals who violate the rules and the entrance from the city water, hazardous waste is present in this area, including broken glass, and it is possible that the experts may become injured.

Table of results:

Table 11- Census results of the site of east of Bandar e Abbas

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELON	<i>Pelecanus onocrotalus</i>	White Pelican	2
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	40
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	88
ARDCI	<i>Ardea cinerea</i>	Grey Heron	20
CASAL	<i>Casmerodius albus</i>	Great White Egret	2
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	21
EGRGA	<i>Egretta garzetta</i>	Little Egret	1
ARDGR	<i>Ardea grayii</i>	Indian Pond Heron	1
PLALE	<i>Platalea leucorodia</i>	Spoonbill	9
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	84
TADFE	<i>Tadorna ferruginea</i>	Ruddy Shelduck	6
TADTA	<i>Tadorna tadorna</i>	Shelduck	59
ANAPL	<i>Anas platyrhynchos</i>	Mallard	23
DROAR	<i>Dromas ardeola</i>	Crab Plover	10
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	566
HIMHI	<i>Himantopus himantopus</i>	Black-winged Stilt	30
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	4
PLUAP	<i>Pluvialis apricaria</i>	Eurasian Golden Plover	2
PLUFU	<i>Pluvialis (dominica) fulva</i>	Pacific Golden Plover	3
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	43
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	14
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	94
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	667
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	1737
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	17
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	102
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	189
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	214
TRIER	<i>Tringa erythropus</i>	Spotted Redshank	1
TRITO	<i>Tringa totanus</i>	Redshank	204
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	3

TRINE	<i>Tringa nebularia</i>	Greenshank	8
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	50
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	18
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	14
CALTN	<i>Calidris tenuirostris</i>	Great Knot	41
CALAB	<i>Calidris alba</i>	Sanderling	7
CALMI	<i>Calidris minuta</i>	Little Stint	43
CALAP	<i>Calidris alpina</i>	Dunlin	73
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	30
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	33
WADER	Unidentified Waders	Unidentified Waders	660
LARCN	<i>Larus canus</i>	Common Gull	4
LARCC	<i>Larus cachinnans</i>	Caspian Gull	36
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	94
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	2
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	43
LARGE	<i>Larus genei</i>	Slender-billed Gull	427
LARUS	<i>Larus spp.</i>	Unidentified Gulls	180
CHLHY	<i>Chlidonias hybridus</i>	Whiskered Tern	4
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	17
STECA	<i>Sterna caspia</i>	Caspian Tern	4
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	24
STEAN	<i>Sterna anaethetus</i>	Bridled Tern	1
STERN	<i>Sternidae spp.</i>	Unidentified Terns	50
PANHA	<i>Pandion haliaetus</i>	Osprey	1
HALAL	<i>Haliaeetus albicilla</i>	White-tailed Eagle	2
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	6
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	4
HALSM	<i>Halcyon smyrnensis</i>	White-throated Kingfisher	1
MOTAL	<i>Motacilla alba</i>	White Wagtail (Pied Wagtail)	18
MOTCT	<i>Motacilla citreola</i>	Citrine Wagtail	2
ACCBA	<i>Accipiter badius</i>	Shikra	1
AQUNI	<i>Aquila nipalensis</i>	Steppe Eagle	1
Total Number		6155	

6.2: Tiab & Minab Protected Area: Rud-e Shur & Rud-e Shirin: Rud-e Shur

Introducing the area:

The international wetland of Rud-e Shur, Shirin, and Minab with an area of 78,099 hectares is located approximately 10 to 70 km east of Bandar e Abbas in the Persian Gulf, in front of Hormoz Island, parallel to the sea level, at the estuary of Rud-e Shur and Rud-e Shirin, in the northern part of the Strait of Hormuz in the Persian Gulf.

The coastal area extends for approximately 60 kilometers along the northern shores of the Strait of Hormuz, extending from Bandar e Abbas in the west to the Zarani River in the east. A total of 1700 hectares of mangrove forest are located in this area between the 10 °27 ° to 26 °52 ° North latitude and 56 °23 ° to 56 ° East longitudes. According to the classification of types of wetlands, this wetland belongs to the coastal-marine category.

The Shur, Shirin, and Minab rivers and estuaries are significant wintering areas for waterbirds, including Eurasian Oystercatcher, Eurasian Curlew, Dalmatian Pelican, and several other species. This place is the nesting habitat of species of the heron varieties, such as the Goliath Heron and the Indian Pond Heron.

Habitat Management Type: Protected Area, Ramsar Site

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	partly cloudy

Method and coverage:

50% coverage level, 9 experts

8:25 am - 02:50 pm

A 4WD vehicle was used to conduct the census in this area. For access to the areas where birds were present, track roads that were closest to the estuary were used. Stations and telescopes were used to count birds.

As a result of the limited visibility along coastal access routes, it was not possible to cover more than 50% of the area. The lack of a wharf made it impossible to use a boat.

Important considerations and suggestions:

- Access routes are constantly changing as a result of changes caused by human activity within the habitat. It is imperative that the census of this area be conducted by someone who has sufficient knowledge of the area and is aware of the latest changes.
- Due to the fact that the access routes to this area frequently pass through the security guards of construction projects, it is necessary to make prior arrangements for entry by the General Department of Environment of the province.

Table of results:

Table 12- Results of the Rud-e Shur census

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	42
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	843
ARDCI	<i>Ardea cinerea</i>	Grey Heron	96
CASAL	<i>Casmerodius albus</i>	Great White Egret	29
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	28
CICNI	<i>Ciconia nigra</i>	Black Stork	7
PLALE	<i>Platalea leucorodia</i>	Spoonbill	6
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	270
ANAPL	<i>Anas platyrhynchos</i>	Mallard	18
DROAR	<i>Dromas ardeola</i>	Crab Plover	255

HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	1408
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	3
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	32
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	1
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	112
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	681
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	389
CHARA	<i>Charadrius</i> spp.	Unidentified Plovers	1
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	4
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	96
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	65
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	401
TRITO	<i>Tringa totanus</i>	Redshank	89
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	6
TRINE	<i>Tringa nebularia</i>	Greenshank	3
TRIOC	<i>Tringa ochropus</i>	Green Sandpiper	1
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	389
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	4
CALAP	<i>Calidris alpina</i>	Dunlin	45
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	11
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	28
WADER	Unidentified Waders	Unidentified Waders	1758
LARCC	<i>Larus cachinnans</i>	Caspian Gull	14
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	2
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	23
LARGE	<i>Larus genei</i>	Slender-billed Gull	28
LARUS	<i>Larus</i> spp.	Unidentified Gulls	20
CHLHY	<i>Chlidonias hybridus</i>	Whiskered Tern	2
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	54
STECA	<i>Sterna caspia</i>	Caspian Tern	1
STERN	<i>Sternidae</i> spp.	Unidentified Terns	83
PANHA	<i>Pandion haliaetus</i>	Osprey	4
HALAL	<i>Haliaeetus albicilla</i>	White-tailed Eagle	2
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	6
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	4

Total Number	7364
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6.3. Gursuzan site

Introducing the area:

Khoor-e Gursuzan is a man-made estuary with an area of 30 hectares located on the central coast of Bandar e Abbas. During low tide, many birds make use of this estuary.

Habitat management type: free zone

Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	sunny

Method and coverage:

80% coverage level, 7 experts

1:40 am - 11:28 am

With the aid of a telescope, experts enumerated the entire estuary at one point on the park walk.

Important considerations and suggestions:

- The census of this estuary must be conducted during low tide. When the tide is high, birds do not make much use of this estuary.
- When conducting the census, great care should be taken to identify birds that rely on freshwater for survival. As a result of the entry of wastes from Bandar e Abbas into this estuary, birds such as Green Sandpipers and Kingfishers can be found there.

Table of results:

Table 13- Census results of Gursuzan site

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PHACA	Phalacrocorax carbo	Great Cormorant	27
ARDCI	Ardea cinerea	Grey Heron	8
CASAL	Casmerodius albus	Great White Egret	13

EGRGU	<i>Egretta gularis</i>	Western Reef Heron	7
EGRGA	<i>Egretta garzetta</i>	Little Egret	1
PLALE	<i>Platalea leucorodia</i>	Spoonbill	1
HIMHI	<i>Himantopus himantopus</i>	Black-winged Stilt	78
VANIN	<i>Vanellus indicus</i>	Red-wattled Lapwing	4
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	6
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	14
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	1
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	2
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	2
TRITO	<i>Tringa totanus</i>	Redshank	22
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	1
TRINE	<i>Tringa nebularia</i>	Greenshank	6
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	6
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	31
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	9
LARCC	<i>Larus cachinnans</i>	Caspian Gull	1
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	7
LARRI	<i>Phalacrocorax carbo</i>	Black-headed Gull	93
LARGE	<i>Ardea cinerea</i>	Slender-billed Gull	105
STENI	<i>Casmerodius albus</i>	Gull-billed Tern	31
STEBR	<i>Egretta gularis</i>	Great Crested Tern	4
ALCAT	<i>Egretta garzetta</i>	Kingfisher	1
CERRU	<i>Platalea leucorodia</i>	Pied Kingfisher	1
MOTAL	<i>Himantopus himantopus</i>	White Wagtail (Pied Wagtail)	7
MOTCT	<i>Vanellus indicus</i>	Citrine Wagtail	1
Total Number			490

6.4. The west coast of Bandar e Abbas

Introducing the area:

A vast area extends from the middle coast of Bandar e Abbas to Bandar e Pol. Several ports, mud areas, and shipbuilding facilities are located in this area.

Most of the site is industrial, and it is necessary to make prior arrangements to visit all of its parts. There is, however, the possibility of using port roads for access purposes to some extent.

Habitat management type: free zone

Water condition:

Control water fluctuations	Water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Windy/ cloudy

Method and coverage:

40% coverage level, 7 experts
03:20 pm - 5:30 pm

Since this site encompasses a large area and contains many industrial sites, it was not possible to cover more than 40% of it.

Important considerations and suggestions:

- Because of the presence of rocks on the coast, it is recommended to establish census points that have a suitable height above sea level, which will allow monitoring of a larger area.

Table of results:

Table 14 - Census results of the west coast of Bandar e Abbas

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PHACA	Phalacrocorax carbo	Great Cormorant	54
ARDCI	Ardea cinerea	Grey Heron	1
HAEOS	Haematopus ostralegus	Eurasian Oystercatcher	2
PLUSQ	Pluvialis squatarola	Grey Plover	4
CHAHI	Charadrius hiaticula	Ringed Plover	2

CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	7
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	20
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	5
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	1
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	2
TRITO	<i>Tringa totanus</i>	Redshank	5
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	7
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	14
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	3
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	76
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	3
LARUS	<i>Larus spp.</i>	Unidentified Gulls	50
STECA	<i>Sterna caspia</i>	Caspian Tern	1
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	1
MILMG	<i>Milvus migrans</i>	Black Kite	5
Total Number			263

6.5. Bandar pol-KeshtiSazi

Introducing the area:

Bandar Pol-KeshtiSazi is a long coastal strip 22 km west of Bandar e Abbas, which has a muddy, sandy, and rocky coast, as well as an estuary portion. As a result of the entrance of the Kol River into this site, an estuary is formed.

There are also some mangrove forests on this site. The site covers an area of 17245 hectares. The coastal strip in the middle of this site measures 22.7 kilometers in length. There is a large portion of the site in the free zone, but a small portion is in the Ramsar site to the west.

The area is located adjacent to Khor-e Khoran to the west. A variety of human activities can be seen in this area, including house construction, road construction, and fishing.

Habitat management type: free zone

Picture of the area:



Habitat management type: free zone

Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	windy/ rainy/ cloudy

Method and coverage:

70% coverage level, 7 experts

04:05 pm - 06:00 pm

A 4WD vehicle was used to conduct the census on this site. The experts conducted the census from dirt roads to several points that provided a clearer and broader view of the area. The birds' behavior was affected by strong wind and rain at the time of the census. A shade and wind deflector was used at the location of the telescope to minimize the effect of wind and rain on the quality of the census.



Image 4- Supervision of the natural environment deputy of the General Department of Environmental Conservation on the census process

Important considerations and suggestions:

- There are good dirt roads that lead to the coastal strip in this area. Ideally, this area should be counted along the way from Bandar e Abbas to Bandar e Khamir during the Khoor-e Khooran census.

Table of results:

Table 15 - Census results of Bandar Pol-KeshtiSazi

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELON	<i>Pelecanus onocrotalus</i>	White Pelican	1
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	10
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	227
ARDCI	<i>Ardea cinerea</i>	Grey Heron	12
CASAL	<i>Casmerodius albus</i>	Great White Egret	11
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	14
ARDGR	<i>Ardea grayii</i>	Indian Pond Heron	1
PLALE	<i>Platalea leucorodia</i>	Spoonbill	8
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	10
DROAR	<i>Dromas ardeola</i>	Crab Plover	8
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	16
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	7
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	6
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	11
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	4
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	23
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	20
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	14
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	126
TRITO	<i>Tringa totanus</i>	Redshank	13
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	1
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	60
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	8
CALMI	<i>Calidris minuta</i>	Little Stint	8
CALAP	<i>Calidris alpina</i>	Dunlin	42
WADER	Unidentified Waders	Unidentified Waders	315
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	54
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	30
LARGE	<i>Larus genei</i>	Slender-billed Gull	44
LARUS	<i>Larus spp.</i>	Unidentified Gulls	30
CHLHY	<i>Chlidonias hybridus</i>	Whiskered Tern	1
STECA	<i>Sterna caspia</i>	Caspian Tern	5
STEBR	<i>Sterna bergii</i>	Great Crested Tern	5
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	2
STERN	<i>Sternidae spp.</i>	Unidentified Terns	19
MOTAL	<i>Motacilla alba</i>	White Wagtail (Pied Wagtail)	5
Total Number			1171

6.6. Hara Protected Area (Khood-e Khooran)

Introducing the area:

Mangrove protected area is between 00, 27, 40, 26 north latitude and 52, 55-21, 55 east longitude on the border between Mehran and Gavazin river delta in Qeshm Peninsula. The mangrove forest around Qeshm Island is stretched in a strip with a width of 50 to 500 meters and covers an area equal to 150 km and an area equal to 8236 hectares. If the waters of the marshy areas and the area of empty places are not taken into account, the real area of this forest is about 6012 hectares.

The largest part of the mangrove forests is located in the waters of Bandar Laft and Bandar e Pol in the northwest of Qeshm Island and at a distance of 140 km west of Bandar e Abbas . This area was designated as a mangrove-protected area in 1973 as a national park in 1976 and again as a protected area on 25 September 1982. This area was recognized as one of the biosphere reserves in Iran in 1976. In 1977, the pristine areas of mangrove forests, flower fields, and streams in the Khood-e Khooran (100,000 hectares) were registered under the Wetlands Convention as an important wetland with international value. Bandar e Khamir in the northwest of the protected area is considered the most important city in the area. Bandar-e Pol - Old Laft and New Laft are also considered important settlements on the edge of this region. The bridge is located on the northern coastal strip and the Bandar-e Laft are located in the east of the region. The main road from Bandar e Abbas to Bandar e Khamir passes from the north of the region, and all parts of the region can be accessed by boat, especially through the two ports of Laft and Pol. These forests, with their dynamic environment, complex mechanisms, rare birds, unconventional aquatic animal species, various functions, magical values, and beauty, are amazing phenomena with special attractions for a wide range of people.

Habitat Management Type: Protected Area, Ramsar Site, Biosphere Reserve

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Sunny

Method and coverage:

70% coverage level, 9 experts

The census of the mangrove forest was carried out during 2 days. The experts were divided into two groups, each given a boat. The census continued every two days from the early hours of the day until the evening hours. One group was responsible for counting birds in the west and north of the region, and the other group was responsible for the census in the east and south. In order not to interfere with the activities of the two groups, before starting the enumeration of the routes of each group through the Google Earth software was designed based on last year's census. Both groups carried out the census in the creeks from the boat and in mudflats and tidal flats by choosing a station and using a telescope. Dividing the area between 2 groups allowed it to cover 70% of this vast area.



Image 5- Visit by the Director of the Department of Environment of Qeshm Free Zone in Khor-e Khoran during the project

Important considerations and suggestions:

- Due to the large size of the region, it is recommended to use the maximum qualitative and quantitative human resources. It is recommended to divide experts into two groups and use two boats.
- If possible, it is recommended that the place of establishment and start of movement of one group be from Bandar e Khamir and the other group from Qeshm Island.
- It is recommended to carry out the census of the streams during the high tide hours and the census of the areas during the low tide hours.
- It is recommended to have a telescope with a diameter of less than 70 mm in the boat for censusing through the telescope while moving.
- Considering the large area, it is recommended to have lunch on the boat and plan for it before departure.
- It is recommended to use the capacity of the local community to increase interest and knowledge among local people.

Table of results:

Table 16 - Census results of mangrove protected area

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	182	171
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	1453	1097
ARDCI	<i>Ardea cinerea</i>	Grey Heron	255	225
CASAL	<i>Casmerodius albus</i>	Great White Egret	377	337
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	329	276
EGRGA	<i>Egretta garzetta</i>	Little Egret	2	0
ARDGR	<i>Ardea grayii</i>	Indian Pond Heron	37	46
BUTST	<i>Butorides striatus</i>	Striated (Little Green) Heron	1	1
ARDEI	<i>Ardeidae spp.</i>	Unidentified Herons	39	0
PLALE	<i>Platalea leucorodia</i>	Spoonbill	64	69
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	77	75
DROAR	<i>Dromas ardeola</i>	Crab Plover	1339	1453
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	180	138
HIMHI	<i>Himantopus himantopus</i>	Black-winged Stilt	1	0
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	10	2
VANIN	<i>Vanellus indicus</i>	Red-wattled Lapwing	2	0
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	165	85
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	7	3
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	454	66
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	191	110
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	198	87
CHARA	<i>Charadrius spp.</i>	Unidentified Plovers	26	20
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	0	46
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	318	161
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	2790	922
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	2552	1923
TRIER	<i>Tringa erythropus</i>	Spotted Redshank	0	0
TRITO	<i>Tringa totanus</i>	Redshank	994	666
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	10	8
TRINE	<i>Tringa nebularia</i>	Greenshank	75	56
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	652	449
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	33	15
TRING	<i>Tringa spp.</i>	Unidentified Sandpipers	316	0
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	1	1
CALAB	<i>Calidris alba</i>	Sanderling	0	9
CALMI	<i>Calidris minuta</i>	Little Stint	60	12
CALTM	<i>Calidris temminckii</i>	Temminck's Stint	1	0
CALAP	<i>Calidris alpina</i>	Dunlin	718	626
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	20	63
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	63	133

WADER	Unidentified Waders	Unidentified Waders	1453	1434
LARCC	<i>Larus cachinnans</i>	Caspian Gull	74	39
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	588	543
LARIC	<i>Larus ichthyæetus</i>	Great Black-headed Gull	12	9
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	20	1
LARGE	<i>Larus genei</i>	Slender-billed Gull	419	498
LARUS	<i>Larus</i> spp.	Unidentified Gulls	119	262
CHLHY	<i>Chlidonias hybridus</i>	Whiskered Tern	9	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	132	53
STECA	<i>Sterna caspia</i>	Caspian Tern	130	88
STEAL	<i>Sterna albifrons</i>	Little Tern	5	0
STEBR	<i>Sterna bergii</i>	Great Crested Tern	136	34
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	0	190
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	0	1
STERN	<i>Sternidae</i> spp.	Unidentified Terns	10	9
PANHA	<i>Pandion haliaetus</i>	Osprey	2	2
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	25	21
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	17	20
ALCAT	<i>Alcedo atthis</i>	Kingfisher	8	10
MOTAL	<i>Motacilla alba</i>	White Wagtail (Pied Wagtail)	2	0
-	Unidentified Falcon	Unidentified Falcon	0	1
ACCBA	<i>Accipiter badius</i>	Shikra	1	5
AQUPO	<i>Aquila pomarina</i>	Lesser Spotted Eagle	0	3
NEOPE	<i>Neophron percnopterus</i>	Egyptian Vulture	5	0
Total Number			17159	12574

6.7. Tiab & Minab Protected Area: Khor-e Kolahi

Introducing the area:

Khor-e Kolahi is in the south of Tiab's big estuary, to which Nobar River is one of the water inlets. Kolahi site can be accessed both through the fishing and military wharf located in the middle of it, and it can also be accessed by boat from Khor-e Tiab. There are several tidal flats in it, which is a suitable habitat for waterbirds. Due to the lack of mangrove forest in this site, it is possible to access many of its areas through motorcycles and camels, and as a result, the presence of humans in its various areas is normal.

Picture of the area:



Habitat Management Type: Protected Area, Ramsar Site

Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Sunny

Method and coverage:

75% coverage level, 6 experts
13:30 pm - 16:30 pm

The census was mostly done from fishing boats. At several points of the mud flats, it was stopped and station counting was done. The possibility of accessing most areas by boat provided the possibility of 75% coverage.



Image 6- Bird census on a boat, the main method of bird census in mangrove forests in this project

Important considerations and suggestions:

- For full access to Khor-e Kolahi, you must use a car, motorcycle, and boat. But most of the main birding areas are accessible by boat.
- It is suggested to conduct the census when fishermen and oyster fishermen are not present to minimize the impact of human presence.
- To access it by boat from Khor-e Tiab, be sure to check the wind and calmness of the sea.



Image 7- Change in bird behavior when fishermen are on the seashore, making it difficult to count the birds

Table of results:

Table 17 - Kolahi site census results

Code of the species	Scientific name of species	English name of species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	2	9
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	11	277
ARDCI	<i>Ardea cinerea</i>	Grey Heron	4	5
CASAL	<i>Casmerodius albus</i>	Great White Egret	5	8
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	15	4
EGRGA	<i>Egretta garzetta</i>	Little Egret	1	0
NYCNY	<i>Nycticorax nycticorax</i>	Black-crowned Night Heron	0	32
DROAR	<i>Dromas ardeola</i>	Crab Plover	0	31
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	89	47
VANIN	<i>Vanellus indicus</i>	Red-wattled Lapwing	1	12
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	25	2
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	12	4
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	11	1
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	5	4

CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	18	1
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	30	32
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	16	1
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	18	20
TRITO	<i>Tringa totanus</i>	Redshank	12	37
TRINE	<i>Tringa nebularia</i>	Greenshank	2	0
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	55	22
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	6	0
CALMI	<i>Calidris minuta</i>	Little Stint	15	32
CALAP	<i>Calidris alpina</i>	Dunlin	34	28
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	15	0
WADER	Unidentified Waders	Unidentified Waders	0	146
LARCC	<i>Larus cachinnans</i>	Caspian Gull	0	3
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	122	25
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	0	1
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	0	1
LARGE	<i>Larus genei</i>	Slender-billed Gull	57	3
LARUS	<i>Larus spp.</i>	Unidentified Gulls	106	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	8	4
STECA	<i>Sterna caspia</i>	Caspian Tern	3	0
PANHA	<i>Pandion haliaetus</i>	Osprey	1	0
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	9	0
ALCAT	<i>Alcedo atthis</i>	Kingfisher	1	0
-	<i>Hieraaetus fasciatus</i>	Bonelli's Eagle	0	1
AQUHE	<i>Aquila heliaca</i>	Imperial Eagle	0	1
Total Number			709	794

6.8. Tiab & Minab Protected Area: Khood-e Tiab

Introducing the area:

Khood-e Tiab is a 4,700-hectare area near the city of Minab, according to the division in the map of the General Department of Environment in Hormozgan Province. Access to the lagoon is mainly through the fishing wharf of Tiab village. A fishing boat from this wharf can be rented. Access to shrimp farms is possible by car.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High and low tide	Sunny

Method and coverage:

80% coverage level, 4 experts
8:10 am - 11:00 am

The part of the shrimp farm was monitored through the use of a 4WD vehicle. A fishing boat was rented from Tiab village for bird census in the estuary. On two occasions; the Census was conducted both at high

and low tide and during 2 days. Good access to the estuary and good weather made it possible to cover 80% of this large wetland.



Image 8- When the bird population is high, the team is divided into two groups to count birds on both sides of the boat

Important considerations and suggestions:

Considering that Koor-e Tiab has a large area and on the other hand access to Koor-e Namaki and Kolahi is also possible through this estuary, it is recommended to consider 2 full days for it.

- It is recommended to divide the experts into 2 groups to save time when examining muddy areas.
- In the shrimp farm, maximum accuracy should be done to identify freshwater species. For example, the single and singing waterfowl or Pasruk waterfowl may be confused with the spotted waterfowl.
- Green Sandpiper and Common Sandpiper or Redshank may be confused with Spotted Redshank.



Image 9- Starting the census in the state of high tide and continuing until the state of low tide

Table of results:

Table 18 - Tiab site census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PODCR	Podiceps cristatus	Little Grebe	0	1
PELCR	Pelecanus crispus	Dalmatian Pelican	25	32
PHACA	Phalacrocorax carbo	Great Cormorant	65	44
ARDCI	Ardea cinerea	Grey Heron	45	45
CASAL	Casmerodius albus	Great White Egret	40	34
EGRGU	Egretta gularis	Western Reef Heron	56	43
ARDGR	Ardea grayii	Indian Pond Heron	13	5
CICNI	Ciconia nigra	Black Stork	2	0
PLALE	Platalea leucorodia	Spoonbill	23	14

PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	1	142
ANAPL	<i>Anas platyrhynchos</i>	Mallard	9	0
MERSE	<i>Mergus serrator</i>	Red-breasted Merganser	1	0
DROAR	<i>Dromas ardeola</i>	Crab Plover	0	95
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	157	317
RECAV	<i>Recurvirostra avosetta</i>	Avocet	5	0
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	4	6
VANIN	<i>Vanellus indicus</i>	Red-wattled Lapwing	5	0
PLUFU	<i>Pluvialis (dominica) fulva</i>	Pacific Golden Plover	0	2
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	177	97
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	1	3
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	37	206
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	121	82
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	54	194
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	197	158
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	68	46
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	297	122
TRITO	<i>Tringa totanus</i>	Redshank	213	77
TRINE	<i>Tringa nebularia</i>	Greenshank	30	19
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	101	182
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	24	5
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	0	8
CALTN	<i>Calidris tenuirostris</i>	Great Knot	5	17
CALAB	<i>Calidris alba</i>	Sanderling	0	27
CALMI	<i>Calidris minuta</i>	Little Stint	25	0
CALAP	<i>Calidris alpina</i>	Dunlin	626	348
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	4	12
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	0	34
WADER	Unidentified Waders	Unidentified Waders	1100	1355
LARCN	<i>Larus canus</i>	Common Gull	1	0
LARCC	<i>Larus cachinnans</i>	Caspian Gull	50	1
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	94	45
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	0	38
LARGE	<i>Larus genei</i>	Slender-billed Gull	73	46
LARUS	<i>Larus spp.</i>	Unidentified Gulls	23	10

STENI	<i>Sterna nilotica</i>	Gull-billed Tern	162	56
STECA	<i>Sterna caspia</i>	Caspian Tern	21	5
STEAL	<i>Sterna albifrons</i>	Little Tern	0	2
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	24	10
STERN	<i>Sternidae</i> spp.	Unidentified Terns	2	1
PANHA	<i>Pandion haliaetus</i>	Osprey	0	6
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	5	1
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	0	11
ALCAT	<i>Alcedo atthis</i>	Kingfisher	4	3
HALSM	<i>Halcyon smyrnensis</i>	White-throated Kingfisher	1	0
PERPT	<i>Pernis ptilorhynchus</i>	Crested Honey Buzzard	1	0
ACCBA	<i>Accipiter badius</i>	Shikra	2	0
FALTI	<i>Falco tinnunculus</i>	Kestrel	0	1
AQUHE	<i>Aquila heliaca</i>	Imperial Eagle	0	1
Total Number			3994	4009

6.9. Tiab & Minab Protected Area: Namaki

Introducing the area:

Khoor-e Namaki is located in the north of Khoor-e Tiab. The entrance of this estuary is Hasan Langi river. The Namaki site consists of a Khoor-e Namaki, a river and a very large shrimp farm in which it is located. To access the river and estuary, it is better to rent a boat from Tiab village. Access to a part of the shrimp farm is also possible through the river and boat.

Type of habitat management: Protected Area - Ramsar site

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High and low tide	Sunny- partly cloudy

Method and coverage:

80% coverage level, 6 experts
11:20 am - 03:30 pm

Access to the shrimp breeding site was done both by a 4WD vehicle and by boat. The river and estuary were followed by fishing boats. There is good access to different parts of the lagoon, which provides the possibility of 80% coverage.

Important considerations and suggestions:

- To access Khor-e Namaki, it is better to enter it by boat from Khor-e Tiab. Therefore, checking the state of the sea and its calmness should be kept in mind.
- It is suggested that at the end of the estuary, where Bandi is located on the river and where shrimp farms can be seen, experts should get off the boat and check the surface of the fields with a telescope. The possibility of seeing a black stork in that area should be kept in mind.



Image 10- Great Knot, an endangered species, in the wetlands of Hormozgan Province

Table of results:

Table 19 - The results of the census of the salty site

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PODCR	Podiceps cristatus	Little Grebe	0	1
PELCR	Pelecanus crispus	Dalmatian Pelican	20	24
PHACA	Phalacrocorax carbo	Great Cormorant	103	77
ARDCI	Ardea cinerea	Grey Heron	37	38
CASAL	Casmerodius albus	Great White Egret	38	35

EGRGU	<i>Egretta gularis</i>	Western Reef Heron	33	22
EGRGA	<i>Egretta garzetta</i>	Little Egret	0	2
BUBIB	<i>Bubulcus ibis</i>	Cattle Egret	1	0
ARDGR	<i>Ardea grayii</i>	Indian Pond Heron	5	1
CICNI	<i>Ciconia nigra</i>	Black Stork	0	1
PLALE	<i>Platalea leucorodia</i>	Spoonbill	18	33
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	0	650
TADTA	<i>Tadorna tadorna</i>	Shelduck	22	0
ANACR	<i>Anas crecca</i>	Common Teal	4	0
ANAPL	<i>Anas platyrhynchos</i>	Mallard	3	1
ANACL	<i>Anas clypeata</i>	Northern Shoveler	0	7
DROAR	<i>Dromas ardeola</i>	Crab Plover	158	322
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	460	168
HIMHI	<i>Himantopus himantopus</i>	Black-winged Stilt	0	36
RECAV	<i>Recurvirostra avosetta</i>	Avocet	0	3
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	7	2
VANIN	<i>Vanellus indicus</i>	Red-wattled Lapwing	0	9
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	15	40
CHADU	<i>Charadrius dubius</i>	Little Ringed Plover	0	1
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	55	63
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	32	63
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	65	36
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	3	38
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	112	89
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	37	67
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	587	144
TRITO	<i>Tringa totanus</i>	Redshank	209	120
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	3	4
TRINE	<i>Tringa nebularia</i>	Greenshank	23	39
TRIOC	<i>Tringa ochropus</i>	Green Sandpiper	0	2
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	127	136
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	7	8
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	0	4
CALTN	<i>Calidris tenuirostris</i>	Great Knot	0	56
CALAB	<i>Calidris alba</i>	Sanderling	17	0

CALMI	<i>Calidris minuta</i>	Little Stint	6	5
CALTM	<i>Calidris temminckii</i>	Temminck's Stint	0	1
CALAP	<i>Calidris alpina</i>	Dunlin	34	84
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	26	1
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	45	0
WADER	Unidentified Waders	Unidentified Waders	340	1635
LARCC	<i>Larus cachinnans</i>	Caspian Gull	1	0
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	3	27
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	0	7
LARGE	<i>Larus genei</i>	Slender-billed Gull	14	34
LARUS	<i>Larus</i> spp.	Unidentified Gulls	15	3
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	74	34
STECA	<i>Sterna caspia</i>	Caspian Tern	33	61
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	8	10
STERN	<i>Sternidae</i> spp.	Unidentified Terns	0	35
PANHA	<i>Pandion haliaetus</i>	Osprey	2	1
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	1	7
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	1	1
ALCAT	<i>Alcedo atthis</i>	Kingfisher	1	0
HALSM	<i>Halcyon smyrnensis</i>	White-throated Kingfisher	0	1
ACCBA	<i>Accipiter badius</i>	Shikra	1	2
Total Number			2806	4291

6.10. Tiab & Minab Protected Area: Khor-e Kargan

Introducing the area:

Khor Kergan is located in the south of the small village of Kergan, where is also the Kergan wharf. Man-made structures are mainly in the north of this estuary, and the southern half is more pristine. Part of this site is a mangrove forest.

A large part of this site is accessible by car and others by motorcycle. In this estuary, both fishing and oysters catch. A part of this wetland is located at the Ramsar site Rud-e Shur.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Windy - partly cloudy

Method and coverage:

20% coverage level, 5 experts

11:20 am - 05:30 pm

For the census, the region was divided into two sections, north and south. By using the wharf and station as a census site, the northern region was counted. The southern area was explored on foot. Very unevenness in the area, the impossibility of walking for a long time due to the type of mud, and the strong wind during the census made the coverage level of the census in this area 20%.

Important considerations and suggestions:

- The local community in this area is extremely sensitive to unknown people. For the census in this area, it is necessary to have one of the local trustees with the group. It is recommended to use the cooperation of members of the Islamic Council of the village for this purpose.
- Most of the muddy area of this estuary has mud where it is impossible to walk or monitor as the foot sinks into the mud. Therefore, it is recommended to use the fixed station selection method more often.
- If walking is required, be sure to use appropriate shoes or sandals. The presence of different oyster types increases the possibility of serious foot injury.
- Creeks entering the lagoon during low tide have a significant height difference to the overall surface of the estuary, which greatly limits visibility.

Table of results:

Table 20 - Results of Kergan site census

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	86	9
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	25	198
ARDCI	<i>Ardea cinerea</i>	Grey Heron	89	5
CASAL	<i>Casmerodius albus</i>	Great White Egret	15	6
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	10	19
ARDGR	<i>Ardea grayii</i>	Indian Pond Heron	0	3
PLALE	<i>Platalea leucorodia</i>	Spoonbill	5	7
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	171	0
DROAR	<i>Dromas ardeola</i>	Crab Plover	360	3
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	180	10
HIMHI	<i>Himantopus himantopus</i>	Black-winged Stilt	1	0
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	2	2
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	3	3
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	15	9
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	59	2

CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	10	13
CHARA	<i>Charadrius</i> spp.	Unidentified Plovers	0	8
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	16	17
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	21	4
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	109	15
TRITO	<i>Tringa totanus</i>	Redshank	15	6
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	0	3
TRINE	<i>Tringa nebularia</i>	Greenshank	1	2
TRIOC	<i>Tringa ochropus</i>	Green Sandpiper	0	0
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	40	1
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	1	1
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	1	3
CALAB	<i>Calidris alba</i>	Sanderling	2	0
CALMI	<i>Calidris minuta</i>	Little Stint	2	0
CALAP	<i>Calidris alpina</i>	Dunlin	47	10
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	8	0
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	0	1
WADER	Unidentified Waders	Unidentified Waders	1821	428
LARCC	<i>Larus cachinnans</i>	Caspian Gull	2	0
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	3	137
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	18	0
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	0	2
LARGE	<i>Larus genei</i>	Slender-billed Gull	97	50
LARUS	<i>Larus</i> spp.	Unidentified Gulls	112	120
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	4	2
STECA	<i>Sterna caspia</i>	Caspian Tern	5	0
STEAL	<i>Sterna albifrons</i>	Little Tern	2	0
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	1	0
STEAN	<i>Sterna anaethetus</i>	Bridled Tern	0	1
STERN	<i>Sternidae</i> spp.	Unidentified Terns	0	20
PANHA	<i>Pandion haliaetus</i>	Osprey	1	0
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	1	3
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	1	0
ALCAT	<i>Alcedo atthis</i>	Kingfisher	1	0
MOTAL	<i>Motacilla alba</i>	White Wagtail (Pied	0	8

ACCBA	Accipiter badius	Shikra	1	2
Total Number			3364	1133

6.11. Kolugh Kalam lagoon

Introducing the area:

Kolugh Kalam is a seasonal freshwater wetland in Minab City, near Sangki village. Its area reaches 1505 hectares when full of water. Access to this wetland is possible through Sengaki village.

Since this wetland has fresh water, its bird species are different from other wetlands in Hormozgan province. It is necessary to monitor its condition.



Image 11- Common Shelduck, which prefers freshwater habitats, in the Kolugh Kalam wetland in 2022. Photographer: Meysam Ghasemi

Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Fresh	Arid	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
No tide	Sunny

Method and coverage:

100% coverage level, 3 experts
11:15 am - 01:30 pm

Due to a road through the wetland, we covered 100% of the area. However, due to the lagoon's dryness, no birds were counted in it.

Important considerations and suggestions:

- It is better to ask the locals about the most convenient access points to the lagoon. The dirt roads leading to the wetland may change throughout the year.
- This wetland is a very valuable area for observing and recording duck species. Also, a significant population of birds dependent on freshwater can be found in this wetland.
- Kolugh Kalam is a seasonal wetland. So it may be completely dry at census time.

Table of results:

No birds were seen. In the 2021 census, 1166 birds were counted.

6.12. Jagin, Gabrik & Jask Protected Area: Khor-e Nehor

Introducing the area:

Khor-e Nehor is between Soorglam and Kentucky, with an area of 646 hectares. The east coast of this estuary is used for fishing activities. The estuary mostly consists of mud flats and sandy beaches.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With Water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Sunny

Method and coverage:

70% coverage level, 3 experts
05:00 pm - 06:00 pm

Khor-e Nahoreh can be followed by an assisted car, so it was done in this way. Due to the silhouette condition of a part of the area, the coverage level is 70%.

Important considerations and suggestions:

- This estuary is smaller than Soorglam and adjacent. It is recommended that planning be done so that both sites are censused on the same day.
- The Coast strip of Nehor can be followed by an assisted car. If the beginning of the path is a silhouette for the bird monitoring, you can start the census at the end of the path.

It is recommended to enter the area with the assistance of the police or locals since there are Illegal fishing activities in the area and the police station is inactive.

- It is recommended to visit the part of Khor-e Nehor that cannot be seen from the shore by boat. A boat can be rented to explore the Kentucky estuary during the New Year.
- If you need to rent a boat, it must be arranged in advance. The wharf located in this area is empty of residents and boaters for many hours of the day.

Table of results:

Table 21 - Census results of Khor-e Nehor

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	3
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	25
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	1
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	4
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	1
CHARA	<i>Charadrius spp.</i>	Unidentified Plovers	30
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	1
CALMI	<i>Calidris minuta</i>	Little Stint	1
WADER	Unidentified Waders	Unidentified Waders	23
LARCC	<i>Larus cachinnans</i>	Caspian Gull	45
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	15
LARGE	<i>Larus genei</i>	Slender-billed Gull	23
STECA	<i>Sterna caspia</i>	Caspian Tern	2
Total Number			174

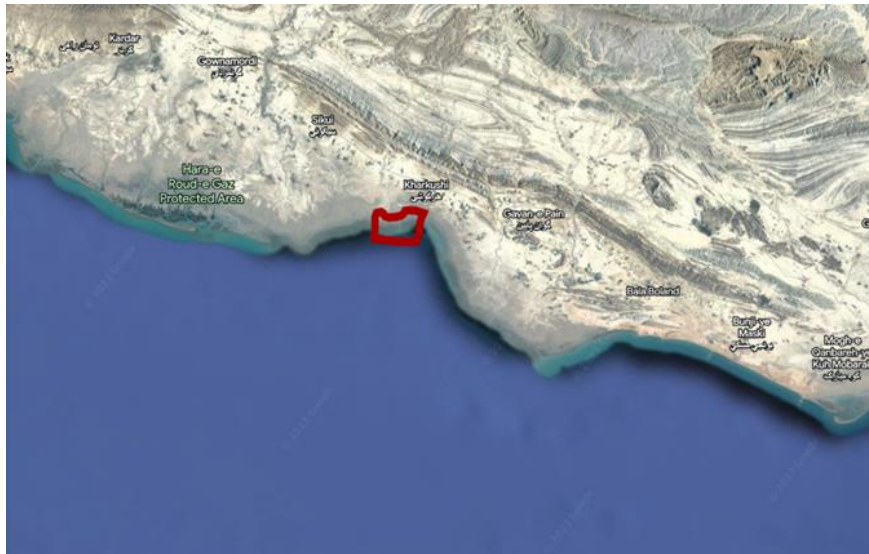
6.13. Khoor-e Kargoushki

Introducing the area:

Khoor-e Kargoushki is a four-kilometer coastal strip with a wide mud flat, 40 kilometers south of Sirik, with a large fishing wharf. The fishing wharf with a very long length of one and a half kilometers enters the sea. This has created a very convenient access for counting birds from the wharf.

Habitat Management Type: Protected Area, Ramsar Site

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With mater	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Windy- Sunny

Method and coverage:

75% coverage level, 4 experts
02:45 pm - 03:30 pm

The method of choosing a suitable point and counting birds through a telescope was used for the census of Khor-e Kargoushki. Since a portion of the estuary can't be observed due to the severe silhouette condition, the coverage percentage is 75 percent.

Important considerations and suggestions:

- It is suggested that the census of this wetland be planned in such a way that the situation is not silhouette
- It is recommended that experts do not enter the muddy area on foot from the wharf. It is not possible to walk in this muddy area and the risk of injury to people and equipment is serious.



Image 12- Osprey

Table of results:

Table 22 - The results of the Khor-e Kargoushki census

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	Pelecanus crispus	Dalmatian Pelican	65	5
PHACA	Phalacrocorax carbo	Great Cormorant	33	8
ARDCI	Ardea cinerea	Grey Heron	11	23
CASAL	Casmerodius albus	Great White Egret	10	6
EGRGU	Egretta gularis	Western Reef Heron	25	18

PLALE	<i>Platalea leucorodia</i>	Spoonbill	2	11
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	88	0
DROAR	<i>Dromas ardeola</i>	Crab Plover	42	21
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	46	19
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	6	45
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	4	19
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	13	0
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	5	133
CHARA	<i>Charadrius</i> spp.	Unidentified Plovers	0	390
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	82	161
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	2	33
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	23	7
TRITO	<i>Tringa totanus</i>	Redshank	36	22
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	12	26
TRINE	<i>Tringa nebularia</i>	Greenshank	3	4
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	76	9
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	3	0
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	0	1
CALAP	<i>Calidris alpina</i>	Dunlin	12	6
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	6	0
WADER	Unidentified Waders	Unidentified Waders	249	550
LARCC	<i>Larus cachinnans</i>	Caspian Gull	1	0
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	14	97
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	0	2
LARGE	<i>Larus genei</i>	Slender-billed Gull	15	61
LARUS	<i>Larus</i> spp.	Unidentified Gulls	110	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	2	8
STECA	<i>Sterna caspia</i>	Caspian Tern	32	23
STEAL	<i>Sterna albifrons</i>	Little Tern	7	5
STERN	<i>Sternidae</i> spp.	Unidentified Terns	70	120
PANHA	<i>Pandion haliaetus</i>	Osprey	2	1
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	0	1
Total Number			1107	1835

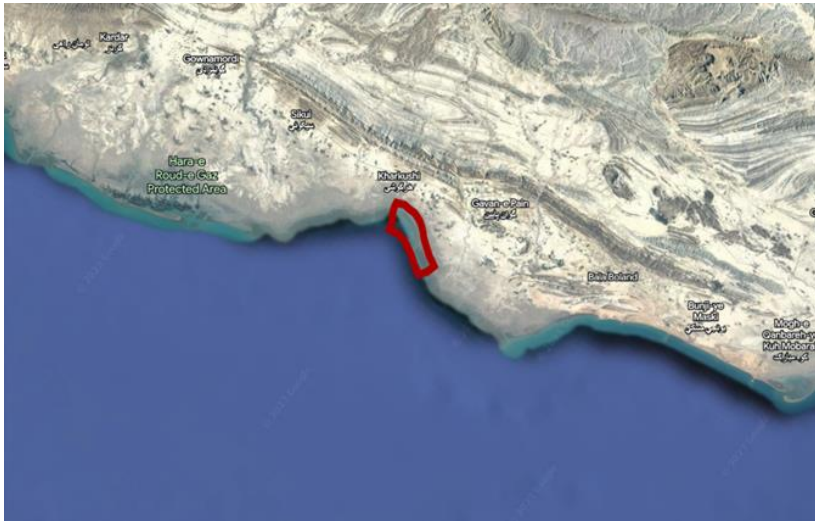
6.14. Khor-e Berizk

Introducing the area:

Brizek is a coastal strip and estuary about 7 km long, and 45 km south of Sirik port. There is a large wharf one and a half kilometers in this estuary, used for fishing. This wharf also provided suitable access for the estuarine bird census.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Windy

Method and coverage:

80% coverage level, 3 experts

04:15 pm – 05:34 pm

The census of this estuary was done through the wharf and the selection of the census station, and there was no need for a boat. Covering more than 80% of this lagoon was possible due to the suitable viewing angle of the wharf. The non-covering of 20% was due to the silhouette condition.

Important considerations and suggestions:

- It is suggested that the census of this wetland be planned in such a way that the situation is not silhouette
- It is recommended that experts do not enter the muddy area on foot from the wharf. It is not possible to walk in this muddy area and the risk of injury to people and equipment is serious.
- At the end of the wharf, you can see the sea from the high height created by the stonework on the edge of the wharf. Spend some time looking for waterbirds. Also, at the end of the wharf, you can usually find a substantial population of Little Tern. It is suggested to obtain imaging for more accurate diagnosis and differentiation from Saunders' sea swallow.
- It is suggested to not count Khor-e Kargoushki birds. It is not possible to see an exact border between these 2 mouths since they are directly adjacent. It is better to use index selection to avoid mistakes and re-counting birds.



Image 13- Dividing the group into several teams to count birds based on the division of bird families among the teams

Table of results:

Table 23 - Khor-e Berizk census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	19	35
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	21	70
ARDCI	<i>Ardea cinerea</i>	Grey Heron	17	12
CASAL	<i>Casmerodius albus</i>	Great White Egret	3	13
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	8	13
BUTST	<i>Butorides striatus</i>	Striated (Little Green)	0	1
PLALE	<i>Platalea leucorodia</i>	Spoonbill	10	0
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	33	1
DROAR	<i>Dromas ardeola</i>	Crab Plover	102	137
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	50	46
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	1	0
PLUFU	<i>Pluvialis (dominica) fulva</i>	Pacific Golden Plover	0	2
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	43	40
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	8	12
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	58	6
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	64	19
CHARA	<i>Charadrius spp.</i>	Unidentified Plovers	0	50
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	146	280
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	21	28
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	94	45
TRITO	<i>Tringa totanus</i>	Redshank	103	71
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	41	19
TRINE	<i>Tringa nebularia</i>	Greenshank	1	9
TRIOC	<i>Tringa ochropus</i>	Green Sandpiper	0	1
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	18	25
CALTN	<i>Calidris tenuirostris</i>	Great Knot	0	2
CALAB	<i>Calidris alba</i>	Sanderling	3	0
CALAP	<i>Calidris alpina</i>	Dunlin	3	58
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	3	0
WADER	Unidentified Waders	Unidentified Waders	1077	520
LARCC	<i>Larus cachinnans</i>	Caspian Gull	0	2

LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	5	8
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	0	3
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	0	1
LARGE	<i>Larus genei</i>	Slender-billed Gull	18	183
LARUS	<i>Larus spp.</i>	Unidentified Gulls	74	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	17	11
STECA	<i>Sterna caspia</i>	Caspian Tern	40	17
STEAL	<i>Sterna albifrons</i>	Little Tern	124	2
STEBR	<i>Sterna bergii</i>	Great Crested Tern	0	4
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	1	3
STERN	<i>Sternidae spp.</i>	Unidentified Terns	85	0
PANHA	<i>Pandion haliaetus</i>	Osprey	1	2
Total Number			2312	1751

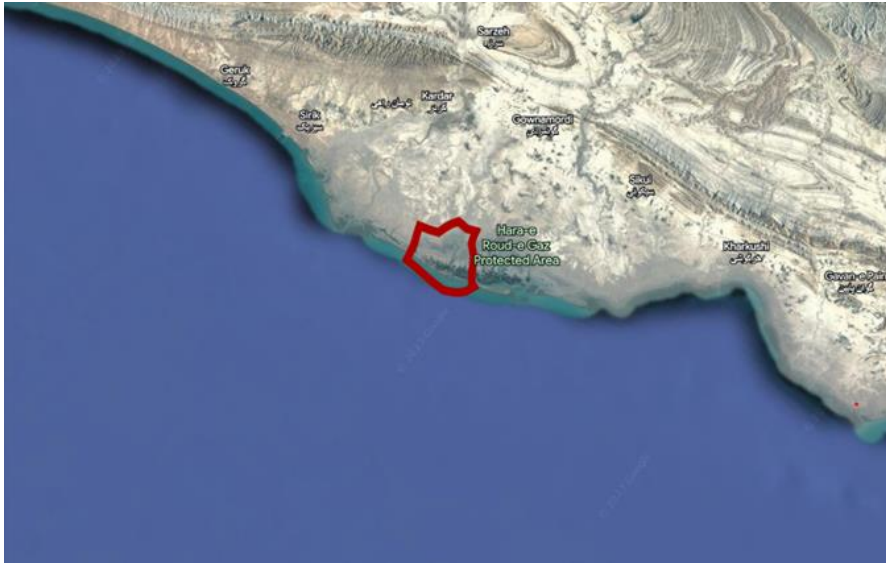
6.15- Gaz & Hara Protected Area: Khoor-e Ziarat

Introducing the area:

Khoor-e Ziarat is located 13 kilometers south of Bandar Sirik. Since this estuary does not have a particular wharf, it requires boating from Khoor-eAzini to access its important points. This estuary is very similar to Khoor-e Azini. However, the water corridors between its mangrove forests are much less and there are fewer chandel trees than Khoor-e Azini.

Habitat Management Type: Protected Area, Ramsar Site

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Sunny

Method and coverage:

65% coverage level, 5 experts
 Wp 400, 401 & 403, 404
 7:46 am – 9:30 am

Khoor-e Ziarat was surveyed by boat. Two points were stopped at the mouth of the estuary and the census point was determined and the birds were counted through a telescope. Due to the difficulty of accessing this wetland's eastern and western water corridors, the coverage percentage was 65.

Important considerations and suggestions:

- The boat access route to Khoor-e Ziarat is from Khoor-e Azini. It is suggested to make a pilgrimage through the sea at the sea calm to take the Azin route.
- Most of the population of visiting birds is in the 2 muddy areas at the beginning of the sea mouth. It is suggested that the main census time in this wetland be allocated to these 2 areas.
- It is suggested that when renting a boat in Azini for the census of birds in Ziarat, you must request a boatman who knows Khoor-e Ziarat.



Image 14- Resting behavior in Crab Plover

Table of results:

Table 24- Khor-e Ziarat census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	10	14
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	185	17
ARDCI	<i>Ardea cinerea</i>	Grey Heron	31	27
CASAL	<i>Casmerodius albus</i>	Great White Egret	18	15
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	27	12
ARDGR	<i>Ardea grayii</i>	Indian Pond Heron	4	12
PLALE	<i>Platalea leucorodia</i>	Spoonbill	0	1
DROAR	<i>Dromas ardeola</i>	Crab Plover	324	0
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	7	1
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	1	1
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	23	9
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	32	39
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	47	14
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	30	21
CHARA	<i>Charadrius spp.</i>	Unidentified Plovers	0	17
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	0	3
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	13	4
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	130	20
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	535	17
TRITO	<i>Tringa totanus</i>	Redshank	28	8
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	0	1
TRINE	<i>Tringa nebularia</i>	Greenshank	0	3
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	80	33
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	14	3
CALTN	<i>Calidris tenuirostris</i>	Great Knot	0	1
CALAB	<i>Calidris alba</i>	Sanderling	10	2
CALAP	<i>Calidris alpina</i>	Dunlin	81	7
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	2	0
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	4	1
WADER	Unidentified Waders	Unidentified Waders	372	0
LARCC	<i>Larus cachinnans</i>	Caspian Gull	36	18

LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	152	71
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	0	1
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	19	5
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	0	1
LARGE	<i>Larus genei</i>	Slender-billed Gull	198	6
LARUS	<i>Larus spp.</i>	Unidentified Gulls	32	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	7	13
STECA	<i>Sterna caspia</i>	Caspian Tern	66	27
STEAL	<i>Sterna albifrons</i>	Little Tern	2	0
STEBR	<i>Sterna bergii</i>	Great Crested Tern	82	8
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	164	17
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	29	0
STERN	<i>Sternidae spp.</i>	Unidentified Terns	5	1
PANHA	<i>Pandion haliaetus</i>	Osprey	5	0
CIRMA	<i>Circus macrourus</i>	Pallied Harrier	1	0
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	4	0
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	6	2
ALCAT	<i>Alcedo atthis</i>	Kingfisher	5	6
ACCBA	<i>Accipiter badius</i>	Shikra	4	1
Total Number			2825	480

6.16. Gaz & Hara Protected Area: Khood-e Azini

Introducing the area:

Khood-e Azini is located 15 km south of Bandar Sirik. To enter this estuary, you must use the Azini fishing wharf. The upper part of Khood-e Azini is a mangrove forest. It seems that among the wetlands of Hormozgan province, the largest population of the invasive Chandel species can be seen in this estuary. The Oriental White-eye, which is one of the remarkable species in mangrove forests, has a significant population in this estuary. The continuous movement of motor boats at a relatively high speed has caused significant damage to the roots of the trees in this estuary. It seems that the population of Chandel trees dominates the population of mangrove trees in many parts of this estuary.

Habitat Management Type: Protected Area, Ramsar Site

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Windy-Sunny

Method and coverage:

80% coverage level, 5 experts

Wp 400, 401 & 403, 404
9:30 am - 11:30 am

Khoor-e Azini was surveyed using a fishing boat. At the outset of this estuary towards the sea, there are 2 very wide mudflats where the experts got off the boat. By selecting the census station, they counted the birds with a telescope.

Important considerations and suggestions:

- There are many fishing boats in Khoor-e Azini, which also transport passengers during the tourist season. Many boaters in this lagoon know the places where birds are present. Before renting a boat, it is better to ask the fishermen to send a boatman who has tourism experience and knows where to find the birds.
- It is better to plan the visit to this wetland so that there is enough time to observe and record the white-eyed cockroach.
- It is better to plan so that when the sea is calm, the opportunity to sail to Khoor-e Ziarat through this estuary is used.
- To save time and increase quality, divide the experts into 2 groups. When counting birds in muddy areas, each group should check one area.
- Due to the high population of Dalmatian Pelican in this wetland, it is suggested to be careful to find White Pelican among them. It should be noted that White Pelican White Pelican have been reported in this wetland before.



Image 15- Dalmatian Pelican in breeding plumage in the wetlands of Hormozgan province

Table of results:

Table 25 - Khood-e Azini census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	135	49
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	115	18
ARDCI	<i>Ardea cinerea</i>	Grey Heron	37	20
CASAL	<i>Casmerodius albus</i>	Great White Egret	29	8
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	29	11
ARDGR	<i>Ardea grayii</i>	Indian Pond Heron	11	3
PLALE	<i>Platalea leucorodia</i>	Spoonbill	2	4
DROAR	<i>Dromas ardeola</i>	Crab Plover	210	142
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	51	23
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	2	0
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	30	10
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	109	50

CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	92	12
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	113	42
CHARA	<i>Charadrius</i> spp.	Unidentified Plovers	0	83
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	0	2
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	70	49
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	25	63
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	126	82
TRITO	<i>Tringa totanus</i>	Redshank	83	48
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	7	0
TRINE	<i>Tringa nebularia</i>	Greenshank	2	4
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	96	50
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	4	4
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	13	4
CALTN	<i>Calidris tenuirostris</i>	Great Knot	0	1
CALAB	<i>Calidris alba</i>	Sanderling	84	3
CALMI	<i>Calidris minuta</i>	Little Stint	3	3
CALAP	<i>Calidris alpina</i>	Dunlin	117	23
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	13	0
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	15	2
WADER	Unidentified Waders	Unidentified Waders	1030	25
LARCC	<i>Larus cachinnans</i>	Caspian Gull	30	2
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	72	69
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	39	6
LARGE	<i>Larus genei</i>	Slender-billed Gull	24	395
LARUS	<i>Larus</i> spp.	Unidentified Gulls	75	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	66	6
STECA	<i>Sterna caspia</i>	Caspian Tern	90	28
STEAL	<i>Sterna albifrons</i>	Little Tern	15	0
STEBR	<i>Sterna bergii</i>	Great Crested Tern	42	10
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	18	5
STERN	<i>Sternidae</i> spp.	Unidentified Terns	2	14
PANHA	<i>Pandion haliaetus</i>	Osprey	3	1
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	5	1
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	2	1
ALCAT	<i>Alcedo atthis</i>	Kingfisher	4	7

MOTAL	Motacilla alba	White Wagtail (Pied)	8	0
ACCBA	Accipiter badius	Shikra	1	0
AQUNI	Aquila nipalensis	Steppe Eagle	0	1
Total Number			3149	1384

6.17. Jask-e Sharghi Protected Area: Khood-e Khalasi

Introducing the area:

Khood-e Khalasi is a vast area with an area of at least 1000 hectares, including a sandy beach area, mangrove forest, and tidal mud flats. Mangrove forests cover an area of about 200 hectares. Some of the mangrove trees in this area are very old and valuable, and they can reach a height of 10 meters. Khood-e Khalasi and its edge are uninhabited, but sometimes tents or fishing cabins can be seen there.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
Low tide	Sunny

Method and coverage:

90% coverage level, 4 experts

11:47 am- 02:20 pm

Access to this estuary came through the boat dock. The entire estuary was monitored as much as possible. The station selection method was used to monitor the mudflats and the rest of the site was observed from a boat.

Important considerations and suggestions:

- To access this estuary, you have to rent a boat from Bahl village. However, a part of the estuary can be accessed by motorcycle.
- Part of the mangroves in this area are ancient, and it is possible to plan a time for more detailed monitoring of this area.
- There is a possibility of seeing birds such as Purple Heron and Goliath Heron in this estuary.
- It is better to census this estuary and the Khor-e Shahreno in one day.
- The distance from Bahl village, which is the origin of canoeing, to the estuary is relatively long. It is recommended to carefully check sea conditions along the way. Sometimes a very large number of Phalaropes can be seen in this area of the sea.

Table of results:

Table 26 - Khor-e Khalasi census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PODCR	Podiceps cristatus	Little Grebe	0	5
PELCR	Pelecanus crispus	Dalmatian Pelican	28	8
PHACA	Phalacrocorax carbo	Great Cormorant	63	54
ARDCI	Ardea cinerea	Grey Heron	33	32
CASAL	Casmerodius albus	Great White Egret	15	12
EGRGU	Egretta gularis	Western Reef Heron	36	18
ARDGR	Ardea grayii	Indian Pond Heron	2	1
PLALE	Platalea leucorodia	Spoonbill	0	6
PHORO	Phoenicopterus roseus	Greater Flamingo	12	0
DROAR	Dromas ardeola	Crab Plover	0	1
HAEOS	Haematopus ostralegus	Eurasian Oystercatcher	32	25
BURRE	Burhinus recurvirostris	Great Stone Plover	3	0
PLUSQ	Pluvialis squatarola	Grey Plover	52	41
CHAH	Charadrius hiaticula	Ringed Plover	2	0
CHAAL	Charadrius alexandrinus	Kentish Plover	173	30
CHAMO	Charadrius mongolus	Mongolian Plover	137	56
CHALE	Charadrius leschenaultii	Greater Sand Plover	81	55
CHARA	Charadrius spp.	Unidentified Plovers	0	5
LIMLA	Limosa lapponica	Bar-tailed Godwit	63	31

NUMPH	<i>Numenius phaeopus</i>	Whimbrel	38	22
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	130	45
TRITO	<i>Tringa totanus</i>	Redshank	46	14
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	15	2
TRINE	<i>Tringa nebularia</i>	Greenshank	3	3
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	108	316
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	12	2
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	18	3
CALAB	<i>Calidris alba</i>	Sanderling	197	66
CALMI	<i>Calidris minuta</i>	Little Stint	3	47
CALAP	<i>Calidris alpina</i>	Dunlin	278	41
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	2	0
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	21	5
WADER	Unidentified Waders	Unidentified Waders	1783	90
LARCN	<i>Larus canus</i>	Common Gull	0	2
LARCC	<i>Larus cachinnans</i>	Caspian Gull	3	10
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	21	149
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	37	85
LARGE	<i>Larus genei</i>	Slender-billed Gull	9	67
LARUS	<i>Larus spp.</i>	Unidentified Gulls	15	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	32	9
STECA	<i>Sterna caspia</i>	Caspian Tern	25	27
STEAL	<i>Sterna albifrons</i>	Little Tern	20	0
STEBR	<i>Sterna bergii</i>	Great Crested Tern	0	20
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	0	24
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	1	7
STERN	<i>Sternidae spp.</i>	Unidentified Terns	0	4
PANHA	<i>Pandion haliaetus</i>	Osprey	8	4
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	0	3
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	7	2
ALCAT	<i>Alcedo atthis</i>	Kingfisher	9	4
Total Number			3573	1453

6.18. Jask-e Sharghi Protected Area: Khood-e Shahreno

Introducing the area:

Shahreno and Khood Khalasi are located in the Eastern Jask region. This estuary is part of the protected area of Gabrik Mangrove and East and West Jask. Khood-e Gabrik and Khood-e Jask are a group of estuaries in the Oman Sea near Jask in Hormozgan province. Old mangrove forests can also be seen in this area, damaged by camels. Part of Shahreno has mangrove forests, part is mud flats and part is a sandy strip on the Coast. Illegal fishing activities sometimes occur in the estuary.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
Low tide	Windy

Method and coverage:

90% coverage level, 4 experts
11:00 am - 03:30 pm



Image 16- Photo of the Persian Shearwater taken outside the census period - Photographer: Meysam Ghasemi

Streams and mangroves were monitored by counting from a boat. The coastal strip and mudflats were counted by walking and choosing a fixed station. The census was conducted with a local professional guide and over 90% coverage was achieved.

Important considerations and suggestions:

Counting both Khor-e Shahreno and Khor-e Khalasi on the same day is recommended.

- There is a possibility of seeing Goliath Heron in this estuary.
- Old mangrove trees should be examined carefully.
- It is suggested to select a high point on the coastal strip for bird counting. There are times when birds are not seen resting at sea level, so choosing the right height can be helpful.

Table of results:

Table 27 - Census results for Khood-e Shahreno

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	20	15
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	66	20
ARDCI	<i>Ardea cinerea</i>	Grey Heron	41	19
ARDGO	<i>Ardea goliath</i>	Goliath Heron	1	0
ARDPU	<i>Ardea purpurea</i>	Purple Heron	0	1
CASAL	<i>Casmerodius albus</i>	Great White Egret	9	4
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	18	13
ARDGR	<i>Ardea grayii</i>	Indian Pond Heron	2	2
PLALE	<i>Platalea leucorodia</i>	Spoonbill	1	0
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	81	71
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	39	4
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	4	0
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	46	1
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	33	5
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	129	3
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	56	7
CHARA	<i>Charadrius spp.</i>	Unidentified Plovers	0	5
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	34	2
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	13	17
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	311	45
TRITO	<i>Tringa totanus</i>	Redshank	115	54
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	0	2
TRINE	<i>Tringa nebularia</i>	Greenshank	13	1
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	77	41
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	15	5
CALAB	<i>Calidris alba</i>	Sanderling	43	3
CALMI	<i>Calidris minuta</i>	Little Stint	10	4
CALAP	<i>Calidris alpina</i>	Dunlin	368	0
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	22	0
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	30	0
WADER	Unidentified Waders	Unidentified Waders	488	162

LARCC	Larus cachinnans	Caspian Gull	2	20
LARFU	Larus fuscus	Lesser Black-backed Gull	8	107
LARIC	Larus ichthyaetus	Great Black-headed Gull	34	47
LARGE	Larus genei	Slender-billed Gull	22	40
STENI	Sterna nilotica	Gull-billed Tern	24	1
STECA	Sterna caspia	Caspian Tern	28	4
STEAL	Sterna albifrons	Little Tern	4	0
STEBR	Sterna bergii	Great Crested Tern	1	0
PANHA	Pandion haliaetus	Osprey	6	4
CIRAE	Circus aeruginosus	Marsh Harrier	1	1
AQUCL	Aquila clanga	Greater Spotted Eagle	0	4
ALCAT	Alcedo atthis	Kingfisher	6	2
HALSM	Halcyon smyrnensis	White-throated	1	0
PUFPE	Puffinus persicus	Persian Shearwater	0	1
ACCBA	Accipiter badius	Shikra	1	0
Total Number			2223	737

6.19. Jagin, Gabrik & Jask Protected Areas: Khor-e Soorgalm

Introducing the area:

Khor-e Soorgalm is located in Gabrik region and 50 kilometers east of Jask city in Hormozgan province. To access this area, you can use the asphalt road to Sorglum Wharf. The main part of the Khor-e Soorgalm is a mud flat and coastal strip, and mangrove trees cover a small part of it.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Windy

Method and coverage:

70% coverage level, 3 experts
04:30 pm – 05:30 pm

The census of this area was done by driving a 4WD vehicle in the coastal strip and censusing from inside the car. To avoid encountering fishing violators, the census at the end of the coastal strip was stopped at 70%.

Important considerations and suggestions:

- For the census of this estuary, you can enter the coastal strip from the end of the coast road by car and conduct the census from inside the car.
- In this area, illegal fishing activities are carried out, and it is better to avoid dealing with offenders.
- At the end of the Coast strip, there are some fishing sheds, around which birds such as pelicans rest.
- While driving on the coastal strip, be careful to observe the Great Stone Plover. This bird's population can be seen in this area.



Image 17- Great Stone Plover in the wetlands of Hormozgan province

Table of results:

Table 28 - The results of the Khoor-e Soorgalm census

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	80	26
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	37	38
ARDCI	<i>Ardea cinerea</i>	Grey Heron	14	16
CASAL	<i>Casmerodius albus</i>	Great White Egret	82	20
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	88	12
PLALE	<i>Platalea leucorodia</i>	Spoonbill	7	4
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	9	11
DROAR	<i>Dromas ardeola</i>	Crab Plover	30	0
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	19	8
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	4	6
VANIN	<i>Vanellus indicus</i>	Red-wattled Lapwing	0	1
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	16	0
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	7	0
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	72	17
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	78	4
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	80	25
CHARA	<i>Charadrius spp.</i>	Unidentified Plovers	0	18
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	188	0
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	10	1
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	181	134
TRITO	<i>Tringa totanus</i>	Redshank	7	1
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	8	0
TRINE	<i>Tringa nebularia</i>	Greenshank	7	0
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	115	0
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	26	0
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	9	0
CALAB	<i>Calidris alba</i>	Sanderling	62	96
CALMI	<i>Calidris minuta</i>	Little Stint	3	2
CALAP	<i>Calidris alpina</i>	Dunlin	98	5
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	15	0
WADER	Unidentified Waders	Unidentified Waders	177	150

LARHM	Larus hemprichii	Sooty Gull	1	0
LARCC	Larus cachinnans	Caspian Gull	75	15
LARFU	Larus fuscus	Lesser Black-backed Gull	593	21
LARIC	Larus ichthyaetus	Great Black-headed Gull	21	2
LARGE	Larus genei	Slender-billed Gull	554	5
LARUS	Larus spp.	Unidentified Gulls	40	0
STENI	Sterna nilotica	Gull-billed Tern	14	0
STECA	Sterna caspia	Caspian Tern	25	0
STEBR	Sterna bergii	Great Crested Tern	107	0
STEBE	Sterna bengalensis	Lesser Crested Tern	28	0
STESN	Sterna sandvicensis	Sandwich Tern	3	0
STERN	Sternidae spp.	Unidentified Terns	0	70
PANHA	Pandion haliaetus	Osprey	7	0
HALAL	Haliaeetus albicilla	White-tailed Eagle	1	0
CIRAE	Circus aeruginosus	Marsh Harrier	2	0
AQUCL	Aquila clanga	Greater Spotted Eagle	1	0
ALCAT	Alcedo atthis	Kingfisher	1	0
MOTAL	Motacilla alba	White Wagtail (Pied	1	0
FALTI	Falco tinnunculus	Kestrel	0	1
Total Number			3003	709

6.20. Jask-e Sharghi Protected Area: Bahal Sea Shore

Introducing the area:

Bahal is a small village east of Bandar Jask. Bahal village has a relatively large fishing wharf where fishing goes on. Behl Coast strip is four kilometers long, next to this wharf. There is also a military area near this wharf.

Type of habitat management: Part of it is managing by the the Iranian Department of Environment

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Sunny

Method and coverage:

70% coverage level, 3 experts

12:40 pm - 02:35 pm

04:00 pm – 04:30 pm

The wharf area census was done by choosing a station and using a telescope. The coastal strip was also monitored by a 4WD vehicle and a part of the site was also monitored on foot. Considering the tide state, the number of birds was few.



Image 18- Dividing the team into two groups for the census of areas with wharfs



Image 19- Indian Pond Heron in beaches of Hormozgan province

Table of results:

Table 29 - The results of the census of Bahal Wharf

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PHACA	Phalacrocorax carbo	Great Cormorant	1
CASAL	Casmerodius albus	Great White Egret	1
EGRGU	Egretta gularis	Western Reef Heron	11
NUMPH	Numenius phaeopus	Whimbrel	1
ACTHY	Actitis hypoleucos	Common Sandpiper	1
PHALO	Phalaropus lobatus	Red-necked Phalarope	2870
LARHM	Larus hemprichii	Sooty Gull	5
LARCC	Larus cachinnans	Caspian Gull	1
LARFU	Larus fuscus	Lesser Black-backed Gull	604
LARIC	Larus ichthyaetus	Great Black-headed Gull	3
LARRI	Larus ridibundus	Black-headed Gull	1
LARGE	Larus genei	Slender-billed Gull	190
Total Number			3689

6.21. Khor-e Meydani

Introducing the area:

Khor-e Meydani is a huge estuary with an area of 13,781 hectares. It is located at the easternmost point of Hormozgan province and adjacent to Sistan and Baluchistan provinces. This site has different habitats, most of which are tidal mudflats, and only a very small part of it has mangroves. It is possible to enter the estuary by boat from its southeastern mouth. This estuary is also the largest estuary on the of the Oman Sea shores.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Sunny

Method and coverage:

35% coverage level, 3 experts
11:00 am – 02:15 pm



Image 20- Stationary counting method on the boat when water conditions do not allow docking.

Important considerations and suggestions:

- Khor-e Meydani is huge. It is recommended to allocate at least one full day for the census in this estuary.
- It is recommended to follow parts of this estuary by boat and motorcycle.
- It is recommended not to conduct the census at full tide.
- Due to the existence of a floating checkpoint in Khor-e Meydani, it is recommended to have identification and mission documents on hand at all times.
- An experienced boatman familiar with the area is required to visit this estuary by boat.
- To rent a boat, the nearest wharf is Abkahi wharf, which can be accessed through Kerti village. Motorcycles from this village can also be rented.

Table of results:

Table 30 - Khor-e Meydani census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	36
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	1375
ARDCI	<i>Ardea cinerea</i>	Grey Heron	6
CASAL	<i>Casmerodius albus</i>	Great White Egret	2
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	13
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	105
DROAR	<i>Dromas ardeola</i>	Crab Plover	6
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	26
PLUFU	<i>Pluvialis (dominica) fulva</i>	Pacific Golden Plover	3
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	11
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	47
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	25
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	120
CHARA	<i>Charadrius spp.</i>	Unidentified Plovers	238
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	3
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	26
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	27
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	28
TRITO	<i>Tringa totanus</i>	Redshank	19
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	4
TRINE	<i>Tringa nebularia</i>	Greenshank	3
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	105
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	6
CALTN	<i>Calidris tenuirostris</i>	Great Knot	5
CALAB	<i>Calidris alba</i>	Sanderling	150
CALMI	<i>Calidris minuta</i>	Little Stint	80
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	2
WADER	Unidentified Waders	Unidentified Waders	2470
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	82
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	70
LARGE	<i>Larus genei</i>	Slender-billed Gull	14

LARUS	Larus spp.	Unidentified Gulls	11
STENI	Sterna nilotica	Gull-billed Tern	1
STECA	Sterna caspia	Caspian Tern	14
STEAL	Sterna albifrons	Little Tern	3
STEBR	Sterna bergii	Great Crested Tern	6
STEBE	Sterna bengalensis	Lesser Crested Tern	30
STESN	Sterna sandvicensis	Sandwich Tern	97
STERN	Sternidae spp.	Unidentified Terns	30
PANHA	Pandion haliaetus	Osprey	8
Total Number			5307

6.22. Oman Sea Coast: Abd - Googsar (including Googsar lagoon)

Introducing the area:

Googsar coast is near Googsar village in the east of Hormozgan province. This coastal strip is 3.5 km long. It is a small and accessible area that ends at Googser Wharf.

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
Low tide	Sunny

Method and coverage:

100% coverage level, 3 experts
07:50 am - 08:30 am

Googsar coast census was done by choosing a station and using a telescope. By choosing the right station, the whole area was covered.

Important considerations and suggestions:

- The most suitable spot for bird counting on Googsar Coast is the elevated part at the easternmost point of this Coast. This is located next to the border post.

Since the border guard is exactly where the census is happening, experts should have identification and mission documents on hand.

Table of results:

Table 31 - Khoor-e Googsar census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	3
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	13
ARDCI	<i>Ardea cinerea</i>	Grey Heron	6
CASAL	<i>Casmerodius albus</i>	Great White Egret	2
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	2
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	1
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	5
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	7
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	4
TRITO	<i>Tringa totanus</i>	Redshank	4
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	2
TRINE	<i>Tringa nebularia</i>	Greenshank	3
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	9
CALAP	<i>Calidris alpina</i>	Dunlin	7
WADER	Unidentified Waders	Unidentified Waders	4
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	5
LARGE	<i>Larus genei</i>	Slender-billed Gull	1
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	1
STECA	<i>Sterna caspia</i>	Caspian Tern	10
STEBR	<i>Sterna bergii</i>	Great Crested Tern	20
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	30
PANHA	<i>Pandion haliaetus</i>	Osprey	1
Total Number			140

6.23. Kalirag-Vanak Coast

Introducing the area:

Vanak Coast is a 22 km long coastal strip, four kilometers east of Googsar and near Vanak village. This coastal strip ends at Kalirag village. Most of this coastline is without human structures or human activity, but there is an active fishing wharf in the middle of it.

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
Low tide	Sunny

Method and coverage:

90% coverage level, 3 experts
8:30 am- 10:30 am

The census was conducted in the Vanak coastal strip using a 4WD vehicle. Census was done from inside the car moving at low speed. The entire coastal strip was monitored. A part of the beach could not be covered due to the silhouette situation and therefore the coverage level did not reach 100%.

Important considerations and suggestions:

- A 4WD vehicle must be used to monitor the Vanak coastal strip. The entire coast can be explored by vehicle and there is no need for a boat or walk.
- It is possible to census this estuary along the way to Khood-e Meydani.
- There is a wide variety of Sternidae in this area. They should be identified as accurately as possible.



Image 21 - Gathering of different species of Terns

Table of results:

Table 32 - Census results of Vanak Coast

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	34
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	26
ARDCI	<i>Ardea cinerea</i>	Grey Heron	3
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	2
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	1
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	21
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	6
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	220
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	15
TRINE	<i>Tringa nebularia</i>	Greenshank	1
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	9

CALAB	<i>Calidris alba</i>	Sanderling	10
CALMI	<i>Calidris minuta</i>	Little Stint	7
CALAP	<i>Calidris alpina</i>	Dunlin	2
WADER	Unidentified Waders	Unidentified Waders	24
LARCC	<i>Larus cachinnans</i>	Caspian Gull	29
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	121
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	1
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	172
LARGE	<i>Larus genei</i>	Slender-billed Gull	68
LARUS	<i>Larus</i> spp.	Unidentified Gulls	72
CHLHY	<i>Chlidonias hybridus</i>	Whiskered Tern	1
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	19
STECA	<i>Sterna caspia</i>	Caspian Tern	20
STEAL	<i>Sterna albifrons</i>	Little Tern	16
STEBR	<i>Sterna bergii</i>	Great Crested Tern	10
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	179
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	222
STERN	<i>Sternidae</i> spp.	Unidentified Terns	9
PANHA	<i>Pandion haliaetus</i>	Osprey	2
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	1
Total Number			1323

6.24- Sim Coast

Introducing the area:

Sim Coast is a coast with a length of about 4 km, which starts east of Khor-e Had and ends with a road and some sheds. Sim Coast can be accessed through this road.

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Windy- Sunny

Method and coverage:

90% coverage level, 3 experts
02:10 am - 04:36 pm

The census was conducted by walking and choosing a station. A part of the site was monitored using a 4WD vehicle.

Important considerations and suggestions:

- Illegal fishing activities may be taking place on on the Sim Coast. Be careful when entering this coast.
- The end of Sim Coast reaches the Khor-e Had where there is an excellent view of this estuary. It is possible to enumerate some of the birds of Khor-e Had from this place.

Table of results:

Table 33 - Results of Sim Coast census

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	14	121
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	12	0
ARDCI	<i>Ardea cinerea</i>	Grey Heron	5	7
CASAL	<i>Casmerodius albus</i>	Great White Egret	0	5
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	3	8
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	16	1
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	10	0
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	25	3
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	21	11
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	11	17
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	54	0
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	8	0
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	37	4
TRITO	<i>Tringa totanus</i>	Redshank	4	1
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	1	0
TRINE	<i>Tringa nebularia</i>	Greenshank	0	1
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	41	2
CALAB	<i>Calidris alba</i>	Sanderling	23	8
CALMI	<i>Calidris minuta</i>	Little Stint	30	0
CALAP	<i>Calidris alpina</i>	Dunlin	18	36
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	2	0
WADER	Unidentified Waders	Unidentified Waders	23	20
LARHM	<i>Larus hemprichii</i>	Sooty Gull	0	1
LARCC	<i>Larus cachinnans</i>	Caspian Gull	11	0
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	38	661
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	8	163
LARGE	<i>Larus genei</i>	Slender-billed Gull	5	209
LARUS	<i>Larus spp.</i>	Unidentified Gulls	35	550
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	1	0
STECA	<i>Sterna caspia</i>	Caspian Tern	23	9
STEBR	<i>Sterna bergii</i>	Great Crested Tern	1	1

STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	1	0
PANHA	<i>Pandion haliaetus</i>	Osprey	2	2
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	0	1
FALTI	<i>Falco tinnunculus</i>	Kestrel	0	3
AQUHE	<i>Aquila heliaca</i>	Imperial Eagle	1	0
Total Number			484	1845

6.25. Sedich-Abd

Introducing the area:

Sedich-Abd site is the coastal zone between Abd village in the east of the site and Khor-e Sedich in the west of this site. This coastal strip is about 12 kilometers long, most of which are accessible by 2WD. There is fishing activity along this coastal strip, but a large part is devoid of human activity.

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
High tide	Sunny

Method and coverage:

80% coverage level, 3 experts

8:10 am- 10:30 pm

The census was carried out through a moving two-wheel drive vehicle and also through a fixed station. The coverage level of 80% was made possible due to access to most areas of the site. It was impossible to visit some parts of the site.

Important considerations and suggestions:

- Sedich-Abd coast is far from most residential centers. Therefore, it is suggested to plan so that the night before the census, staying in Abd village next to this site.

Considering that it is difficult to choose the access route to the beach, it is recommended that one of the Indigenous People of Abd village accompany the experts.

Table of results:

Table 34 - Sedich-Abd census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	1
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	32
ARDCI	<i>Ardea cinerea</i>	Grey Heron	2
CASAL	<i>Casmerodius albus</i>	Great White Egret	1
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	9
HIMHI	<i>Himantopus himantopus</i>	Black-winged Stilt	6
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	2
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	4
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	26
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	5
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	1
WADER	Unidentified Waders	Unidentified Waders	1
LARHM	<i>Larus hemprichii</i>	Sooty Gull	1
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	89
LARIC	<i>Larus ichthyæus</i>	Great Black-headed Gull	102
LARGE	<i>Larus genei</i>	Slender-billed Gull	6
LARUS	<i>Larus spp.</i>	Unidentified Gulls	9
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	2
STECA	<i>Sterna caspia</i>	Caspian Tern	15
STEBR	<i>Sterna bergii</i>	Great Crested Tern	4
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	4
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	4
PANHA	<i>Pandion haliaetus</i>	Osprey	3
Total Number			329

6.26. Jask-e Kohneh Coast

Introducing the area:

The city of Jask is located on a peninsula in the Sea of Oman, connected to the sea from 3 geographical sides. The Jask Coast site refers to the west coast of Jask city, which is marked on the map. Fishing and recreational activities can be seen along this 6-kilometer beach. People are present on this site to spend their free time.

Type of habitat management: part of it is under the Iranian Department of Environment management

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
Low tide	Sunny

Method and coverage:

90% coverage level, 4 experts

11:00 am- 12:50 pm

The census was carried out by a moving 2WD vehicle and also through a fixed station. Access to almost the entire area was possible except for the small part in the government agency's possession.

Important considerations and suggestions:

- For the census, it is better to choose a time during the working hours of the day and the presence of tourists and families is less than during other hours.
- At the time of the census, it is better to be careful to observe Oceanic Gull.

Table of results:

Table 35 - Census results for Jasak Coast

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	Pelecanus crispus	Dalmatian Pelican	6	4
PHACA	Phalacrocorax carbo	Great Cormorant	51	20
ARDCI	Ardea cinerea	Grey Heron	8	0
CASAL	Casmerodius albus	Great White Egret	2	0
EGRGU	Egretta gularis	Western Reef Heron	10	1
PHORO	Phoenicopterus roseus	Greater Flamingo	6	0
DROAR	Dromas ardeola	Crab Plover	3	0
HAEOS	Haematopus ostralegus	Eurasian Oystercatcher	1	0
BURRE	Burhinus recurvirostris	Great Stone Plover	1	0
PLUSQ	Pluvialis squatarola	Grey Plover	5	0
CHAH1	Charadrius hiaticula	Ringed Plover	3	0
CHAAL	Charadrius alexandrinus	Kentish Plover	30	0
CHAMO	Charadrius mongolus	Mongolian Plover	20	0
CHALE	Charadrius leschenaultii	Greater Sand Plover	20	0
LIMLA	Limosa lapponica	Bar-tailed Godwit	21	0
NUMPH	Numenius phaeopus	Whimbrel	3	0
NUMAR	Numenius arquata	Eurasian Curlew	53	1
TRITO	Tringa totanus	Redshank	5	0
TRIST	Tringa stagnatilis	Marsh Sandpiper	3	0
TRINE	Tringa nebularia	Greenshank	2	0
TRICI	Tringa cinereus	Terek Sandpiper	10	0
ACTHY	Actitis hypoleucos	Common Sandpiper	2	0
CALAB	Calidris alba	Sanderling	79	0
CALMI	Calidris minuta	Little Stint	6	0

CALAP	<i>Calidris alpina</i>	Dunlin	40	0
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	8	0
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	6	0
WADER	Unidentified Waders	Unidentified Waders	185	0
STEPA	<i>Stercorarius parasiticus</i>	Parasitic Skua	1	0
LARHM	<i>Larus hemprichii</i>	Sooty Gull	3	2
LARCC	<i>Larus cachinnans</i>	Caspian Gull	124	0
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	451	462
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	14	7
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	0	60
LARGE	<i>Larus genei</i>	Slender-billed Gull	63	3
CHLHY	<i>Chlidonias hybridus</i>	Whiskered Tern	1	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	4	0
STECA	<i>Sterna caspia</i>	Caspian Tern	6	0
STEAL	<i>Sterna albifrons</i>	Little Tern	1	0
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	0	3
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	2	0
PANHA	<i>Pandion haliaetus</i>	Osprey	4	1
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	8	0
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	1	0
ACCBA	<i>Accipiter badius</i>	Shikra	1	0
Total Number			1273	564

6.27. Khoor-e Markazi Jask

Introducing the area:

In the northern part of Jask City, there is a large estuary named Khoor-e Jask. Access to this area is possible by car and motorcycle through Jask City. Fishing activities are ongoing in this estuary. On the outskirts of the estuary, construction activities are underway for Jask.

Type of habitat management: Protected Area

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Salty	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
Low tide	Windy- Sunny

Method and coverage:

90% coverage level, 4 experts
9:00 am- 10:20 am

The census was carried out by moving a 2WD vehicle and also through a fixed station. Access to almost the entire area was possible except for the small part at the disposal of the government organization.

Important considerations and suggestions:

- Due to the presence of construction and military activities in this coastal area, it is necessary for a person from the city's environmental department to accompany the experts' team.
- Be sure to make the necessary arrangements before traveling to the region.

Table of results:

Table 36 - Khor-e Jasek census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	1	70
PHACA	<i>Phalacrocorax carbo</i>	Great Cormorant	18	793
ARDCI	<i>Ardea cinerea</i>	Grey Heron	7	12
CASAL	<i>Casmerodius albus</i>	Great White Egret	6	15
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	5	4
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	32	62
DROAR	<i>Dromas ardeola</i>	Crab Plover	0	11
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	5	19
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	1	31
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	1	0
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	0	38
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	0	27
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	0	7
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	8	8
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	41	71
TRITO	<i>Tringa totanus</i>	Redshank	5	92
TRINE	<i>Tringa nebularia</i>	Greenshank	3	11
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	4	0
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	3	3
WADER	Unidentified Waders	Unidentified Waders	0	120
LARCC	<i>Larus cachinnans</i>	Caspian Gull	2	0
LARFU	<i>Larus fuscus</i>	Lesser Black-backed	8	131
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	0	20
LARGE	<i>Larus genei</i>	Slender-billed Gull	1	23
LARUS	<i>Larus spp.</i>	Unidentified Gulls	0	180
CHLHY	<i>Chlidonias hybridus</i>	Whiskered Tern	0	4

STENI	<i>Sterna nilotica</i>	Gull-billed Tern	1	29
STECA	<i>Sterna caspia</i>	Caspian Tern	0	13
STERN	Sternidae spp.	Unidentified Terns	0	41
PANHA	<i>Pandion haliaetus</i>	Osprey	0	2
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	1	0
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	0	1
PERPT	<i>Pernis ptilorhynchus</i>	Crested Honey Buzzard	0	1
BUTRU	<i>Buteo rufinus</i>	Long-legged Buzzard	1	0
Total Number			154	1839

6.28. Nian Dam

Introducing the area:

Nian Dam is located near Nian village in Shamil region, near Shamil Dam. Since access to the edge of Nian Dam is better than Shamil Dam, it is possible to be more careful to find freshwater bird species in this area. Access to this dam is possible with prior arrangements.

Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Fresh	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
-	Windy

Method and coverage:

80% coverage level, 9 experts
01:30 pm - 02:00 pm

The census was carried out from the dam crest and through the appropriate station. The part of the lake that was in the blind spot was impossible to follow.

Important considerations and suggestions:

- To visit this dam, contact must be made at least one week in advance.
- On the edge of the lake and under the vegetation of the edge of the lake, you can find a wide variety of different kinds of ducks.

Table of results:

Table 37 - Nian Dam census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PODCR	Podiceps cristatus	Little Grebe	7	21
TACRU	Tachybaptus ruficollis	Great Crested Grebe	0	1
PELCR	Pelecanus crispus	Dalmatian Pelican	0	2
PHACA	Phalacrocorax carbo	Great Cormorant	5	7
CASAL	Casmerodius albus	Great White Egret	2	1
ANAPL	Anas platyrhynchos	Mallard	11	0

AYTFE	<i>Aythya ferina</i>	Pochard	0	7
AYTFU	<i>Aythya fuligula</i>	Tufted Duck	8	0
FULAT	<i>Fulica atra</i>	Common Coot	1	5
VANIN	<i>Vanellus indicus</i>	Red-wattled Lapwing	1	0
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	1	0
TRINE	<i>Tringa nebularia</i>	Greenshank	0	2
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	0	1
WADER	Unidentified Waders	Unidentified Waders	0	5
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	0	3
MOTAL	<i>Motacilla alba</i>	White Wagtail (Pied	0	1
Total Number			36	56

6.29. Shamil Dam

Introducing the area:

Shamil and Nian dams are gravel and clay-core dams, and the height of these two dams is approximately 32 meters and they have a common reservoir, the usable water volume of which is 160 million cubic meters per year. The distance between the construction of these two dams is approximately 10 kilometers. The Shamil construction site is located on the Shamil River and the Nian Dam construction site is located on Zandan River.

Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Fresh	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
Low tide	Windy

Method and coverage:

80% coverage level, 9 experts
09:45 am - 01:15 pm



Image 22- Fahimeh Goodarzi at Shamil Dam during census project

The census was done in two ways. First, 2 points were selected from the dam crest for station census. Following that, the experts boarded the boat and counted the birds by foot.

Important considerations and suggestions:

- To visit this dam, correspondence must be made at least one week in advance.
- Due to the risks involved, a life jacket must be worn when boarding the boat.

Table of results:

Table 38 - Census results for Shamil Dam

Code of the species	Scientific name of the species	English name of the species	Number of the birds	
			2022	2023
PODCR	Podiceps cristatus	Little Grebe	44	121
TACRU	Tachybaptus ruficollis	Great Crested Grebe	3	6
PELON	Pelecanus onocrotalus	White Pelican	0	1
PELCR	Pelecanus crispus	Dalmatian Pelican	14	19
PHACA	Phalacrocorax carbo	Great Cormorant	98	167
ARDCI	Ardea cinerea	Grey Heron	23	8
CASAL	Casmerodius albus	Great White Egret	6	6
EGRGU	Egretta gularis	Western Reef Heron	0	3
EGRGA	Egretta garzetta	Little Egret	16	0
PLALE	Platalea leucorodia	Spoonbill	8	40
ANSAN	Anser anser	Greylag Goose	4	7
ANAPE	Anas penelope	Eurasian Wigeon	0	1
ANAST	Anas strepera	Gadwall	0	2
ANACR	Anas crecca	Common Teal	0	11
ANAPL	Anas platyrhynchos	Mallard	4	90
AYTFE	Aythya ferina	Pochard	5	105
AYTFU	Aythya fuligula	Tufted Duck	11	91
ANATI	Anatinae spp.	Unidentified Ducks	0	170
FULAT	Fulica atra	Common Coot	23	818
HIMHI	Himantopus himantopus	Black-winged Stilt	0	6
VANIN	Vanellus indicus	Red-wattled Lapwing	4	1
TRIOC	Tringa ochropus	Green Sandpiper	0	1
ACTHY	Actitis hypoleucos	Common Sandpiper	0	5
WADER	Unidentified Waders	Unidentified Waders	0	3
LARRI	Larus ridibundus	Black-headed Gull	11	0
LARIC	Larus ichthyaetus	Great Black-headed Gull	0	1
LARGE	Larus genei	Slender-billed Gull	0	17
CHLHY	Chlidonias hybridus	Whiskered Tern	0	4
STENI	Sterna nilotica	Gull-billed Tern	0	8
STEBE	Sterna bengalensis	Lesser Crested Tern	1	0
STERN	Sternidae spp.	Unidentified Terns	0	8

HALAL	<i>Haliaeetus albicilla</i>	White-tailed Eagle	0	2
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	3	1
CERRU	<i>Ceryle rudis</i>	Pied Kingfisher	4	2
MOTAL	<i>Motacilla alba</i>	White Wagtail (Pied	1	1
ACCBA	<i>Accipiter badius</i>	Shikra	0	1
BUTRU	<i>Buteo rufinus</i>	Long-legged Buzzard	0	1
FALTI	<i>Falco tinnunculus</i>	Kestrel	0	1
AQUHE	<i>Aquila heliaca</i>	Imperial Eagle	0	3
AQUNI	<i>Aquila nipalensis</i>	Steppe Eagle	0	1
Total Number			283	1733

6.30. Khor-e Sedich

Introducing the area:

Khor-e Sedich is a small estuary with a length of 3 km and a width of 600 meters in the southern part. No mangrove forest can be seen in this estuary, but a mangrove planting plan has been implemented there. This estuary has fishing activities and fishermen's resting huts are sometimes seen in it.

Picture of the area:



Water condition:

Control water fluctuations	water feature	Water condition of the wetland	Frozen condition
Lack of water level control	Fresh	With water	No freeze

Tide and weather conditions:

Tide Condition	Weather Condition
Low tide	Windy

Method and coverage:

80% coverage level, 3 experts

11:15 am - 12:35 pm

The census was conducted through station selection. A part of the site was also monitored by experts on foot.

Important considerations and suggestions:

- It is better to monitor this site in one day and with the Sedich-Abd Coast site. It is better to stay overnight in Abd village and then from Abd (after passing Sedich-Abd Coast), observe the site.
- Due to several junctions along the route, it is better to have a local person along with experts.

Table of results:

Table 39 - Sedich census results

Code of the species	Scientific name of the species	English name of the species	Number of the birds
PELCR	<i>Pelecanus crispus</i>	Dalmatian Pelican	26
ARDCI	<i>Ardea cinerea</i>	Grey Heron	5
CASAL	<i>Casmerodius albus</i>	Great White Egret	1
EGRGU	<i>Egretta gularis</i>	Western Reef Heron	2
PLALE	<i>Platalea leucorodia</i>	Spoonbill	1
PHORO	<i>Phoenicopterus roseus</i>	Greater Flamingo	137
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	23
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	15
CHARA	<i>Limosa limosa</i>	Black-tailed Godwit	5
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	1
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	1
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	18
TRITO	<i>Tringa totanus</i>	Redshank	17
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	11
TRINE	<i>Tringa nebularia</i>	Greenshank	3
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	25
CALMI	<i>Calidris minuta</i>	Little Stint	2
CALAP	<i>Calidris alpina</i>	Dunlin	143
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	4
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	3
WADER	Unidentified Waders	Unidentified Waders	50
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	30
LARGE	<i>Larus genei</i>	Slender-billed Gull	1
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	5
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	1
ALCAT	<i>Alcedo atthis</i>	Kingfisher	1
Total Number			531

7. Discussion and conclusion

The number of birds observed during 2023 was 64,123, representing 97 species. At the beginning of the report, a detailed comparison is made between this census and the census of 2022. In order to calculate population and species changes accurately, additional parameters and different analyses must be considered.

Depending on the tide conditions and accessibility, the coverage level of each area varies from year to year.

According to the changes in the population and diversity, as well as the level of coverage by region, the following should be noted:

- Out of 30 sites censused in 2023, 16 were found to be under the management of the Iranian Department of Environment. Out of 174,979 hectares of the total area of the censused sites, 147,951 hectares were under the management of the Iranian Department of Environment. Based on the area, 84% of census sites were managed by the Iranian Department of Environment. An estimated 64,123 birds were counted in 2023, of which 45,834 were observed in the sites under the protection of the Iranian Department of Environment, which represents 71% of the counted birds. The study indicates that most of the birds in the province live in protected areas, but it is important to protect the free zone that harbors 29% of the population of migratory birds living along the waterways.

1) There appears to be a significant impact of fishing activities at census sites on species diversity. The number of carrion birds has declined in areas where trawling has been illegal and has now ceased, while the diversity of waterbirds has increased. As a result, it seems necessary to closely monitor fishing activities in important bird habitats.

2) It appears that the flamingo population in the estuaries of Minab city is very high compared to other regions of the province and country. This opportunity can be used for education, public awareness, and tourism.

3) The Great Knot is an endangered species that is observed annually in the province of Hormozgan. It is recommended that a study be conducted regarding the identification of the population, distribution, and survival risks associated with this species in the province, as its presence in the province is of special importance and its better protection requires a more accurate identification of the time and place of its presence. Due to the biological status of this species, international financing capabilities can also be utilized.

4) Given the large number and area of census sites in Hormozgan province, it appears necessary to utilize the maximum number of volunteers and interested individuals. The idea is to hold a field training course in Hormozgan province for the participation of all those who are interested throughout the country. Once the selection process has been completed, qualified individuals may appear as experts in provincial censuses.

5) It appears that the spread of the invasive chandel plant has adverse effects on the diversity and population of birds, resulting in serious changes in the ecosystem if it is replaced by the mangrove plant. It seems necessary to investigate and prevent such a problem to achieve this goal. A significant increase in the population of this species has been observed in the estuaries of Jask City (especially the Khor-e Khalasi).

6) Bandar e Abbas' eastern coast, which is located within the city limits, ranks third in the province in terms of bird populations. In a densely populated city, the presence of such a large population and variety of birds is very significant and provides many opportunities. It appears that this capacity could be utilized to expand and develop bird-watching activities in Bandar e Abbas and make it one of its major attractions. Additionally, it may be possible to propose using some of the income from tourism for the protection of bird species.

7) To provide the possibility of comparison of census data between years, it is recommended that as much as possible, census teams should adhere to movement routes and census points recorded by GPS in previous years.

8) A significant number of birds reside in Khor-e Khooran, and since tourism activities are being developed in this estuary, which can adversely affect the bird population, it is recommended that a detailed plan for tourism activities be put on the agenda and that it be monitored.

8. Appendix 1 - General table of the number of birds in 2022 and 2023

Code of the species	Scientific name of the species	English name of the species	Total Number	
			2022	2023
Podicipedidae				
TACRU	Tachybaptus ruficollis	Little Grebe	20	7
PODCR	Podiceps cristatus	Great Crested Grebe	160	149
PODNI	Podiceps nigricollis	Black-necked Grebe	11	0
Pelecanidae				
PELON	Pelecanus onocrotalus	White Pelican	0	4
PELCR	Pelecanus crispus	Dalmatian Pelican	1204	808
Phalacrocoracidae				
PHACA	Phalacrocorax carbo	Great Cormorant	8655	5616
Ardeidae				
ARDCI	Ardea cinerea	Grey Heron	1038	653
ARDGO	Ardea goliath	Goliath Heron	1	0
ARDPU	Ardea purpurea	Purple Heron	0	1
CASAL	Casmerodius albus	Great White Egret	799	587
EGRGU	Egretta gularis	Western Reef Heron	883	586
EGRGA	Egretta garzetta	Little Egret	50	4
BUBIB	Bubulcus ibis	Cattle Egret	3	0
ARDGR	Ardea grayii	Indian Pond Heron	75	75
BUTST	Butorides striatus	Striated (Little Green) Heron	2	2
NYCNY	Nycticorax nycticorax	Black-crowned Night Heron	0	32
ARDEI	Ardeidae spp.	Unidentified Herons	39	0
Ciconiidae				
CICNI	Ciconia nigra	Black Stork	4	8
Threskiornithidae				
PLEFA	Plegadis falcinellus	Glossy Ibis	31	0
PLALE	Platalea leucorodia	Spoonbill	222	214
Phoenicopteridae				
PHORO	Phoenicopterus roseus	Greater Flamingo	1569	1619
Anatidae				
ANSAN	Anser anser	Greylag Goose	4	7
TADFE	Tadorna ferruginea	Ruddy Shelduck	7	6
TADTA	Tadorna tadorna	Shelduck	79	59
NETCO	Nettapus coromandelianus	Indian Cotton Teal	0	0
ANAPE	Anas penelope	Eurasian Wigeon	13	1
ANAST	Anas strepera	Gadwall	15	2
ANACR	Anas crecca	Common Teal	474	11
ANAPL	Anas platyrhynchos	Mallard	88	132
ANAAC	Anas acuta	Northern Pintail	5	0
ANACL	Anas clypeata	Northern Shoveler	166	7
MARAN	Marmaronetta angustirostris	Marbled Teal	2	0
AYTFE	Aythya ferina	Pochard	191	112
AYTFU	Aythya fuligula	Tufted Duck	34	91

MERSE	<i>Mergus serrator</i>	Red-breasted Merganser	1	0
ANATI	Anatinae spp.	Unidentified Ducks	0	170
Rallidae				
GALCH	<i>Gallinula chloropus</i>	Moorhen	3	0
FULAT	<i>Fulica atra</i>	Common Coot	118	823
Dromadidae				
DROAR	<i>Dromas ardeola</i>	Crab Plover	2839	2495
Haematopodidae				
HAEOS	<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	2103	2867
Recurvirostridae				
HIMHI	<i>Himantopus himantopus</i>	Black-winged Stilt	119	156
RECAV	<i>Recurvirostra avosetta</i>	Avocet	58	3
Burhinidae				
BURRE	<i>Burhinus recurvirostris</i>	Great Stone Plover	52	29
Charadriidae				
VANLE	<i>Vanellus leucurus</i>	White-tailed Plover	2	0
VANIN	<i>Vanellus indicus</i>	Red-wattled Lapwing	41	27
PLUAP	<i>Pluvialis apricaria</i>	Eurasian Golden Plover	0	2
PLUFU	<i>Pluvialis (dominica) fulva</i>	Pacific Golden Plover	3	10
PLUSQ	<i>Pluvialis squatarola</i>	Grey Plover	763	507
CHAH1	<i>Charadrius hiaticula</i>	Ringed Plover	82	30
CHADU	<i>Charadrius dubius</i>	Little Ringed Plover	1	1
CHAAL	<i>Charadrius alexandrinus</i>	Kentish Plover	1673	842
CHAMO	<i>Charadrius mongolus</i>	Mongolian Plover	1936	1794
CHALE	<i>Charadrius leschenaultii</i>	Greater Sand Plover	1093	3208
CHARA	<i>Charadrius</i> spp.	Unidentified Plovers	35	865
Scolopacidae				
LIMLI	<i>Limosa limosa</i>	Black-tailed Godwit	41	146
LIMLA	<i>Limosa lapponica</i>	Bar-tailed Godwit	2473	1236
NUMPH	<i>Numenius phaeopus</i>	Whimbrel	3391	1532
NUMAR	<i>Numenius arquata</i>	Eurasian Curlew	7258	3491
TRIER	<i>Tringa erythropus</i>	Spotted Redshank	5	1
TRITO	<i>Tringa totanus</i>	Redshank	2301	1590
TRIST	<i>Tringa stagnatilis</i>	Marsh Sandpiper	176	94
TRINE	<i>Tringa nebularia</i>	Greenshank	249	181
TRIOC	<i>Tringa ochropus</i>	Green Sandpiper	5	5
TRICI	<i>Tringa cinereus</i>	Terek Sandpiper	2177	1926
TRING	<i>Tringa</i> spp.	Unidentified Sandpipers	316	0
ACTHY	<i>Actitis hypoleucos</i>	Common Sandpiper	201	126
AREIN	<i>Arenaria interpres</i>	Ruddy Turnstone	76	58
PHALO	<i>Phalaropus lobatus</i>	Red-necked Phalarope	0	2870
GALGA	<i>Gallinago gallinago</i>	Common Snipe	3	0
CALTN	<i>Calidris tenuirostris</i>	Great Knot	42	123
CALAB	<i>Calidris alba</i>	Sanderling	613	381
CALMI	<i>Calidris minuta</i>	Little Stint	246	246
CALTM	<i>Calidris temminckii</i>	Temminck's Stint	8	1

CALAP	<i>Calidris alpina</i>	Dunlin	3586	1584
CALFE	<i>Calidris ferruginea</i>	Curlew Sandpiper	371	121
LIMFA	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	307	242
PHIPU	<i>Philomachus pugnax</i>	Ruff	3	0
WADER	Unidentified Waders	Unidentified Waders	10948	11948
Stercorariidae				
STEPA	<i>Stercorarius parasiticus</i>	Parasitic Skua	1	0
Laridae				
LARHM	<i>Larus hemprichii</i>	Sooty Gull	4	9
LARCN	<i>Larus canus</i>	Common Gull	1	6
LARCC	<i>Larus cachinnans</i>	Caspian Gull	654	236
LARFU	<i>Larus fuscus</i>	Lesser Black-backed Gull	2912	3725
LARHU	<i>Larus heuglini</i>	Heuglin's Gull	108	83
LARIC	<i>Larus ichthyaetus</i>	Great Black-headed Gull	447	698
LARRI	<i>Larus ridibundus</i>	Black-headed Gull	491	232
LARGE	<i>Larus genei</i>	Slender-billed Gull	2230	2547
LARUS	<i>Larus</i> spp.	Unidentified Gulls	947	1497
Sternidae				
CHLHY	<i>Chlidonias hybridus</i>	Whiskered Tern	77	16
CHLLE	<i>Chlidonias leucoptera</i>	White-winged Black Tern	2	0
STENI	<i>Sterna nilotica</i>	Gull-billed Tern	711	367
STECA	<i>Sterna caspia</i>	Caspian Tern	806	374
STEAL	<i>Sterna albifrons</i>	Little Tern	193	28
STEBR	<i>Sterna bergii</i>	Great Crested Tern	422	126
STEBE	<i>Sterna bengalensis</i>	Lesser Crested Tern	478	477
STESN	<i>Sterna sandvicensis</i>	Sandwich Tern	260	385
STEAN	<i>Sterna anaethetus</i>	Bridled Tern	0	2
STERN	Unidentified Terns	Unidentified Terns	188	514
Pandionidae				
PANHA	<i>Pandion haliaetus</i>	Osprey	68	45
Accipitridae				
HALAL	<i>Haliaeetus albicilla</i>	White-tailed Eagle	5	6
CIRAE	<i>Circus aeruginosus</i>	Marsh Harrier	86	53
AQUCL	<i>Aquila clanga</i>	Greater Spotted Eagle	59	52
Alcedinidae				
ALCAT	<i>Alcedo atthis</i>	Kingfisher	46	34
HALSM	<i>Halcyon smyrnensis</i>	White-throated Kingfisher	8	2
CERRU	<i>Ceryle rudis</i>	Pied Kingfisher	45	3
Motacilidae				
MOTAL	<i>Motacilla alba</i>	White Wagtail (Pied Wagtail)	46	40
MOTCT	<i>Motacilla citreola</i>	Citrine Wagtail	0	3
Procellariidae				
PUFPE	<i>Puffinus persicus</i>	Persian Shearwater	.	\
ADDITIONAL SPECIES				
CORAT	<i>Coragyps atratus</i>	Black Vulture	3	0

PERPT	<i>Pernis ptilorhynchus</i>	Crested Honey Buzzard	1	1
MILMG	<i>Milvus migrans</i>	Black Kite	17	5
NEOPE	<i>Neophron percnopterus</i>	Egyptian Vulture	5	0
BUTRU	<i>Buteo rufinus</i>	Long-legged Buzzard	1	1
CIRMA	<i>Circus macrourus</i>	Pallied Harrier	1	0
ACCBA	<i>Accipiter badius</i>	Shikra	16	12
AQUNI	<i>Aquila nipalensis</i>	Steppe Eagle	0	3
AQUHE	<i>Aquila heliaca</i>	Imperial Eagle	2	5
FALTI	<i>Falco tinnunculus</i>	Kestrel	0	6
FALPR	<i>Falco peregrinus</i>	Peregrine Falcon	1	0
-	Unidentified Falcon	Unidentified Falcon	0	1
-	<i>Hieraaetus fasciatus</i>	Bonelli's Eagle	0	1
AQUPO	<i>Aquila pomarina</i>	Lesser Spotted Eagle	0	3
Total Number			72904	64123

9. Appendix 2 – Census images



Image 23- Walking and station selection in bird counting



Image 24- During movement of the boat, wind stoppers need to be put on by experts



Image 255 - Station method counting in Khor-e Azini



Image 26 - Local community