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Review **Open Access**

Distribution of Mammalian Species in the Vicinity of Ramsar Sites of Pakistan

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SUMMARY

The landscape of Pakistan is diverse, with the high mountain ranges in the north and the Indus River plains in the south. The objective of the study is to understand the diversity and distribution of mammalian species in Ramsar Sites in Pakistan. Data were collected from various sources including books, reports, articles, and websites. Pakistan has 19 Ramsar Sites. The analysis revealed that there are a total of 96 species belonging to 8 orders and 34 families. The majority of species in the study area are classified as Least Concern (82 species), Vulnerable (4 species), Near Threatened (4 species), and Endangered (6 species) by the IUCN. It is worth noting that two species, *Mus musculus* and *Rattus rattus*, are reported from all Ramsar sites in Pakistan.

Keywords: Pakistan, Ramsar, Wetlands, Mammals

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INTRODUCTION

Pakistan, located at the crossroads of the Middle East and Central Asia, holds significant value due to its strategic geographical location. Covering an area of 882,000 km², Pakistan is situated between 61º and 75º east and 24º and 37º north, with a coastline stretching 1,046 km. Primarily characterized as a semi-arid to arid country, Pakistan has a mere 3.8% forest cover. Plant and animal diversity in Pakistan are heavily influenced by its topography and environmental conditions. The country can be classified into three distinct ecological zones: Indus Plains, Foothills, and Mountain Ranges. Northern areas attract tourists because to their beautiful natural scenery, which includes mountains, forests, valleys, and hills. Pakistan has a diverse ecosystem that includes tropical deciduous forests, the Indus delta, subtropical pine forests, subtropical broad leaf evergreen forests, sub-alpine forests, riverine forests, plateaus, natural and man-made wetlands, moist temperate forests, marine, irrigated plantations, glaciers, freshwater, dry tropical thorn forests, dry temperate forests and alpine pastures (Khan, 1991; Roberts, 1997; Qadeer, 2006; Murtaza et al., 2010; Shah and Amjad, 2011; Ashraf, 2020; Houston and Bates, 2020; Altaf et al., 2022).

Pakistan is home to approximately 195 species of mammals, which can be classified into 10 different orders (Roberts, 1997; Roberts, 2005b; Roberts, 2005a).

Out of these 195 species, 5 are found commonly in Pakistan, while 12 are classified as critically endangered, with 1 of them being endemic to the country. Additionally, there are 12 species that are endangered, with 3 of them being endemic. Furthermore, 20 species are considered vulnerable, 32 are near threatened, with 1 being endemic. There are also 71 mammals that are classified as least concern, 38 are data deficient, 8 are regionally extinct, and 2 have not been evaluated yet (IUCN, 2003). This study was aimed to understand the diversity and distribution of mammalian species associated with Ramsar Sites of Pakistan.

METHODOLOGY

The data was collected through review of secondary sources as considerable published material is available on the subject issue. Data were collected through books i.e. The Mammals of Pakistan (Roberts, 1997), Field guide to the small mammals of Pakistan (Roberts, 2005b), Field guide to the large and medium-sized mammals of Pakistan (Roberts, 2005a), as well as Biodiversity of Ramsar Sites in Pakistan: Wildlife and Ecology (Altaf et al., 2014); through websites i.e. IUCN (https://www.iucnredlist.org/), and GBIF (https://www.gbif.org/), through search engine i.e. Google Scholar (https://scholar.google.com/), through reports (IUCN, 2003; MFF, 2018) and through articles (Bhaagat, 2002; Akbar et al., 2004; Khan, 2006; Khan et al., 2012; Begum et al., 2013; Bibi et al., 2013; Ghalib et al., 2013; Zehra et al., 2014; Ghalib et al., 2018; Ghalib et al., 2019). The study was descriptive and exploratory in order to establish understanding of mammalian diversity associated with Ramsar Sites of Pakistan.

WETLANDS

While the value of wetlands for animal protection has been recognized for more than a century, their additional advantages have just lately been revealed. They assist to stabilize water supply, lowering the danger of floods and droughts. Furthermore, wetlands have been shown to remediate dirty rivers, safeguard shorelines, and recharge groundwater aquifers. Wetlands play an important role in the ecology because they provide unique habitats for a variety of plants and animals. With rising worries about the health of our world, wetlands are now being recognized as important carbon sinks and climate stabilizers on a global scale (Gibbs, 1993; Greb et al., 2006; Verhoeven and Setter, 2010; Altaf et al., 2014; Mitsch et al., 2015; Pattison-Williams et al., 2018; Xu et al., 2019).

WETLAND OF PAKISTAN

Pakistan is endowed with a diverse range of wetlands which play an important role in our ecology (Altaf et al., 2014). From the renowned Indus Delta in the south (Khan, 2006) to the gorgeous Shandur Lake in the north (Khan and Baig, 2017), these wetlands provide critical habitat for a variety of bird species and marine life, as well as economic support for local residents through fishing and cultivation (Memon and Thapa, 2011).

RAMSAR SITES

Pakistan is a party to the Ramsar Convention on Wetlands, an intergovernmental treaty that establishes a framework for national action and international collaboration in the protection and sustainable use of wetlands. The Ramsar Convention was adopted on February 2, 1971, in the Iranian city of Ramsar and entered into force in December 1975. Pakistan ratified the convention in 1976. According to Convention's Article 1.1, wetlands are defined as, "Wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters" (https://www.ramsar.org).

Ramsar Sites, are 'Wetlands of International Importance' declared under the Ramsar Convention. There are right now about 2,400 Ramsar Sites worldwide. They encompass a region greater than Mexico, at around 2.5 million square kilometers (https://www.ramsar.org). These locations are recognized based on several criteria established by the Convention. The Ramsar Sites Criteria encompass nine elements for identifying Wetlands of International Importance. *Group A* criteria highlight wetlands having representative, uncommon, or unusual natural or near-natural wetland forms in the appropriate biogeographic area. *Group B* criteria are concerned with the conservation of biological variety, which includes fragile, endangered, or critically endangered species, as well as threatened ecological communities. Other criteria focus on wetlands that sustain plant and/or animal species critical to regional biological diversity, provide shelter under bad conditions, or routinely host considerable numbers of waterbirds, fish, and other non-avian animal species that rely on wetlands. These characteristics, together, govern the selection of Ramsar sites based on their ecological significance and contribution to world biodiversity (https://www.ramsar.org/document/ramsar-sites-criteria).

RAMSAR SITES OF PAKISTAN

Pakistan is a Party to the Ramsar Convention on Wetlands since 1976. (Altaf et al., 2014). As an obligation of the convention every signatory is required to designate at least one Wetland of International Importance as Ramsar Site. Initially nine wetlands of Pakistan were designated as Ramsar sites while at present there are 19 wetlands on Ramsar list. (Figure 1 and Table 1) and a total land area of 1,343,627 ha (https://www.ramsar.org).

Table 1: List of Ramsar sites in Pakistan (GOP, 2012).

Ramsar sites	Districts	Province	Area (Ha)	Designated year
Astola Island	Gwadar	Balochistan	5,000	2001
Chashma Barrage	Mianwali	Punjab	34,099	1996
Deh Akro-II	Nawabshah	Sindh	20,500	2002
Drigh Lake	Larkana	Sindh	164	1976
Haleji Lake	Thatta	Sindh	1,704	1976
Hub Dam	Lasbella	Balochistan	27,000	2001
Indus Delta	Badin & Thatta	Sindh	472,800	2002
Indus Dolphin Reserve	Thatta	Sindh	125,000	2001
Jiwani Coastal	Gwadar	Balochistan	4,600	2001

Jubho lagoon	Thatta	Sindh	706	2001
Kinjhar (Kalri) Lake	Thatta	Sindh	13,468	1976
Miani Hor	Lasbella	Balochistan	55,000	2001
Nurri Lagoon	Badin	Sindh	2,540	2001
Ormara Turtle Beach	Gwadar	Balochistan	2,400	2001
Rann of Kutch	Tharparkar	Sindh	566,375	1980
Tanda Dam	Kohat	KPK	405	1976
Taunsa Barrage	Muzaffargarh	Punjab	6,576	1996
Thanedar Wala	Bannu	KPK	4,047	1976
Uchhali Complex	Khushab	Punjab	1,243	1996

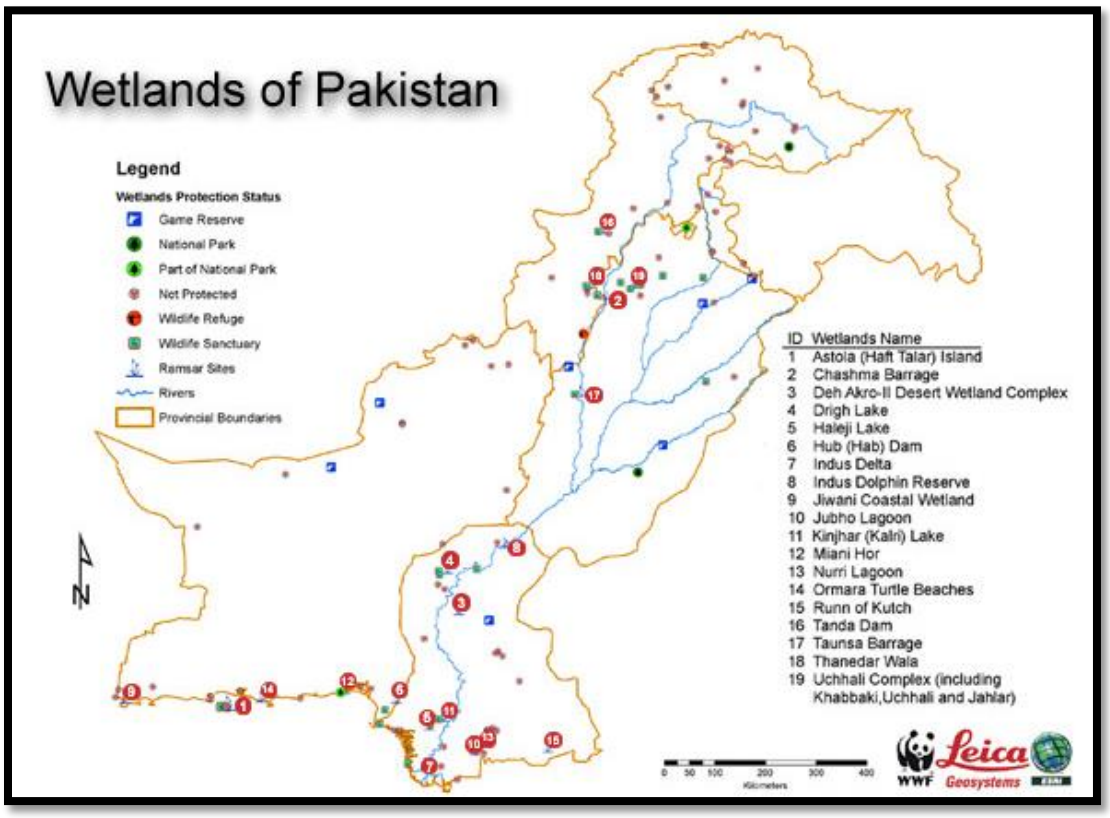

Figure 1: Ramsar sites of Pakistan (WWF, 2024).

MAMMALIAN FAUNA ASSOCIATED WITH RAMSAR SITES OF PAKISTAN

During the analysis, it was noted that 96 species were associated with Ramsar Sites (Table 2), belonging to to 8 orders, namely; Artiodactyla (species=17), Carnivora (species=20), Chiroptera (species=27), Lagomorpha (species=3), Eulipotyphla (species=6), Primates (species=1), Pholidota (species=1), and Rodentia (species=1) (Figure 2). These species belong to 34 families, including; Bovidae (species=3), Balaenopteridae (species=3), Cercopithecidae (species=1), Canidae (species=7), Cervidae (species=1), Delphinidae (species=4), Erinaceidae (species=2), Emballonuridae (species=2), Felidae (species=5), Hipposideridae (species=3), Herpestidae (species=2), Hyaenidae (species=1), Hystricidae (species=1), Kogiidae

(species=1), Leporidae (species=2), Megadermatidae (species=1), Molossidae (species=1), Manidae (species=1), Mustelidae (species=3), Muridae (species=18), Ochotonidae (species=1), Pteropodidae (species=4), Phocoenidae (species=1), Platanistidae (species=2), Rhinonycteridae (species=1), Rhinolophidae (species=1), Rhinopomatidae (species=2), Soricidae (species=4), Suidae (species=1), Sciuridae (species=2), Ursidae (species=1), Vespertilionidae (species=12), Viverridae (species=1), and Ziphiidae (species=1) (Figure 3).

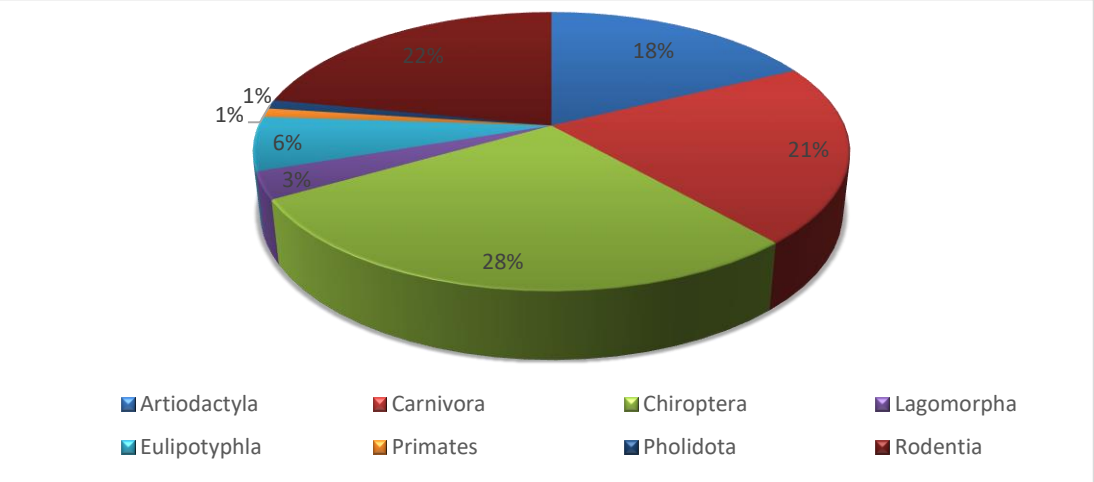

Figure 2: Orders of mammalian species of Ramsar site in Pakistan.

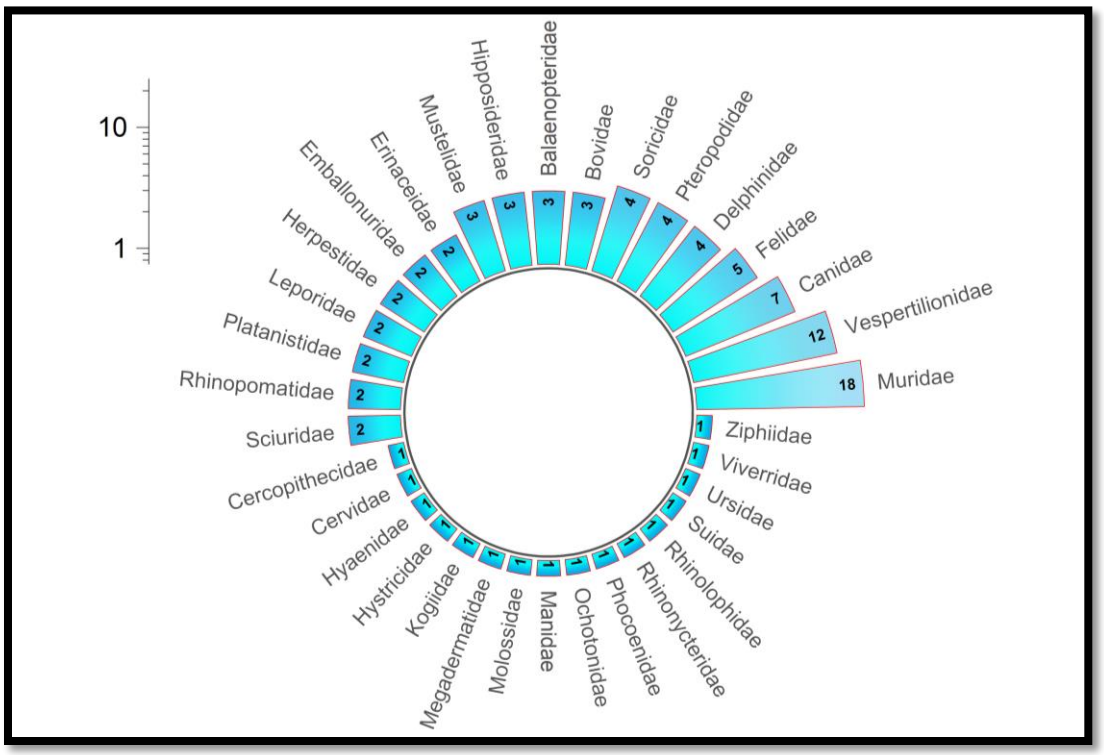

Figure 3: Families of mammalian species of Ramsar site in Pakistan.

During the analysis, it was noted that most of the species of study area are Least Concern (82 species), Vulnerable (4 species), Near Threatened (4 species), and Endangered (6 species) by IUCN (Figure 4).

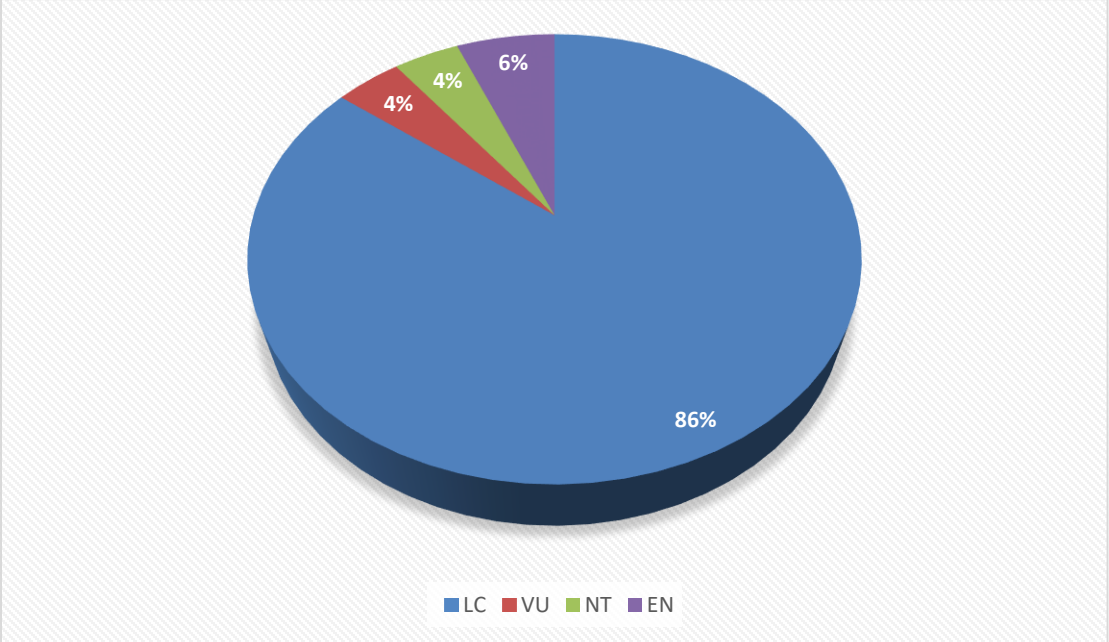

Figure 4: IUCN status of mammalian species of Ramsar site in Pakistan.

UNIQUE MAMMALIAN FAUNA

During the study, it was noted that some of species are unique and reported from single Ramsar Site only. For example, *Barbastella leucomelas* was reported from Tanda Dam, *Hipposideros cineraceus* was reported from Uchhali Complex, *Taphozous nudiventris* was reported from Indus Dolphin Reserve, *Vulpes vulpes griffithi* was reported from Tanda Dam, *Ochotona rufescens* was reported from Drigh Lake, *Acomys cahirinus* was reported from Ormara Turtle Beach, and *Gerbillus cheesmani* was reported from Rann of Kutch. It is noted that two species i.e. *Mus musculus* and *Rattus rattus* are reported from all Ramsar Sites in Pakistan (Figure 5).

THREATS TO MAMMALIAN SPECIES

DEGRADATION OF WETLAND

With the population rapidly increasing and human activities intensifying, the pressure on all types of resources, including wetlands, has significantly risen. The degradation of wetland ecosystems refers to the damage caused by human activities, while wetland loss refers to the reduction in their overall area due to various factors. Among the various activities carried out by humans, man-made disruptions to the natural drainage system have proven to be a common cause of wetland damage. Constructing pavements and diverting water flow disrupt the soil hydrologic system and affect soil moisture levels. Additionally, various natural events also impact wetlands. For example droughts and floods, can pose significant threats to wetlands. Although wetlands act like sponges and have the ability to store water for long periods of time,

they cannot do so indefinitely. If wetlands are not rejuvenated, some of them may eventually dry out. Additionally, overgrazing is another threat to wetlands as it can lead to the grazing of plants by livestock, making them more prone to erosion (Chaudhry, 2010; Khan and Arshad, 2014).

Although wetlands serve as buffers against weather incidents and natural calamities, severe floods can cause irreversible damage to wetlands by removing soil, depleting vegetation, and causing pollution through runoff. Wetland depletion is not only occurring in Pakistan, but also globally due to various forms of development. The loss of these "natural buffers" poses increasing risks to human sustainability on multiple levels. In the past five decades, human activity has significantly and rapidly altered wetlands and other ecosystems, more so than ever before in history. These changes primarily occur as a result of operations that aim to meet the increasing demand for fresh water, fiber, food, wood, and fuel. The unplanned growth has led to the rapid degradation of wetlands, often driven by residential or industrial needs.

ILLEGAL HUNTING

Illegal wildlife trafficking is the world's fourth largest illicit trade, worth billions of US dollars. Illegal wildlife trade has been expanding day by day, leading to the depletion as well as extinction of several animal species (Khan et al., 2020; TRAFFIC, 2021). Various national and international organizations have been working to stop and/or reduce this tendency. People in Pakistan, hunted mammalian species i.e. Indian pangolins (Iftkhar et al., 2018; Mahmood et al., 2019), foxes, and bears (Altaf et al., 2017; Ibrahim et al., 2022); other purposes snow leopard (Bari et al., 2022), Indian gazelles (Khan et al., 2018a), musk deer (Khan et al., 2006; Qureshi et al., 2013; Abbas et al., 2015), markhor (Khan et al., 2018b) for different purposes i.e. food, medicine and other parts of body. Pakistan, as a key signatory of the CITES regulations, is confronted with numerous conservation challenges. These challenges encompass, but are not restricted to, ineffective governance systems, inadequate data on wildlife populations, poverty, and lack of education among local communities. To furnish the government and research community with evidence for assessing the vulnerability of mammals to illegal hunting, it is crucial to delve into the factors contributing to the rising incidence rates in crucial ecological zones in Pakistan.

CONCLUSION

The study concludes that Pakistan is home to various types of wetlands and has a high diversity of mammalian species. However, these valuable resources are under serious stress due to various factors, making their conservation a crucial need of the time. The main driving forces behind the functioning of wetlands are their hydrology and hydrodynamics. Therefore, any changes in these forces caused by human activities can significantly impact the essential functions and services provided by wetlands. Unfortunately, the wetlands in the country are generally deteriorating and the mammalian species are declining under a wide range of anthropogenic pressures. So need to protect wetlands and mammalian species in Pakistan.

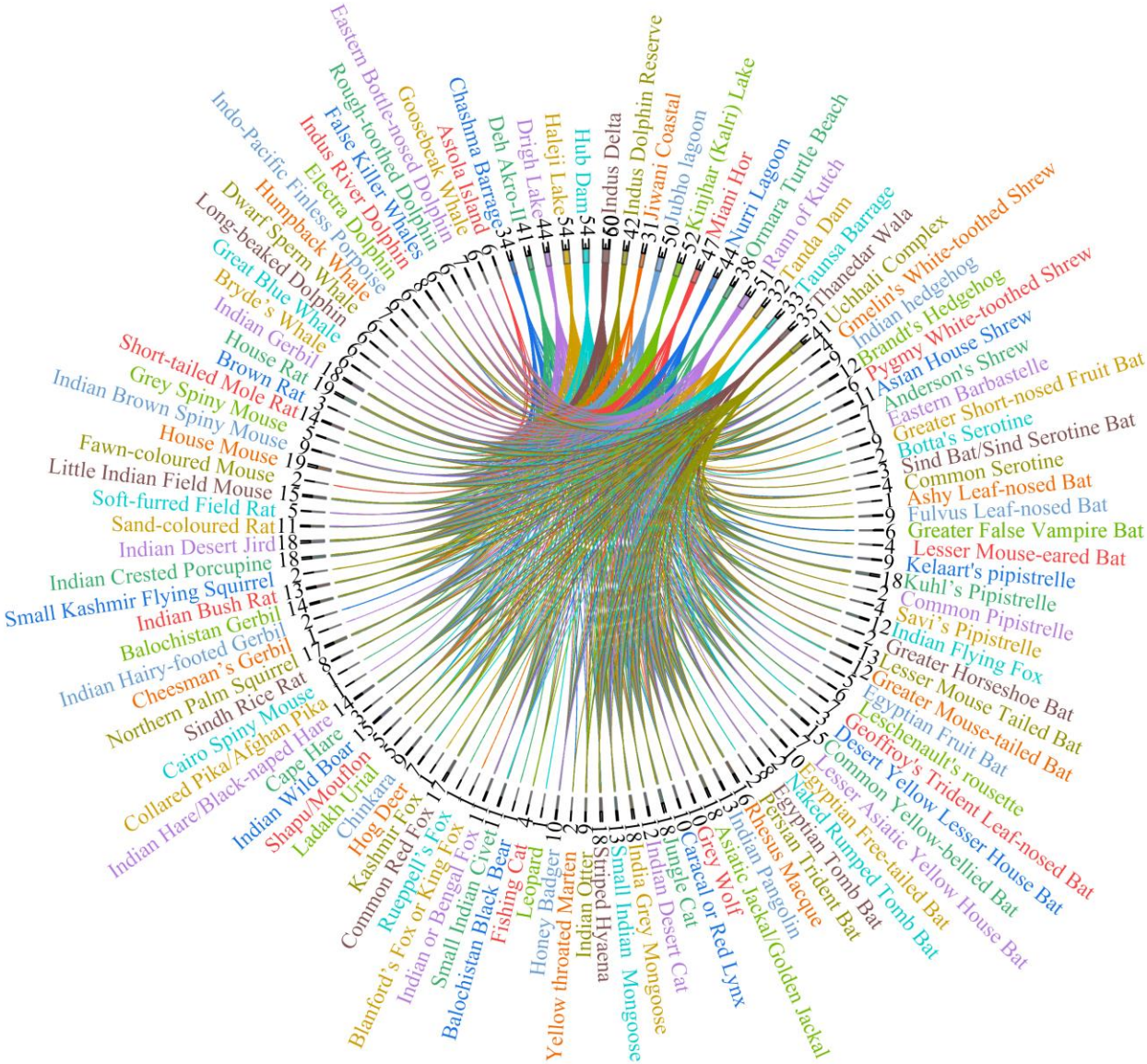

Figure 5: Chord diagram of mammalian families in Ramsar sites of Pakistan.

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Table 2: List of mammalian species of Ramsar sites in Pakistan.

Sr.	Common name	*Scientific name*	Order	Family	Species Authority	Status
1.	Yellow throated Marten	*Martes flavigula*	Carnivora	Mustelidae	Boddaert, 1785	LC
2.	Striped Hyaena	*Hyaena hyaena*	Carnivora	Hyaenidae	Linnaeus, 1758	NT
3.	Soft-furred Field Rat	*Millardia meltada*	Rodentia	Muridae	Gray, 1837	LC
4.	Small Kashmir Flying Squirrel	*Hylopetes fimbriatus*	Rodentia	Sciuridae	Gray, 1837	LC
5.	Small Indian Civet	*Viverricula indica*	Carnivora	Viverridae	É. Geoffroy, 1803	LC
6.	Small Indian Mongoose	*Herpestes javanicus*	Carnivora	Herpestidae	É. Geoffroy, 1818	LC
7.	Sindh Rice Rat	*Bandicota bengalensis*	Rodentia	Muridae	Gray, 1835	LC
8.	Sind Bat/Sind Serotine Bat	*Eptesicus nasutus*	Chiroptera	Vespertilionidae	Dobson, 1877	LC
9.	Short-tailed Mole Rat	*Nesokia indica*	Rodentia	Muridae	Gray, 1830	LC
10.	Shapu/Mouflon	*Ovis orientalis*	Artiodactyla	Bovidae	Gmelin 1774	NT
11.	Savi's Pipistrelle	*Pipistrellus savii*	Chiroptera	Vespertilionidae	Bonaparte, 1837	LC
12.	Sand-coloured Rat	*Millardia gleadowi*	Rodentia	Muridae	Murray, 1886	LC
13.	Rueppell's Fox	*Vulpes rueppellii*	Carnivora	Canidae	Schinz, 1825	LC
14.	Rough-toothed Dolphin	*Steno bredanensis*	Artiodactyla	Delphinidae	G. Cuvier, 1828	LC
15.	Rhesus Macque	*Macaca mulatta*	Primates	Cercopithecidae	Zimmermann, 1780	LC
16.	Pygmy White-toothed Shrew	*Suncus etruscus*	Eulipotyphla	Soricidae	Savi, 1822	LC
17.	Persian Trident Bat	*Triaenops persicus*	Chiroptera	Rhinonycteridae	Dobson, 1871	LC
18.	Northern Palm Squirrel	*Funambulus pennantii*	Rodentia	Sciuridae	Wroughton, 1905	LC
19.	Naked Rumped Tomb Bat	*Taphozous nudiventris*	Chiroptera	Emballonuridae	Cretzschmar, 1830	LC
20.	Long-beaked Dolphin	*Delphinus delphis*	Artiodactyla	Delphinidae	Linnaeus, 1758	LC
21.	Little Indian Field Mouse	*Mus booduga*	Rodentia	Muridae	Gray, 1837	LC
22.	Lesser Mouse-eared Bat	*Myotis blythii*	Chiroptera	Vespertilionidae	Tomes, 1857	LC
23.	Lesser Mouse Tailed Bat	*Rhinopoma hardwickei*	Chiroptera	Rhinopomatidae	Gray, 1831	LC
24.	Lesser Asiatic Yellow House Bat	*Scotophilus kuhlii*	Chiroptera	Vespertilionidae	Leach, 1821	LC
25.	Leschenault's rousette	*Rousettus leschenaultii*	Chiroptera	Pteropodidae	Desmarest, 1820	NR
26.	Leopard	*Panthera pardus*	Carnivora	Felidae	Pocock, 1927	VU

27.	Ladakh Urial	*Ovis vignei vignei*	Artiodactyla	Bovidae	Blyth, 1841	LC
28.	Kuhl's Pipistrelle	*Pipistrellus kuhlii*	Chiroptera	Vespertilionidae	Kuhl, 1817	LC
29.	Kelaart's pipistrelle	*Pipistrellus ceylonicus*	Chiroptera	Vespertilionidae	Kelaart, 1852	LC
30.	Kashmir Fox	*Vulpes vulpes griffithi*	Carnivora	Canidae	Blyth, 1854	LC
31.	Jungle Cat	*Felis chaus*	Carnivora	Felidae	Schreber, 1777	LC
32.	Indus River Dolphin	*Platanista minor*	Artiodactyla	Platanistidae	Roxburgh, 1801	EN
33.	Indo-Pacific Finless Porpoise	*Neophocaena phocaenoides*	Artiodactyla	Phocoenidae	G. Cuvier, 1829	VU
34.	Indian Wild Boar	*Sus scrofa*	Artiodactyla	Suidae	Linnaeus, 1758	LC
35.	Indian Pangolin	*Manis crassicaudata*	Pholidota	Manidae	Geoffroy, 1803	EN
36.	Indian Otter	*Lutra perspicillata*	Carnivora	Mustelidae	É. Geoffroy, 1826	VU
37.	Indian or Bengal Fox	*Vulpes bengalensis*	Carnivora	Canidae	Shaw, 1800	LC
38.	Indian hedgehog	*Paraechinus micropus*	Eulipotyphla	Erinaceidae	Gray, 1830	LC
39.	Indian Hare/Black-naped Hare	*Lepus nigricollis*	Lagomorpha	Leporidae	F. Cuvier, 1823	LC
40.	Indian Hairy-footed Gerbil	*Gerbillus gleadowi*	Rodentia	Muridae	Murray, 1886	LC
41.	Indian Gerbil	*Tatera indica*	Rodentia	Muridae	Hardwicke, 1807	LC
42.	Indian Flying Fox	*Pteropus giganteus*	Chiroptera	Pteropodidae	Brünnich, 1782	LC
43.	Indian Desert Jird	*Meriones hurrianae*	Rodentia	Muridae	Jordon, 1867	LC
44.	Indian Desert Cat	*Felis silvestris ornata*	Carnivora	Felidae	Schreber, 1777	LC
45.	Indian Crested Porcupine	*Hystrix indica*	Rodentia	Hystricidae	Kerr, 1792	LC
46.	Indian Bush Rat	*Golunda ellioti*	Rodentia	Muridae	Gray, 1837	LC
47.	Indian Brown Spiny Mouse	*Mus platythrix*	Rodentia	Muridae	Bennett, 1832	LC
48.	India Grey Mongoose	*Herpestes edwardsii*	Carnivora	Herpestidae	É. Geoffroy, 1818	LC
49.	Humpback Whale	*Megaptera novaeangliae*	Artiodactyla	Balaenopteridae	Borowski, 1781	LC
50.	House Rat	*Rattus rattus*	Rodentia	Muridae	Linnaeus, 1758	LC
51.	House Mouse	*Mus musculus*	Rodentia	Muridae	Linnaeus, 1758	LC
52.	Honey Badger	*Mellivora capensis*	Carnivora	Mustelidae	Schreber, 1776	LC
53.	Hog Deer	*Axis porcinus*	Artiodactyla	Cervidae	Zimmermann, 1780	EN
54.	Grey Wolf	*Canis lupus*	Carnivora	Canidae	Linnaeus, 1758	LC
55.	Grey Spiny Mouse	*Mus saxicola*	Rodentia	Muridae	Elliot, 1839	LC

56.	Greater Short-nosed Fruit Bat	*Cynopterus sphinx*	Chiroptera	Pteropodidae	Vahl, 1797	LC
57.	Greater Mouse-tailed Bat	*Rhinopoma microphyllum*	Chiroptera	Rhinopomatidae	Brünnich, 1782	LC
58.	Greater Horseshoe Bat	*Rhinolophus ferrumequinum*	Chiroptera	Rhinolophidae	Anderson, 1905	LC
59.	Greater False Vampire Bat	*Megaderma lyra*	Chiroptera	Megadermatidae	É. Geoffroy, 1810	EN
60.	Great Blue Whale	*Balaenoptera musculus*	Artiodactyla	Balaenopteridae	Linnaeus, 1758	EN
61.	Goosebeak Whale	*Ziphius cavirostris*	Artiodactyla	Ziphiidae	G. Cuvier, 1823	LC
62.	Gmelin's White-toothed Shrew	*Crocidura gmelini*	Eulipotyphla	Soricidae	Pallas, 1811	LC
63.	Geoffroy's Trident Leaf-nosed Bat	*Asellia tridens*	Chiroptera	Hipposideridae	Geoffroy, 1810	LC
64.	Fulvus Leaf-nosed Bat	*Hipposideros fulvus*	Chiroptera	Hipposideridae	Gray, 1838	LC
65.	Fishing Cat	*Prionailurus viverrinus*	Carnivora	Felidae	Bennett, 1833	VU
66.	Fawn-coloured Mouse	*Mus cervicolor*	Rodentia	Muridae	Hodgson, 1845	LC
67.	False Killer Whales	*Pseudorca crassidens*	Artiodactyla	Platanistidae	Owen, 1846	NT
68.	Electra Dolphin	*Peponocephala electra*	Artiodactyla	Delphinidae	Gray, 1846	LC
69.	Egyptian Tomb Bat	*Taphozous perforatus*	Chiroptera	Emballonuridae	É. Geoffroy, 1818	LC
70.	Egyptian Fruit Bat	*Rousettus aegyptiacus*	Chiroptera	Pteropodidae	Geoffroy, 1810	LC
71.	Egyptian Free-tailed Bat	*Tadarida aegyptiaca*	Chiroptera	Molossidae	É. Geoffroy, 1818	LC
72.	Eastern Bottle-nosed Dolphin	*Tursiops truncatus*	Artiodactyla	Delphinidae	Montagu, 1821	LC
73.	Eastern Barbastelle	*Barbastella leucomelas*	Chiroptera	Vespertilionidae	Cretzschmar, 1826	LC
74.	Dwarf Sperm Whale	*Kogia simus*	Artiodactyla	Kogiidae	Owen, 1866	LC
75.	Desert Yellow Lesser House Bat	*Scotoecus pallidus*	Chiroptera	Vespertilionidae	Dobson, 1876	LC
76.	Common Yellow-bellied Bat	*Scotophilus heathii*	Chiroptera	Vespertilionidae	Horsfield, 1831	LC
77.	Common Serotine	*Eptesicus serotinus*	Chiroptera	Vespertilionidae	Schreber, 1774	LC
78.	Common Red Fox	*Vulpes vulpes pusillus*	Carnivora	Canidae	Blyth, 1854	LC
79.	Common Pipistrelle	*Pipistrellus pipistrellus*	Chiroptera	Vespertilionidae	Schreber, 1774	LC
80.	Collared Pika/Afghan Pika	*Ochotona rufescens*	Lagomorpha	Ochotonidae	Gray, 1842	LC
81.	Chinkara	*Gazella bennettii*	Artiodactyla	Bovidae	Sykes, 1831	LC
82.	Cheesman’s Gerbil	*Gerbillus cheesmani*	Rodentia	Muridae	Thomas, 1919	LC

83.	Caracal or Red Lynx	*Caracal caracal*	Carnivora	Felidae	Schreber, 1776	LC
84.	Cape Hare	*Lepus capensis*	Lagomorpha	Leporidae	Linnaeus, 1759	LC
85.	Cairo Spiny Mouse	*Acomys cahirinus*	Rodentia	Muridae	É. Geoffroy, 1803	LC
86.	Bryde’s Whale	*Balaenoptera edeni*	Artiodactyla	Balaenopteridae	Anderson, 1879	LC
87.	Brown Rat	*Rattus norvegicus*	Rodentia	Muridae	Berkenhout, 1769	LC
88.	Brandt's Hedgehog	*Paraechinus hypomelas*	Eulipotyphla	Erinaceidae	Brandt, 1836	LC
89.	Botta's Serotine	*Eptesicus bottae*	Chiroptera	Vespertilionidae	Peters, 1869	LC
90.	Blanford’s Fox or King Fox	*Vulpes cana*	Carnivora	Canidae	Blanford, 1877	LC
91.	Balochistan Gerbil	*Gerbillus nanus*	Rodentia	Muridae	Blanford, 1875	LC
92.	Balochistan Black Bear	*Ursus thibetanus gedrosianus*	Carnivora	Ursidae	Pocock, 1932	EN
93.	Asiatic Jackal/Golden Jackal	*Canis aureus*	Carnivora	Canidae	Linnaeus, 1758	LC
94.	Asian House Shrew	*Suncus murinus*	Eulipotyphla	Soricidae	Linnaeus, 1766	LC
95.	Ashy Leaf-nosed Bat	*Hipposideros cineraceus*	Chiroptera	Hipposideridae	Blyth, 1853	LC
96.	Anderson's Shrew	*Suncus stoliczkanus*	Eulipotyphla	Soricidae	Anderson, 1877	LC