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Fish reviewer			

Hawizeh (HZ) (IBA 032 & 036)

Surveyed in winter and summer 2005-2010

Admin Area: Missan and Basra

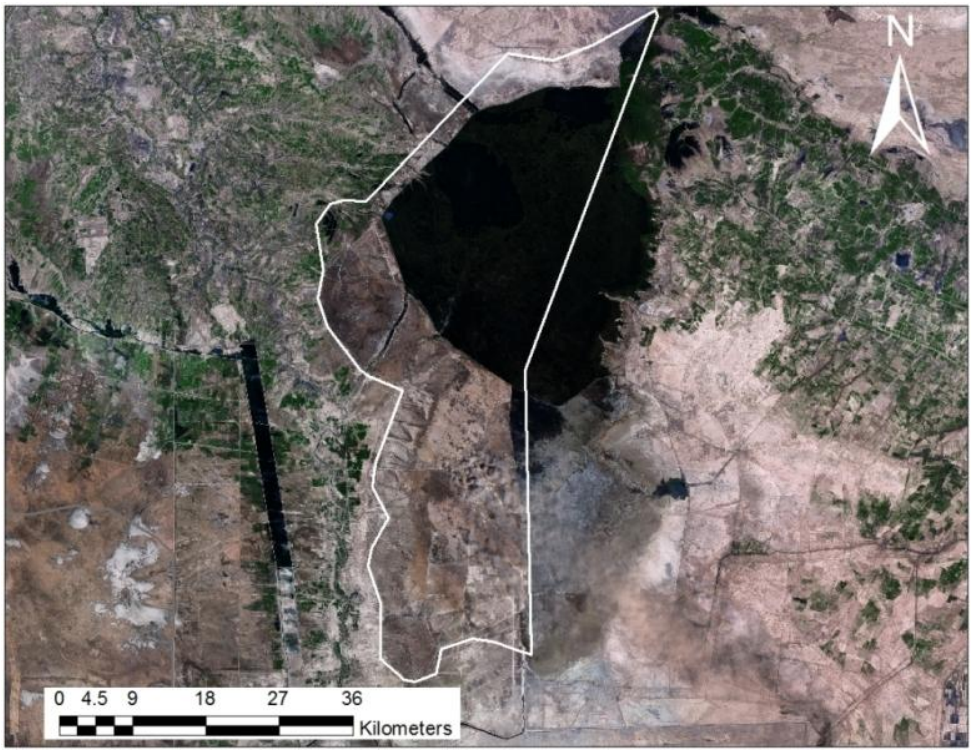
Central coordinates: N 31° 27' 00" E 47° 39' 00"

Area: 165,000 ha

Altitude: Around 4 m

KBA Criteria: V& Ie
IBA Criteria: A1, A2, A4i, A4ii, A4iii
IPA Criteria: A4, A5, B1, and C
Status: Unprotected
Ecoregion: Tigris-Euphrates alluvial salt marsh

Directional information: This area is located approximately 40 km southeast of Amarah city and 60 km northwest of Basra.



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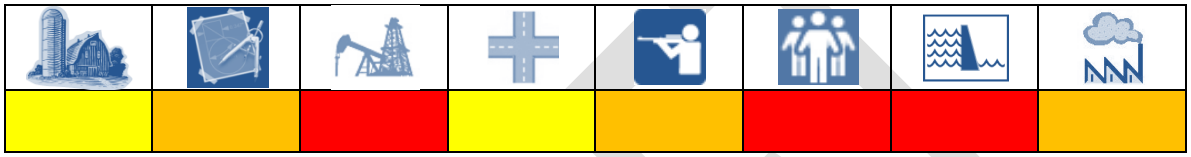
Northern section of Hawiza (Um-Al-Ne'aaj) facing west (Photo by Mudhafar Salim, 2009)



Site Description: Hawizeh Marsh lies to the east of the Tigris River, straddling the Iran-Iraq border. Evans (1994) listed it as two IBA sites, 032 & 036, but the KBA surveys consider these to be one delineated site. The Iranian section of the marshes is known as Hor Al-Azim, which is fed primarily by the Kharkeh River. In Iraq, this marsh is fed by two main distributaries departing from the Tigris River near Amarah, known as Al-Musharah and Al-Kahla'a. Hawizeh Marsh extends north to south from the Birkat Al-Udheim and Umm An-Ni'aaj Lakes, bordered by the Iran-Iraq frontier on the northeast and the Majnoon Oilfield to the southeast. Villages, roads, dykes and agricultural lands in the west are located along its borders including the Al-Sheeb, Al-Musharah, and Al-Kahla'a Causeways to the northwest, and the Al-Uzayr and Al-Khana (Dasim) Causeways in the southwest extremities. Small linear sections follow the wetland waterways of the Al-Kassarah Canal in the west and along the Iranian border area in the east. The site is also bisected by numerous dykes with surfaced roads including the Lisan E'jayrda Causeway running east-west.

Hawizeh marsh is the first Ramsar site in Iraq designated on 17/10/2007 when Iraq signed the Convention for Protecting Internationally Important Wetlands on 17/02/2008 (known as the Ramsar Convention (Ramsar, 2011)). The total area of the designated Ramsar site is 137,700 ha. The estimated 1973 pre-drainage area of Hawizeh Marsh was 243,500 ha, thus about 56% of the original area has been included in the Ramsar site designation. Hawizeh Marsh is a transboundary wetland, with about 75-80% located in Iraq and the rest in Iran. The Iraqi Ramsar site and the KBA site delineations exclude the marsh areas that extend into Iran. The Ramsar site only includes the water bodies with narrow margins around the marshlands, but the KBA delineation for Hawizeh is somewhat larger because a larger buffer zone is proposed. This was to ensure the biological requirements of the key bird species of this site. The area is dominated by freshwater to brackish marshes, both permanent and seasonal, with reed beds and open areas of shallow water. Hawizeh was one of the only Mesopotamian marshland areas that never fully dried out because it continued to receive water from Iran through the Kharkeh River. Nevertheless, the re-flooding that took place throughout the marshes after the war in 2003 greatly benefitted Hawizeh marshlands as well.

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Unfortunately, the wetlands are shrinking significantly again today, and becoming increasingly restricted to the northern part only as dry land extends from the southern edges of Majnoon oilfield to the north of Lisan E'jayrda. This is due to the completion of a 65-km long embankment in 2009 on the Iranian side of the border that now blocks water entering the marshes from Iran. In addition, water resources from the Tigris are declining due to upstream dams and diversion projects. This has caused serious drought particularly in the lower half of Hawizeh.

Satellite images showing Hawizeh Marsh from 2008 to 2012 (source: http://www.maptalker.com)

During the KBA site visits nine sub-sites were surveyed in winter and summer between 2005 and 2010 and these are shown below.

Sub-Site Code	Sub-Site Name	Nearest Town	IBA Codes	Coordinates					
				North			East		
HZ1	Umm An-Ni'aaj	Kahla'	IBA 032, IBA 036	31	35	35	47	34	56
HZ2	Udheim	Musharah	IBA 032, IBA 036	31	41	13	47	44	56
HZ3	Sewaalif	Musharah	IBA 032, IBA 036	31	41	44	47	42	55
HZ4	E'jayrda	'Ezeir	IBA 036	31	19	55	47	37	51
HZ5	E'jayrda, East	'Ezeir	IBA 036	31	19	38	47	37	50
HZ6	E'jayrda Border Station	'Ezeir	IBA 036	31	17	10	47	36	46
HZ7	E'jayrda, North	'Ezeir	IBA 036	31	17	22	47	27	21
HZ8	Majnoon	Al-Deer	IBA 036	31	5	41	47	34	38
HZ9	Umm Al-Ward Bushes	Kahla'	IBA 036	31	34	5	47	30	4

Important Bird Area Criteria	**Observation made 2005-2010. Unless stated otherwise numbers are estimates based on extrapolations using area/transect counts and area of known habitat. (see methodology on pXX).**	
A1. Globally threatened species		
	Breeding	Passage/Wintering
Marbled Duck *Marmaronetta ngustirostris* (Resident)	72-203 pairs (2005-2009)	182-1317 (counts, 2005-2009)
Basra Reed Warbler *Acrocephalus griseldis*	700 pairs (based on sample counts and	

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(Summer visitor)	2,250 ha of reedbeds suitable for breeding).	
White-headed Duck *Oxyura leucocephala* (Winter visitor)		38 (counts, 2005)
A2. Restricted-range species		
	Breeding	Passage/Wintering
Iraq Babbler *Turdoides altirostris* (Resident)	850 pairs (based on sample counts and 3,000 ha of reedbeds suitable for breeding).	11-69 (2007-2009)
Acrocephalus griseldis	700 pairs	
A4i. 1% or more of biogeographical population of a congregatory waterbird species		
	Breeding	Passage/Wintering
Marmaronetta angustirostris (Resident)	72-203 pairs (2005-2009)	182-1317 (counts, 2005-2009)
A4ii. 1% or more of global population of a congregatory seabird or terrestrial species		
	Breeding	Passage/Wintering
Acrocephalus griseldis	700 pairs	
A4iii. Holding congregations of 20,000 waterbirds or 10,000 pairs of seabirds of one or more species		
	Breeding	Passage/Wintering
Congregatory waterbirds		> 35,000 (counts)

Additional Important Bird Observations: During the 2005-2010 surveys 94 bird species were observed in Hawizeh. In addition to those listed in the table above, two Vulnerable species, Eastern Imperial Eagle *Aquila heliaca* and Greater Spotted Eagle *A. clanga,* were found wintering at this site, as were three Near Threatened species, Ferruginous Duck *Aythya nyroca* (summer and winter), Pallid Harrier *Circus cyaneus*, and Black-tailed Godwit *Limosa limosa* (passage and winter), all in sub-IBA threshold numbers. The Iraqi race of Little Grebe *Tachibaptus ruficollis iraquensis* and the Iraqi race of Hooded Crow, *Corvus cornix capellanus* (also known as Mesopotamian Crow) breed here. Additionally, the site supported eight breeding Sahara-Sindian Desert biome-restricted species but these did not triggar inclusion under the A3 criterion (see table page XXX). Hawizeh is the only wetland in Iraq that holds a breeding population of African Darter *Anhinga rufa* (of the Middle East race *chantrei*) and African Sacred Ibis*Theskiornis aethiopicus.* According to frequent reports of locals and hunters, the Goliath Heron *Ardea goliath* occurs in the northern part of the marshes, but in small numbers.

Other Important Fauna: Data were collected in 2005-2010 at various sites in Hawizeh. The southen marshes lie at the centre of the distribution of an isolated subspecies of smooth-coated Otter *Lutrogale perspicillata maxwelli.* Its status and distribution have been unclear due to confusion with the Eurasian Otter *Lutra lutra* (Near Threatened), which also occurs in the region. Recent surveys (Omer et al. 2012, Al-Sheikhly and Nader 2013) have confirmed the presence of smooth-coated otter in parts of the southern marshes for the first time since the 1950s-1960s and it is likely that this species

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occurs in the Hawizeh, as this is one of the few areas in southern Iraq that was not completely drained in the 1990s.. Some key carnivore species found or reported during the KBA surveys include Jungle Cat *Felis chaus* and Wild Cat *Felis silvestris*. In 2012, Grey Wolf *Canus lupus*, Golden Jackal *Canis aureus*, and Wild Cat *Felis silvestris* were camera trapped in Majnoon. Reptiles found in terrestrial and aquatic habitats were: Tessellated Water Snake *Natrix tessellate* and Caspian Turtle *Mauremys caspica* (both Least Concern) exist is considerable numbers.

Fish: Data were collected from 2005 through 2007, during which 14 species were found. According to Coad (2010) *Acanthobrama marmid, Alburnus mossulensis, Carassius auratus, Cyprinus carpio, Heteropneustus fossilis* are of economic importance; and *Acanthopagrus latus*, *Aspius vorax, Carasobarbus luteus, Mesopotamichthys sharpeyi, Luciobarbus xanthopterus, Liza abu, Liza carinata,* and *Tenualo sailisha* are *of* conservation concern and also economically important. *Silurus triostegus* is found in increasing numbers but is not fished commercially. It is ecologically important as a predator in the marshes but its conservation status in Iraq is unknown.

Plants & Habitats: About 32 terestrial species and 25 aquatic and semi-aquatic species were observed in the four main habitats that were surveyed within the Hawizeh Marshes:

1. Inland Standing Water—Aquatic Communities—Rooted Submerged Vegetation;Rooted Floating Vegetation,; and Free Floating Vegetation(N: 31° 35' 35" E: 47° 34' 56") dominated by *Hydrella verticillata, Myriophyllum verticillatum, Najas marina, Potamogeton crispus, P. lucens, P. nodosus, P. pectinatus, P. perfoliatus,* and *Ceratophyllum demersum; Nymphoides indica;* and *Lemna gibba, Lemna minor* respectively.
2. Marsh Vegetation—Helophytic Vegetation—Reedbed; Reedmace Bed; and *Schoenoplectus* bed (N: 31° 35' 35" E: 47° 34' 56") dominated by *Phragmites australis; Typha domingensis;* and *Schoenoplectus littoralis* respectively.
3. Woodland—Shrub (N: 31°34'11.04" E: 47°30'6.10") dominated by *Tamarix* sp.
4. Inland Running water—Rivers or Canals—Riparian Vegetation (N: 31° 34' 05" E: 47° 30' 04") dominated by *Salix acmophylla*, *S. euphratica*, *Rubus sanctus*, *Cynodon dactylon* and *Aeluropus lagapoides*.

The area was rated between slightly disturbed (2) and most disturbed (5) on the ecological scale due to the drying of the marsh which will in time affect all aquatic organisms. The slope is flat and the geology of the area is Mesopotamian alluvium, mainly silts. The elevation is less than 10m.

Conservation Issues: Hawizeh is one of the most important water bodies in Iraq as it harbors a number of very important species that breed in the region's dense reed beds. However, many of the Hawizeh sub-sites are now severely affected by the Iranian embankment that runs parallel to, and 200 m away from, the Iraq/Iran border. It is roughly 20 m across and over 65 km long – bisecting the entire length of Hawizeh Marsh and directly impacting the water supply to the Iraqi wetlands from Al-Karkha River. The most urgent priority is to remove the embankment to renew water supplies. During recent years, the habitat has changed dramatically and most of this site is suffering from the serious drought that began in 2009, which had a direct affect on biodiversity. Unfortunately, many parts were once extremely rich in waterfowl (based both on historical information and the KBA 2005-2009 surveys) but have dried up in less than two years. Oil development is primarily

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focused in the northern part of the site near Umm Al Ni'aaj (HZ1) and the southern part part in Majnoon area (HZ8), and was considered a very high threat due to previous pollution from well sites as well as plans for further development. Human intrusion, both from past damaging military campaigns in that still affect the site to the current movement of people and equipment across the southern part for oil development was also considered a very high threat. Additional high threats result from urban and commercial development and expansion occurring largely close to Umm Al Ni'aaj (HZ1); fishing and bird hunting that appears to be largely unsustainable and is concentrated at sub-sites HZ1 and HZ2, as well as HZ4 and HZ8 (before 2008); and pollution from sewage coming from upstream cities and towns to petrochemical pollution from oil facilities in southern Hawizeh, as well as waste water diverted to Iraq from Iran.

Recommendations: With the listing of Hawizeh as Iraq's first Ramsar Site, a management plan was developed but remains largely unimplemented (Nature Iraq, 2008a & b). It is critical to implement the program of work outlined in the management plan and the key recommendations it makes. Here we address only recommendations for the critical threats now facing Hawizeh since the completion of the management plan. Due to the serious decrease in water levels in Hawizeh because of the embankment built by Iran, liaison with the relevant Iranian authorities is necessary and the solution to this problem will be at least partly political. This site must also be protected from human activities that affect the fauna, such as over-hunting of birds and electro-fishing. These can be addressed by the local governments in Basra and Missan Governorates by prohibiting fishing and hunting in the breeding/spawning seasons as well as the bird migration seasons. Local governments and NGOs need to raise the awareness of local people including the local Marsh Arabs regarding the importance of Hawizeh Marsh for both environment and cultural heritage. Additional research should be conducted of the local fish population to determine the sustainable catch for the area, and a community program devised to regulate the fisheries. Frequent field education activities should be conducted to raise local awareness about threatened and key species and how to protect them. It is noteworthy that Shell Oil Company (contracted by the Iraqi government) is developing the Majnoon Oifield, which overlaps Hawizeh Marshes. Shell consulted Wetlands International, Flora and Fauna International, Nature Iraq and Mott MacDonald as well as other conservation organizations and consulting companies to develop a Biodiversity Action Plan for Hawizeh Marsh. This action plan, under development at the writing of this assessment, aims to minimize the negative impacts of oil development on the biodiversity of the area.

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