## Mosul Lake (D10)

Surveyed in summer 2007-2010 and winter 2008-2010

Admin Area: Dohuk Coordinates: N 36° 44' 28'' E 42° 47' 10'' Area: 48,128 ha

Altitude: 300-350 m

IBA Criteria: A1 and A4i IPA Criteria: Under assessment Status: Unprotected Ecoregion: Middle East Steppe (PA0812)

Directional information: This site is located 24 km southwest of Dohuk city.





Mosul Lake (Photo by Korsh Ararat, 2009)



**Site Description:** This site consists of a large freshwater lake reservoir created by the Mosul Dam southwest of Dohuk city. This earthen embankment dam was completed in 1984 but has been under constant repair as it is built upon gypsum, a material that dissolves in water. A US Army Corps of Engineers report stated that due to the possibility of the foundation eroding, "Mosul Dam is the most dangerous dam in the world" (Paley, 2007). There is little human activity other than gravel mining, wheat and barley farming, and some net fishing on the lake. This lake was accessed from a water station that distributes water from the reservoir to Dohuk City. Because of poor security, only a small portion of the lake area could be surveyed.

Important Bird Area Criteria	Observation made 2007-2010. Unless stated otherwise numbers are estimates based on extrapolations using area/transect counts and area of known habitat. (see methodology on p. XX).	
A1. Globally threatened species		
	Breeding	Wintering/Passage
Egyptian Vulture	7-15 pairs (counts, 2009-	
Neophron percnopterus	2010)	
(Summer visitor)		
A4i. 1% or more of biogeographical population of a congregatory waterbird species		
	Breeding	Wintering/Passage
Ruddy Shelduck		1200-9000 (counts); (2.4%-
Tadorna ferruginea		18% of regional population)
(Winter visitor )		
Collared Pratincole	500-1200 (counts, 2008 and	
Glareola pratincola	2010); (0.5%-1.2% of	
(Summer visitor)	regional population	

Additional Important Bird Observations: During the 2007-2010 surveys, 87 species were observed. European Roller *Coracias garrulus* (Near Threatened) was breeding and Lesser White-

fronted Goose *Anser erythropus* (Vulnerable) occurred in winter, but at levels that did not meet IBA criteria. In winter the site held up to 2500 of the *armenicus* race of Yellow-legged Gull *Larus michahellis*.

## Other Important Fauna

Mammals, Reptiles, and other Fauna: Data were not collected.

Fish: Data were collected in 2007 and 2008, when 14 species were reported. Species of both economic importance and conservation concern according to Coad (2010) were: Liza abu, Luciobarbus esocinus, Luciobarbus xanthopterus, and Tor grypus. Five species were solely of economic importance: Acanthobrama marmaid, Cyprinion kais, Cyprinion macrostomum, Cyprinus carpio and Heteropneustes fossilis and one species was solely of conservation concern, Carassius auratus. Four species were of no economic importance, but their conservation status in Iraq is unknown: Alburnus caeruleus, Capoeta damascina, Mastacembelus mastacembelus, and Silurus triostegus.

**Plants & Habitats:** The number of plants identified was about 70. One waypoint was surveyed in one habitat near Mosul Lake: Steppe Zone-Moist Steppe Zone (N 36° 46' 0" E 42° 45' 05"), on the eastern (Dohuk province) side of the lake. This site contained agricultural fields where the characteristic plants were *Prosopis farcta* (shrub), *Sinapis arvensis, Carthamus oxyacantha* (herbs) and *Taeniatherum asperum* (grass). The features of area were a gentle slope, eastern exposure, and sandy clay soils. The area was 50% non-vegetated. The geology was a mix of siltstones and sandstones. The overall condition of the site was very disturbed with an ecological scale of four.

**Conservation Issues:** The principal environmental threat is the status of the Mosul Dam itself, which is under constant maintenance. The proposed solution for the dam is both expensive and untried. Additional threats at this site were fishing, livestock production/grazing, gravel mining, and agricultural activities. All of these threats were assessed as high. In addition, human disturbance such as vehicle and tractor movement reduced the vegetation cover, but, along with residential and commercial development this was considered only a medium threat. Boating is another factor that can adversely impact the habitat and runoff from the surrounding land also picks up discarded trash and other pollutants.

**Recommendations:** It is imperative that a long-term, viable solution is found to address the stability of Mosul Dam. All potential solutions including dam removal should be considered to determine the most cost effective. Regardless of the actions taken, biodiversity protection should be taken into account as the site currently supports several important species. Regulations regarding agriculture, grazing, fishing and boating in and around the lake should be devised and implemented. In addition, controls on fishing seasons, quotas and the enforcement of moratoriums to ensure sustainability of the fishery should be promulgated. Regulations could include potential limits and /or controls on agriculture and grazing in the surrounding areas and the use of agrochemicals. An ecological education campaign targeting lake users would increase awareness of the value of the area.

## References

Coad B. W. (2010). Freshwater Fishes of Iraq. PENSOFT Publishers, Sofia-Moscow. No. 93.

Paley, A.R. (2007). <u>"Iraqi Dam Seen In Danger of Deadly Collapse"</u> <u>The Washington Post</u>, October 30, 2007. <u>http://www.washingtonpost.com/wp-</u> <u>dyn/content/article/2007/10/29/AR2007102902193.html?hpid=topnews</u> Retrieved on 2 May 2012.