

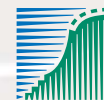
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Waterbirds around the world

A global overview of the conservation,
management and research of the
world's waterbird flyways

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The importance of Uzbekistan's wetlands for wintering waterfowl of the Central Asian Flyway

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The current ecological situation in Central Asia is very different from the early part of the last century, especially regarding waterbird habitats. The Aral Sea region has experienced both major habitat loss and re-creation as a result of human activities. This paper shows that both natural and artificial wetlands are attractive for wintering waterbirds which spend the winter in central and southern regions of Uzbekistan, within the migration flyway from North-Western Asia to Iran-Caspian and Indian-Pakistani wintering grounds.

In the second half of the 20th century anthropogenic transformations of arid ecosystems took place throughout Central Asia. This especially affected the flat lands of Uzbekistan, which were developed for agriculture. Development of an irrigation and drainage network in arid areas has resulted in changes in levels of groundwater and the creation of a large number of filtration and waster-water lakes. The degradation of the Aral Sea and the deltas of the Amudarya and Syrdarya rivers has resulted in major loss of habitats for nesting and migrating birds in Central Asia. Consequently, the importance of existing and

newly created lakes increased. Over 200 000 waterbirds overwinter on the inland wetlands of Uzbekistan (Kashkarov 1994).

Uzbekistan is situated in the middle and south-eastern part of the Turanian plain. Research was undertaken in the south-eastern part i.e. central and southern regions of Uzbekistan. This region has comparatively mild climatic conditions for wintering waterbirds, and 10 to 33% of the total number of waterbirds in the Central Asian-Caspian region overwinter there (Kashkarov 1994). Wetlands in the southern regions of Central Asia and southern Uzbekistan are situated in the zone of warm Central Asian wintering grounds, whereas wetlands in northern Uzbekistan are in the zone of cold Central Asian wintering grounds and are frequently frozen which results in high fluctuations in numbers of wintering birds over different years.

Wetlands studied included large and small lakes, water reservoirs and two stretches of the Syrdarya river: a stretch in Uzbekistan between the Tajikistan and Kazakhstan boundaries (approximately 80 km long), and a stretch on the border with Afghanistan (approximately 20 km long).

Table 1. Distribution of wintering waterbirds in Uzbekistan wetlands in January.

Region	Wetland	No. of waterbirds counted		
		2000	2003	2004
Region of cold wintering grounds		412 346	241 171	331 373
Mid-stream of the Syrdarya River	Syr Darya river	19 456	128 028	97 578
	Aydar-Arnasay lakes system	284 539	96 643	60 708
	Tuyabuguz water reservoir	-	16 500	28 914
Bukhara region	Ayakagitma	23 281	-	-
	Karakir lakes system	85 070	-	144 173
Region of warm wintering grounds		559 419	317 092	442 146
Bukhara Region	Kuyumazar and Tudakul water reservoirs	55 345	143 392	168 533
	Shorkul	13 864	-	-
	Solyonoye and Zamonbobo lakes	16 379	-	-
	Khadicha Lake	8 395	-	1 620
	Deukhona Lake	5 813	6 018	3 262
	Zekry Lake	26 663	8 377	43 745
	Dengizkul	286 634	39 345	18 503
Kashkadarya region	Talimarjan water reservoir	66 698	-	53 128
	Sichankullake	7 637	-	-
	Chimkurgan water reservoir	19 254	-	-
	Achinskoye Lake	52 737	-	28 637
Surhandarya Region	Amudarya river	-	52 427	62 632
	Uchkyzyl water reservoir	-	9 915	8 638
	Aktepe water reservoir	-	21 267	26 331
	Kumkurgan water reservoir	-	36 351	27 117
Total		971 765	558 263	773 519

Aerial surveys were carried out in 2000 on 32 Uzbekistani wetlands in both cold and warm wintering ground zones, with over 900 000 wintering waterbirds counted (Lanovenko *et al.* 2001). Mixed surveys (by foot and motorboat) counted 558 263 waterbirds wintering on 13 wetlands in 2003, and 773 519 waterbirds on 15 wetlands in 2004. All censuses were carried out in January (Table 1).

More than 50 waterbird species were recorded, nine of which are globally threatened: Dalmatian Pelican *Pelecanus crispus*, Lesser White-fronted Goose *Anser erythropus*, White-headed Duck *Oxyura leucocephala*, Ferruginous Duck *Aythya nyroca*, White-tailed Eagle *Haliaeetus albicilla*, Red-breasted Goose *Branta ruficollis*, Marbled Teal *Marmaronetta angustirostris*, Pallas's Sea Eagle *Haliaeetus leucoryphus* and Pygmy Cormorant *Phalacrocorax pygmaeus*. The creation of the new waterbodies has modified the territorial distribution of waterbirds in the Central Asian region and are especially important for White-headed Duck and White-tailed Eagle.

In Table 1, comparison with the 1990s population estimates (Perennou *et al.* 1994), indicates that 17% of Red-crested Pochard from the Western-Central-Asian/South-Western Asia population, 33.8% of Mallard from Western Siberia/Southern-Western Asia population, 42.8% of Ruddy Shelduck *Tadorna ferruginea* from Western-Asian/Caspian/Iranian-Iraq population, and up to 30% of White-headed Duck from Southern-Eastern Europe/Turkish/Southern-Western Asia are wintering in Uzbekistan.

In cold weather conditions, as in 2000 and 2003, waterbirds concentrated on the larger wetlands and deeper rivers. In relatively warm weather, as in 2004, waterbirds distributed over a larger number of shallow small lakes and fields near the deep rivers and big lakes.

In 2004, a very warm winter with good water levels in lakes and water reservoirs, the distribution of some species changed. White-headed Duck, for example, had previously concentrated

only on Dengizkul Lake, but in 2004 it was recorded also on the many small, shallow lakes in Bukhara region and at the Aydar Arnasay lakes system in the Syrdarya river basin.

These surveys illustrated the importance of Uzbekistani wetlands for wintering waterbirds on the Central Asian flyway with the identification of nine wetlands as having international importance for the support of wintering waterbirds. Three of these have Special Protected Area status, which corresponds to IUCN protected areas category IV. Only one of these, Dengizkul Lake, has Ramsar status as a Wetland of International Importance.

The surveys were made possible by a Ramsar Small Grant Fund in 2000, and in 2003 and 2004 through support from the Dutch government in the framework of the Central Asian Flyway Project (Wetlands International, WWF Russia). The enthusiasm of the members of the Working Group on Uzbekistan's Wetlands contributed greatly to the success of these surveys.

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The Northern Lapwing *Vanellus vanellus* has recently expanded its wintering range northwards and now occurs throughout central and southern Uzbekistan. Photo: Paul Marshall.