REVIEW

THE STATUS OF THE EURASIAN OTTER (LUTRA LUTRA) IN CENTRAL ASIA: A LITERATURE REVIEW

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Abstract: The Eurasian otter (*Lutra lutra*) is rare in Central Asia. Otter populations are small and fragmented and appear to be declining in most parts of the region. Diminishing freshwater resources, high human population density in river valleys, river pollution, and a weak focus on nature conservation, make the long-term survival of the species in the region highly threatened. Here, we review the available literature about the Eurasian otter from recent decades in Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan, Afghanistan, and far northwestern China. Central Asia can be considered a "white spot" in terms of otter research, with extremely limited available data suggesting a compelling need for further study and conservation measures.
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INTRODUCTION

Eurasian otters are rare in Central Asia and their populations may be declining toward extinction in parts of the region. Very little is known about the status of the species, and what is known varies significantly across the region. The Eurasian otter (*Lutra lutra*) occupies a very wide range, across Europe, Asia and northern Africa, and is listed as Near Threatened in the IUCN Red List (Loy et al., 2022). Few studies have documented otter presence in Central Asia. Neither de Silva (2011) nor Basnet et al. (2020) in recent reviews of Eurasian otter distribution in Asia cite records of the presence of the species within this huge continental landscape. Published estimates of otter abundance and distribution vary through time, often with contradictory numbers, but reflect an extremely rare contemporary presence. In this review of the available

published literature, we explore reports of *Lutra lutra* in Central Asia across recent decades. The Eurasian otter is protected by law in all countries of Central Asia. Eurasian otters are listed as endangered in China, Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, and Tajikistan (Bykova et al., 2022; Li and Chan, 2018; Loy et al., 2022), and as vulnerable in Afghanistan (Loy et al., 2022).

Subspecies

Two subspecies of the Eurasian otter are reported from Central Asia: *Lutra lutra lutra* (Linnaeus, 1758) and *L. l. seistanica* (*oxiana*) (Birula, 1912) (Oleynikov and Saveljev, 2015). This latter subspecies, known as the Central Asian otter (*Lutra lutra seistanica* Birula, 1912 = *L. l. oxiana* Birula, 1915, with the latter being a synonym) has a type locality designated as the "Helmand River, Seistan, Iran." The type specimen is housed in the Zoological Museum of the Russian Academy of Sciences (ZMAS 8363). The subspecies is notably distinct from the nominative subspecies in both cranial proportions and coloration of its fur (Baryshnikov and Puzachenko, 2012). Only recent studies have identified otter occurrences in the region at the subspecies level.

Both subspecies, *L. l. l.* and *L. l. seistanica*, are found only in Kazakhstan and northeast China, *L. l. lutra* in the north and *L. l. seistanica* near the Pamir ranges. In the southeast of the region, the subspecies borders on the distribution of *L. l. monticola*, though the exact boundaries between the subspecies remain unclear (Hung and Law, 2016). The Eurasian otter is listed in the Red Lists of all the countries we considered, and "endangered" in China, Uzbekistan, Turkmenistan, Tajikistan, "vulnerable" in Afghanistan (Oleynikov and Saveljev, 2015; Rustamov and Belousova, 2021; Bykova et al., 2022), "rare or disappearing" in the Red Data Book of Kazakhstan (Oleynikov and Grachev, 2024), and with an "unknown" status in Kyrgyzstan (Red Data Book of Kyrgyz Republic, 2006; Loy et al., 2022). In Kazakhstan, only *L. l. seistanica* is protected, while *L. l. lutra* is included in the list of game species.

Central Asian Region

Here, we define Central Asia as the vast region of deserts, arid grasslands, and mountains south of the Russian Federation, north of the Himalayan Mountain ranges in Pakistan and India, east of Iran and Caspian Sea, and in the far west of China, and centered on the mountain complex known as the Pamir Knot (Fig. 1). The western part of the region encompasses the countries of Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan, and Afghanistan. The eastern region, the Xinjiang Uygur Autonomous Region of China, is comprised of two areas, Dzungaria in the north, and the larger Tarim Basin in the south, with the severe, uninhabited Taklamakan Desert at its center.

These two large regions lie to the east and west of a great mass of mountain ranges that provide much of the available otter habitat. The Pamir Mountains are at the heart of the convergence of mountain ranges that divide eastern from western Central Asia. Substantial massifs extend from the Pamir, the Kunlun and the Altun Mountains to the east, the Karakoram Mountains to the south-east, the Hindu Kush to the south-west, and the Tien Shan and Altai to the north-east. These high mountains host some of the largest glaciers in Asia and produce substantial rivers on all sides, at least seasonally (Fig. 2).

Figure 1. The Central Asian Region, including Xinjiang Autonomous Region China, Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan, and Afghanistan (Map by Kurt Menke).

Figure 2. A Central Asian river, the Kok-suu, flows from high-elevation glaciers in the mountains of Kyrgyzstan (Photo by Gleb Sedash).

The Pamirs and the Tien Shan both possess a high number of species, comprising a "Mountains of Central Asia Biodiversity Hotspot", which includes parts of southeastern Kazakhstan, eastern Uzbekistan, southeastern Turkmenistan, most of Kyrgyzstan and Tajikistan, and the far western part of Xinjiang (Critical Ecosystem

Partnership Fund, 2017; Myers et al., 2021). These mountain ranges are surrounded by vast areas of desert and arid grasslands that comprise most of the region. Otter habitat in Central Asia is primarily restricted to the large rivers which originate in high mountains, then flow into deserts and steppes and are diminished or disappear into the sands.

Historical References

There is abundance evidence that otter fur was a prized and common trade item in Central Asia for millennia, suggesting that otters were present, if not common, in centuries past. Old trade routes coursing through the region, connecting China with trading entrepots of Xian and Kashgar in Xinjiang, Samarkand in Uzbekistan, Merv in Turkmenistan and Constantinople in Turkey, carried furs across the region. Numerous texts document the very old barter trade in otter pelts, coveted for adorning hats and robes (e.g., Warikoo, 2009; Yongdan, 2018, Kapalbaev et al., 2020), common enough that local people in Xinjiang wore otter fur hats (Supasorn, 2022). Otter fur was particularly prized and in demand in Tibet for centuries (Yongdan, 2018). In some parts of the region, otter pelts were used in the past to pay taxes or annual tribute to the local amban (Hällzon et al., 2024). Over the last two millennia, otter habitat was severely reduced due to a general drying trend in the region that diminished glacial-fed rivers due to Holocene warming conditions (e.g., Feng et al., 2023). Otter abundance then dropped sharply due to an intensifying trade in fur-bearing animals, including otters, beginning in the 17th and 18th centuries in Russia, China and Central Asian countries, fluctuating in the 20th century under varying political systems, but continuing across much of the region until recent decades (Blank and Li, 2021).

METHODOLOGY

Records of Eurasian otters in published literature in recent decades in Central Asian countries were searched using Google Scholar and search engines. Search terms included “otters”, “Eurasian otters”, “*Lutra lutra*”, and “*L. lutra seistanica*”, together with the names of the region’s countries, localities, mountain ranges and rivers. Speculation about otter population presence and abundance in the literature sometimes varied widely, with general and unconfirmed discussions. Records that appeared to be reliable, including direct observation, survey data, or photographs, are highlighted. Less reliable reports are considered cautiously. Recent declines in otter numbers may mean that even estimates from several decades ago may no longer be valid. Published records by country are highly uneven, depending on whether field surveys have been conducted. There are few recent confirmed records of Eurasian otter presence in Central Asia, with the exception of data from two surveys, in Uzbekistan (Bykova et al., 2022) and Kazakhstan (Oleynikov, 2024). There apparently have been no recent systematic searches for the species in Turkmenistan, Tajikistan, Afghanistan or Xinjiang in China.

Reports by Country

Eastern Central Asia, Xinjiang Uygur Autonomous Region of China

Otter habitat in Xinjiang exists primarily in rivers originating in the glaciers of Altai, Tien Shan and Kunlun Mountains, east of the Pamir range. The huge expanses of the Dzungaria Basin’s Gurbantünggüt and the Tarim Basin’s Taklamakan Desert, both

characterized by few rivers, profoundly hot summers, and bitterly cold winters, offer no otter habitat.

Historically, otters were mainly distributed in northern Xinjiang between the Altai Mountains and the Tianshan Mountains (Yuan, 1991). A fur purchased in the Hotan area in the 1950s is the only record of otters from southern Xinjiang (Yuan, 1991). Sustained commercial harvesting had essentially decimated otter populations in China by the 1980s. By the time hunting was curbed by legal protection for otters in 1989, otter populations in China were at a historical low (Li and Chan, 2018). Otters in Xinjiang seem to have disappeared from most of their historical distribution areas by 1990s. No trace of the species has been found in the Manas River and Kuytun River since the 1980s (Yuan Guoying, pers. comm.). A comprehensive examination of records of otter distribution in China from 2006 to 2016 by Li and Chan (2018) produced no recent record of Eurasian otter presence in the region.

Based on speculation, all Eurasian otters in Xinjiang were classified as *L. l. lutra* (Gao, 1987). Hou et al. (2000) did not specifically discuss the subspecies status of the Eurasian otters they reported from the Ili River and seem to have classified it as *L. l. lutra*. It is not clear whether the otter population in the Ili River in Xinjiang belongs to the same subspecies (*L. l. seistanica*) as the population in the Ili River in Kazakhstan.

Hou et al. (2000), in surveys conducted from 1993 to 1995, reported a small otter population in far northwestern Xinjiang in the upper reaches of the Ili River. It is not known whether this population still exists due to the lack of recent surveys. The Irtysh River is the only river basin in Xinjiang that has confirmed records of otters over the past 20 years. According to a survey conducted by a local NGO Wild Xinjiang since 2018, Eurasian otters still live in the upper main stream of the Irtysh River and its tributaries such as the Kelan, Burqin and Haba Rivers (Han and Lu, 2023). Currently, otter populations in Xinjiang appear to be very small and isolated, occupying fragmented habitats, and impacted by overfishing and hunting.

Western Central Asia

The Central Asian countries of Uzbekistan, Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan and Afghanistan lie on the western side of the Pamir Knot. The mountains regions in the eastern parts of these countries, and the large rivers that flow out of them, provide suitable habitats for otters. Large deserts and steppe comprise most of western Central Asia, including the Kyzylkum Desert in Kazakhstan, Turkmenistan and Uzbekistan, and the Karakum Desert, located mainly in Turkmenistan. Both deserts are crisscrossed with networks of irrigation canals and reservoirs constructed for agricultural purposes.

Kazakhstan

The landscape of Kazakhstan is primarily steppe and desert, with a sparse network of rivers. Currently, otters inhabit only the eastern mountainous part of the country. Suitable otter habitats are limited to the peripheral regions of the country, primarily within the basins of major rivers such as the Irtysh, Ili, Syr Darya, and Ural. Both subspecies of the Eurasian otter are present in Kazakhstan: *L. l. lutra*, found in the Irtysh River in the east and extending into the Ural River in the northwest, and *L. l. seistanica*, which occurs in the upper reaches of the Ili River (Oleynikov and Saveljev, 2015). *L. l. seistanica* is considered rare and endangered, listed in the Red Book of the

Kazakh SSR (1978) and in the Red Book of Kazakhstan (Shaimardanov and Lobachev, 2010). This subspecies has disappeared from the basins of the Syr Darya, Chu, and lower Ili Rivers, as well as Lake Balkhash (Shaimardanov and Lobachev, 2010). Today, *L. l. seistanica* is confined to southeastern Kazakhstan, in the Ili River and its tributaries, within the Almaty and Jetisu regions (Shaimardanov, 2016; Oleynikov, 2024).

Oleynikov (2024) reviewed the distribution of Eurasian otters in Kazakhstan, focusing on rivers flowing from mountain ranges in the northeast and southeast of the country. Historically, *L. l. lutra* occupied the entire Irtysh River, including the Black Irtysh - the river above Lake Zaysan (e.g., Lobachev, 1981) - and its tributaries originating in the Altai Mountains. Otters also historically inhabited the Ural and Volga Rivers along the northern border with Russia but have been absent there for decades (Heptner and Naumov, 1998; Shaimardanov and Lobachev, 2010). The species also appears to have disappeared from the Syr Darya and Chu Rivers, the lower reaches of the Ili River, and rivers flowing into Lake Balkhash from the Dzungarian Alatau (e.g., Koksu, Karatau, Tentek) and Kungei Alatau (Heptner and Naumov, 1998; Lobachev, 1981; Gvozdev, 1986; Shaimardanov and Lobachev, 2010). Current estimates of occupied habitat include the Ili River and its mountainous tributaries draining from the Tien Shan range (Shaimardanov, 2016). Berber (2008) estimated the population of *L. l. lutra* at 100 individuals in the Irtysh River basin within eastern Kazakhstan.

Oleynikov (2024) surveyed the Irtysh and Black Irtysh Rivers in the Pavlodar, Abai, and East Kazakhstan regions in 2023. The subspecies *L. l. lutra* was found in the Black Irtysh River and its tributaries up to the Chinese border. According to Oleynikov (2024), an estimated 10 individuals are present in the section of the Black Irtysh River between the Chinese border and Lake Zaysanwere. The subspecies also inhabits the Kolzhir River, a tributary of the Black Irtysh. No otters were found in the lower stretch of the Irtysh River below Semey, a heavily industrialized and agriculturally developed area with three cities, 78 villages, and a diversion canal, and where tributaries are absent.

Otters in Kazakhstan are threatened by unsustainable water resource use, including irrigation and dam construction, which have reduced water levels in rivers, depleted fish stocks, and caused pollution from mining and agricultural activities. Industrial waste and inputs such as nitrate nitrogen, iron, and manganese further degrade water quality, although toxic metal levels are relatively low. These factors have severely degraded water quality in the Irtysh River, while the Black Irtysh, in contrast, remains relatively clean (Oleynikov, 2024). Hunting also poses a significant threat in the northeast of Kazakhstan (Oleynikov, 2024).

Ongoing studies in 2024 (Oleynikov, pers. comm.) on the Ili River in southeastern Kazakhstan indicate a significant decline in the number of sites showing signs of *L. l. seistanica*. It is possible that the subspecies is now on the brink of extinction in this area.

Uzbekistan

Bykova et al. (2022) reviewed the literature on Eurasian otter distribution in Uzbekistan. The authors cite reports that the species is widespread in the mountainous part of Uzbekistan, the western Hissar Alai, on the Surkha Darya, Kashka Darya, Kyzyl Darya, Aksu, Sherabad Darya, Machai Darya and Sangardak Darya Rivers. The authors

cite reports of otter presence in the Zeravshan River, the Amu Darya River to Lake Sarikamysh on the border with Turkmenistan and in the Pskem Valley (Marmazinskaya et al., 2021). At least 20 to 25 otters inhabit the Zarafshan National Park, as well as one otter observed in the upper reaches of the Zarafshan River across the border in Tajikistan (Bykova et al. 2024). Gritsyna et al. (2016) report that three skins of *L. l. seistanica* were offered to a survey team in the Machaydarya River Valley in the western Hissar-Alai area of Uzbekistan. Otters have been documented along the Amu-Bukhara Canal as well as the Amu Darya basin (Bykova et al. 2024).

Bykova et al. (2022) also conducted a survey of otter presence in the Hissar Nature Reserve, a mountain reserve in the western part of the Pamir-Alai Mountains. They report that otters inhabit the Kyzyldarya, Tankhaz Darya Rivers and tributaries of the Aksu River, the Tamshush, Suvtushar and Naushur Rivers. Their field survey of the Aksu River yielded no sign of otters, but interviews with local community members and reserve staff suggest that otters may inhabit the Aksu River from the Hissarsky Reservoir to the confluence of the Asku and Gilan Rivers. In 2016, Aromov estimated the population of otters in the Hissar Nature Reserve and its surroundings at about 25 to 30 individuals (Aromov, 2016). However, the otter population in the reserve appears to be steadily increasing, to a population of at least 56 as of 2024 (Bykova et al. 2024).

It is interesting to note that while mountain rivers in Uzbekistan offer suitable otter habitat, a network of irrigation canals and reservoirs downstream in arid and desert areas increasingly appear to offer adequate potential habitat (Esipov et al., 2000; Bykova et al., 2022). Otters have been found in the network of irrigation canals and lakes of the Surkhan Darya province the Amu-Bukhara Canal and the lakes of the Jeyran Ecocenter and at the Dengizkul and Karazhengeldy Reservoirs (Volozheninov et al., 1985; Taryannilov, 1986; Ishunin, 1987; Esipov et al., 2000). According to the Red Book of Uzbekistan (2019), approximately 500 otters inhabit rivers in the southeastern part of the country, an unsubstantiated figure, and mortality from illegal hunting is reported at 20 otters per year.

Kyrgyzstan

Otters in Kyrgyzstan are likely present only in small, isolated populations. The Kyrgyz Biodiversity Strategy and Action Plan (Ministry of Environmental Protection, 1998) cites the lack of enough information about *L. lutra* to provide a "clear indication" of the status of the species in Kyrgyzstan but speculates that the Eurasian otter is at a critical lower limit of viability, and may be headed for extinction.

The IUCN Red List characterizes the status of the Eurasian otter in Kyrgyzstan as unknown (Loy et al., 2022) but suggests that otters might be found in the Chon-Alai Valley and upper tributaries of the Kyzyl-Suu River, near the southwest border with Tajikistan. However, a wildlife survey by the Ilbirs Foundation in the summer of 2023 in the Kyzyl-Suu Basin in southern Kyrgyzstan found no sign of otters (Sedash, pers. comm.). The subspecies is apparently no longer present in the rivers of the Lake Issyl-Kul Basin and on the Turan Lowland (Red Data Book of Kyrgyz Republic, 2006).

Degradation of water resources from swamp draining, river pollution, and habitat destruction threaten otters in Kyrgyzstan. Otters face a depleted prey base due to competition for fish with local fishing people in Lake Issyk-Kul and major rivers. An increase in fishing has resulted in a reduced forage base for otters and increased mortality from fishing nets and traps. In addition, a rapid proliferation of private trout

farms in the area presents a new threat to otters. Density of fish in the ponds, together with reduced prey in natural rivers, has led to conflict; for example, 3 to 5 cases of otter killings by fish farm staff have been documented in the Kyzyl-Suu Basin over the past decade (Sedash, pers. comm.). These trout farms are unregulated and present potential hazards from disease and water pollution, which have been known to spill into natural rivers and cause native fish populations to die off (Sedash, pers. comm.).

Turkmenistan

Approximately 80% of Turkmenistan is desert, and only informal evidence of otter presence is available for the limited areas of suitable otter habitat. As of 1995, the species was reported from the Amu Dariya River, the Amu Dariya River Islands in the desert and the Karakumsky Canal, all in eastern Turkmenistan, and in the wetlands of the Lebapsky Velayat in the north-eastern part of the country (Marochkina, 1995). Conroy et al. reported in 1998 that tracks of Eurasian otters were regularly seen in the Amudariynsky Reserve and that 20 otters were believed to live in the man-made Lebapsky Velayat (Conroy et al., 1998). Fet and Atamuradov (2012) suggested that otters inhabit canals in the Amu Darya and Murghab drainages at that time, and possibly in Lake Sarykamysh, estimating a population of no more than 200 otters. No more recent reports are available.

Tajikistan

Ninety-three percent of Tajikistan is mountainous and sparsely settled; Tajik National Park alone constitutes 18% of the country in the lofty Pamirs. The extensive mountains are characterized by abundant glaciers and glacier-fed streams and lakes, braided rivers, and deep canyons (IUCN, 2017) that may offer suitable habitat for otters.

There is virtually nothing known about otters in Tajikistan beyond their apparent rarity. The presence of the Eurasian otter in Tajikistan was confirmed several decades ago by Zholnerovskaya et al. (1994) from museum specimens collected in the Tigrovaya Balka Reserve in the Kurgan-Tyube region. Afanasyev et al. (2024) observed otters in the high elevation Shokh Darya River in the Pamir Mountains near its confluence with the Panj River on the border between Tajikistan and Afghanistan. The river network, with 40 tributaries, originates in a 4,668 masl lake and enters the Gunt River at the elevation of 2,105 masl. Surveys are needed for otter populations in remote, high-elevation locations of Tajikistan. The Red Data Book of Tajik SSR (Narzikulov, 1988) lists the Eurasian otter as Endangered.

Afghanistan

Only 50 years ago, the Eurasian otter was found widely in Afghanistan, but populations have experienced a steep decline in recent decades. Ostrowski (2016) reviewed the literature from Afghanistan on the status of the species, primarily citing historical reports. Nauroz (1974) reported that otters were to be found in almost all rivers of the country except for the seasonally flooded Hari-Rud Valley. This was confirmed by Habibi (2003) who suggested that otters were present in all major rivers between 500 and 2,000 masl up until to the late 1970s.

Melisch and Rietschel (1996) published records of otters from the 1960s and 70s, including the following observational records: Faizabad, Talig-an Valley near

Khanabad, Mazar-i-Sharif, Murghab, Juwain in Seistan, Hamun-i-Puzak, Helmand River, Arghandab River, Panjao, southern Koh-i-Baba Mountains, Maidan Valley, Panjshir Valley, Anjuman Pass, Daria-i-Bajagul River, Gusalik, Nuristan, Kumar River, Bashgul River.

A wildlife survey across Afghanistan by the Wildlife Conservation Society in 2007, however, found no sign of otters except in the Wakhan District in the far northeast of the country (Ostrowski, 2016), where they may have been consistently present. Otters were documented in the early 1970s in the Wakhan District (Naumann and Niethammer, 1973). And as of 2007, otters were reported in the Wakhan River near the villages of Sargez and Goz Khun (Habibi, 2008). A solitary otter was observed in 2013 in a tributary of the Panj River (Ostrowski, 2016). Ostrowski (2016) suggests that localized otter populations may currently exist along ~45 km of the Wakhan and Panj Rivers in the Wakhan Corridor.

A heavy historical trade in fur was responsible for significant impacts on otter populations in Afghanistan, where otter pelts have been common in markets (Ostrowski, 2016). In 1967, for example, Niethammer (1967) documented 40 pelts, and Rodenburg (1977) documented 94 pelts in the Kabul market. Many of these pelts went abroad to Russia, Tajikistan, Turkey, and the EU (Johnson and Wingard, 2010). This trade has continued to the present, despite the fact that the Eurasian otter has been officially protected in Afghanistan since 2010, although pelts in the Kabul market are becoming fewer and more expensive, reflecting a lower harvest (Ostrowski, 2016).

THREATS TO OTTERS IN CENTRAL ASIA

Threats to Eurasian otters in Central Asia are in general those faced by otter species everywhere: the unsustainable use and abuse of water resources, habitat destruction, human-wildlife conflict, infrastructure expansion, livestock overgrazing, population growth, water pollution from agriculture, mining and industry, and water resource diminution from climate heating. In some countries, such as Kazakhstan, oil and gas extraction are intense. Mudflows are a rare threat to otters, but Gritsyna et al. (2016) reported an otter death in the Igrisu River in the Hissar Range in 2015 and Bykova et al. (2022) cite mudflows as a potential threat to otters in the Aksu River. Hunting of otters for their pelts was intense in some Central Asia countries in the past, but may no longer be a major factor due to their low population numbers across the region.

Water diversion from rivers into channels has a mixed effect in the region. The regulation of natural river flow and the construction of numerous reservoirs and irrigation canals have significantly disrupted and reduced the connectivity of otter habitats, further threatening their survival in the region. Eighty percent of agricultural land in Central Asia is irrigated through a network of irrigation channels that carry water from upstream rivers (World Bank, 2020). The quantity of water in the Syr Darya River, for example, has decreased eightfold from 1960 to 2000 (Glantz and Zonn, 2005). Such massive reductions in water volume results in greatly diminished river habitat for otters. There is slight evidence, however, that irrigation channels may provide low-quality habitat for otters. Bykova et al. (2022) have documented the use of irrigation canals by otters in desert flatlands in suboptimal habitat on desert plans within the Surkhandarya Province and elsewhere.

CONCLUSIONS

Although a vast proportion of Central Asia is arid and semi-arid, both otters and their habitats are present in the region. Many of the glacial-fed rivers of the mountain ranges originate in remote, little settled areas near international borders, where human disturbance is low. Downstream, these rivers flow through arid lowlands of the region, and are diverted in irrigation channels, lowering river volume dramatically. Yet, the Amu Darya, Syr Darya, Ural, Ili, Chu, Zeravshan and Talas Rivers in Western Central Asia, and to a lesser extent the upper reaches of the Ili and Irtysh Rivers in eastern Central Asia all offer present and potential habitat for otters.

Documentation of the distribution of the Eurasian otter in Central Asia is highly uneven and insufficient. A review of the literature on the presence of the species in the region appears to confirm that while the species was present in parts of the region not many decades ago, there has been a precipitous decline even in small populations in recent times. The Eurasian otter now appears to be rare or endangered in most of the region, as reflected in the Red Books of all countries reviewed. Populations are scattered and isolated, despite suitable habitat in mountain rivers.

That said, very few surveys for otters have been conducted in this large landscape. Moreover, it may be the case that in very limited areas, otter numbers may be increasing, and that protection may enable an increase in otter populations. Bykova et al. (2022) reported that in parts of the Hissar Nature Reserve, otter numbers have increased in the Kyzyl Darya and Tankhaz Darya Rivers. To date, no practical measures have been taken to conserve the Eurasian otter in the region, apart from the establishment of protected areas. Only intensive surveying efforts will enable effective conservation measures to stem the decline of the species in the region. Conservation strategies are urgently needed for Eurasian otter populations across Central Asia, at country-wide and regional scales.

Note: *The full names of countries cited are: Xinjiang Uygur Autonomous Region in the People's Republic of China, Republic of Uzbekistan, Republic of Kazakhstan, Kyrgyz Republic, Republic of Tajikistan, Turkmenistan, Islamic Emirate of Afghanistan.*

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RÉSUMÉ: LE STATUT DE LA LOUTRE EURASIENNE (*LUTRA LUTRA*) EN ASIE CENTRALE : UNE REVUE DE LA LITTÉRATURE

La loutre eurasienne (*Lutra lutra*) est rare en Asie centrale. Les populations de loutres sont de petite taille et fragmentées et semblent en déclin dans la plupart des régions. La diminution des ressources en eau douce, la densité élevée de population humaine dans les vallées fluviales, la pollution des rivières et le manque d'attention portée à la conservation de la nature font que la survie à long terme de l'espèce dans la région est très menacée. Nous passons ici en revue la littérature disponible qui concerne la loutre eurasienne au cours des dernières décennies au Kazakhstan, en Ouzbékistan, au Kirghizistan, au Turkménistan, au Tadjikistan, en Afghanistan et dans l'extrême nord-ouest de la Chine. L'Asie centrale peut être considérée comme une « zone blanche » en termes de recherche sur les loutres, les données disponibles étant extrêmement limitées, ce qui suggère un besoin impérieux d'études supplémentaires et de mesures de conservation.

RESUMEN: STATUS DE LA NUTRIA EURASIÁTICA (*LUTRA LUTRA*) EN ASIA CENTRAL: REVISIÓN BIBLIOGRÁFICA

La nutria Eurasiática (*Lutra lutra*) es rara en Asia Central. Las poblaciones de nutria son pequeñas y fragmentadas y parecen estar declinando en la mayor parte de la región. Recursos de agua dulce en disminución, alta densidad poblacional humana en los valles fluviales, contaminación de los ríos, y un débil foco en la conservación de la naturaleza, hacen que la supervivencia a largo plazo de la especie en la región esté altamente amenazada. Aquí, revisamos la bibliografía disponible acerca de la nutria Eurasiática, de décadas recientes, en Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan,, Tajikistan, Afghanistan, y el extremo noroeste de China. Asia Central puede ser considerada un "punto blanco" en términos de investigación sobre nutrias,

con datos disponibles extremadamente limitados, lo que sugiere una acuciante necesidad de más estudios y medidas de conservación.

РЕЗЮМЕ: СТАТУС ЕВРАЗИЙСКОЙ ВЫДРЫ (*LUTRA LUTRA*) В ЦЕНТРАЛЬНОЙ АЗИИ: ЛИТЕРАТУРНЫЙ ОБЗОР

Выдра (*Lutra lutra*) – редкий вид в Центральной Азии. Популяции выдры немногочисленны, фрагментированы и, по-видимому, сокращаются в большинстве регионов. Дефицит ресурсов пресной воды, высокая плотность населения человека в речных долинах, загрязнение рек и недостаточный акцент на охране природы создают серьезную угрозу для долгосрочного выживания вида в регионе. В настоящем обзоре мы анализируем доступную литературу последних десятилетий о евразийской выдре в Казахстане, Узбекистане, Кыргызстане, Туркменистане, Таджикистане, Афганистане и на крайнем северо-западе Китая. Центральную Азию можно рассматривать как “белое пятно” в отношении исследований выдры, при этом крайняя ограниченность доступных данных указывает на острую необходимость дальнейших исследований и принятия мер по сохранению вида.