



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington, D.C. 20240



In Reply Refer To:
FWS/AIA/DMA

Memorandum

To: The File

From: Branch of Permits Biologist

Through: Chief, Branch of Permits

Subject: **Enhancement finding for the import of the straight-horned markhor (*Capra falconeri jerdoni*) hunting trophies for the survival of the subspecies.**

Issue

The U.S. Fish and Wildlife Service's ("Service") Division of Management Authority ("DMA") has received nine permit applications for the import of sport-hunted straight-horned markhor (*Capra falconeri jerdoni*) taken in the Torghar region of Pakistan between 2004 and 2013. All nine trophies appear to have been legally taken under Pakistani law in cooperation with a management plan in the Torghar region.

Population status of markhor (*Capra falconeri jerdoni*) in Torghar at the time the hunts occurred:

Schaller and Khan (1975) estimated that in 1975 more than 2,000 straight-horned markhor survived throughout the subspecies' entire range, with approximately 1,000 occurring in Balochistan Province. Roberts (1977) believed that the greatest remaining concentration of straight-horned markhor at that time was in the Toba Kakar Range, including the Torghar Hills west of Zhob. However, Hess et al. (1997) felt that fewer than 1,500 straight-horned markhor remained range wide, although they pointed out that comprehensive population data were lacking. In most areas that have been surveyed on more than one occasion (e.g., Takhatu, Sheikh Buddin), straight-horned markhor population trends were downward. The Torghar Hills region may be the one exception.

Throughout much of its range, straight-horned markhor habitat has been heavily impacted by grazing of domestic livestock and logging. Logging has been especially destructive in the Suleiman Range, where local people have extensively cut the local Chilghoza pine (*Pinus*

gerardiana) forests (Rashid 1995, WWF-Pakistan 1995, Hess et al. 1997, WWF 2011). In the Torghar Conservation Project (TCP) area, markhor habitat does not appear to have been as heavily impacted. There was only minor harvest of timber for construction and firewood (K.A. Johnson, pers. obs.). Moreover, although livestock grazing had affected valley bottoms and plains, habitat conditions improved with increasing elevation and ruggedness of topography (Frisina et al. 1998). Most of the important markhor habitats in the Torghar Hills are so steep and rocky that very little, if any, domestic livestock use occurs there (Frisina et al. 1998).

When the Torghar Conservation Project (TCP), a private, grass-roots conservation initiative for straight-horned markhor and Afghan urial (*Ovis vignei cycloceros*) in the Torghar Hills, initiated preliminary surveys in 1985, the estimated total straight-horned markhor population of the TCP area was fewer than 100 animals (Mitchell 1989, Tareen 1990, 1999). Numbers were declining because of uncontrolled hunting, in part due to the dramatic influx of weapons and ammunition into the area during the war in Afghanistan (Johnson 1994, 1997a). In 1994, Johnson (1997b) conducted a systematic survey of the 300-sq. km. "core" of the TCP Area. From those results, he estimated the straight-horn markhor population of the entire TCP Area to be 695 animals. A second field survey was conducted in 1997, covering most of the same area and utilizing the same methods as in 1994 (Frisina et al. 1998). The 1997 survey estimated the straight-horned markhor population in the entire TCP Area to be 1,296 animals. These results would indicate that the straight-horned markhor population of the TCP Area had increased substantially since the mid-1980s.

Johnson (1994, 1997a) postulated that the markhor population increase from the mid-1980s through 1997 was due primarily to one factor -- a substantial reduction of markhor mortality resulting from the replacement of uncontrolled, unlimited hunting by a controlled, extremely limited trophy hunt. Johnson further postulates that this change in mortality was accomplished through implementation of the TCP in 1985. Prior to the TCP, dozens of markhor were apparently killed every year by local tribesmen, nomadic pastoralists passing through the area twice per year with domestic livestock, invited guests of tribal chieftains, and the military (Johnson 1994, 1997a). After the TCP was initiated there appeared to have been a complete cessation of uncontrolled, unlimited hunting. This was possible because the people of Torghar belong to a tribal society (Torghar is inhabited predominantly by the Jalalzai branch of the Sanzar Khail Kakar tribe of Pathans (see Caroe 1958)), and the tribal chieftains gave their full support to a ban on unauthorized hunting. The local Pathan tribesmen complied with this ban, and a number of them were hired as game guards to protect straight-horned markhor and Afghan urial from poaching in the TCP Area. The markhor population has responded to this protection by increasing substantially in numbers since the mid-1980s.

Management programs at the time of harvest:

In Pakistan, control and management of wildlife is constitutionally vested to the Provinces. The straight-horned markhor is listed in the Third Schedule of the Balochistan Wildlife Protection Act of 1974 (Government of Baluchistan Agriculture Department 1977). The Third Schedule includes protected animals that may not be hunted, killed, or captured except as permitted under specific circumstances. In Balochistan Province and North West Frontier Province, however,

Pathan tribal lands enjoyed a large degree of legal and de facto autonomy from provincial and federal government authority. Many matters, including the granting of access and permission to hunt, continued to be regulated primarily by tribal law, with little influence by provincial or federal governments. Thus, although the Balochistan Forest Department (BFD) is technically responsible for wildlife management in Torghar, it has been unable or unwilling to fulfill this responsibility. As such, any inconsistencies or shifts in management would be or was the result in a shift in tribal policies or interests.

In the early 1980s, the late Nawab Taimur Shah Jomezai – local Pathan chieftain and one of the founders of the TCP – became concerned about the uncontrolled killing of markhor and urial in the Torghar Hills. He petitioned the BFD to send wildlife officers to stop the killing; however, the BFD did not respond to the request. Jomezai, in consultation with wildlife biologists from the United States, decided that a private initiative would be necessary to arrest the decline of markhor and urial. Thus, the TCP was begun as a grass-root, community-based game guard program to protect the markhor and urial of Torghar. The TCP is administered by the Society for Torghar Environmental Protection (STEP), a non-governmental organization in Quetta, Pakistan.

STEP was formally established in April 1994. Its principal objectives are: (1) to conserve both the living and non-living resources of the Torghar Hills; (2) to promote conservation awareness among the people of Torghar through education; and (3) to manage the natural resources wisely and on modern scientific principles for the general betterment of the human population of Torghar and to improve their socio-economic conditions (from “Rules and Bye-Laws [sic] of the Society for Torghar Environmental Protection”). STEP is overseen by a tribal council of elders from all subtribes of Torghar, and has a staff of three.

The TCP apparently has employed approximately 90 local Pathan tribesmen (the Torghar Hills are within the Pathan tribal region of northern Balochistan Province) at any one time as game guards to protect straight-horned markhor and Afghan urial populations from uncontrolled, unauthorized hunting (poaching) in the approximately 1,500-sq. km. TCP Area. The Pathans of Torghar are divided into several subtribes, and each of these subtribes “owns” a specific area of the mountains, hills, or plains. Employment under the TCP is apparently distributed among the subtribes, such that game guards are responsible for protecting the area that belongs to their subtribes. STEP’s tribal council makes decisions regarding the designation of individuals as game guards. Many of the original TCP game guards were former hunters who stopped killing markhor and urial at the request of the local Pathan tribal chieftain. These game guards enforced the ban on poaching, and virtually eliminated poaching in the TCP Area. Markhor and urial populations have responded to this protection by increasing substantially in numbers since the mid-1980s. The TCP has been largely self-sufficient since its inception, depending primarily on revenues derived from trophy-hunting fees from international hunters.

Standards for issuance of enhancement permits

ESA Section 10

Subsection 10(a)(1)(A) of the ESA provides authority to allow otherwise prohibited activities for endangered species. This authority allows for the issuance of permits “for scientific purposes or to enhance the propagation or survival” of the listed species. Before granting such exceptions to the ESA’s prohibitions, the Service is required to make certain findings under subsection 10(d) of the ESA. To issue “enhancement” permits for the importation of these markhor trophies, we must determine that “(1) such exceptions were applied for in good faith, (2) if granted and exercised, will not operate to the disadvantage of such endangered species, and (3) will be consistent with the purposes and policy set forth in section 2 of the ESA [this Act].” These determinations are codified within the Service’s regulations (50 CFR 17.22), as outlined below. After taking into consideration the overall net impact, both direct and indirect, on the markhor by allowing the importation of these sport-hunted trophies that have been taken from wild, free-ranging populations, we make the below findings under subsection 10(d) of the ESA.

Permit Issuance Criteria (50 CFR 17.22(a)(2))

(i) Whether the purpose for which the permit is required is adequate to justify removing from the wild or otherwise changing the status of the wildlife sought to be covered by the permit.

Nine applicants have each legally taken one sport-hunted straight-horned markhor for the purpose of enhancement of the survival of the species.

The Service recognizes that sport hunting can play a significant role in the management goals for markhor by establishing a sustainable offtake and encouraging native communities to participate in the management of the subspecies. Based upon information received from the applicants, it is clear that STEP and TCP have provided benefits to the subspecies in the Torghar region and that, by all accounts, the markhor population has increased over the past 30 years. Markhor populations have significantly increased only in conservation areas managed for trophy hunting, and the only conservation plan being implemented for the straight-horned markhor is in the Torghar Hills (Government of Pakistan 2009, p. viii). Due to the conservation measures and the incentives of the TCP, the straight-horned markhor has increased from approximately 1,000 markhor across its range to at least 3,158 individuals, which are represented by the Torghar Hills population. As seen below, it is clear that participation by U.S. hunters, although limited, has and will continue to contribute to this increase. While it is not possible to say that “but for the participation of these U.S. hunters, the TCP would fail” and that the possible political instability in the Torghar regions of Pakistan could adverse impact the program, there is clear indication that at this time TCP is strong program to is providing clear conservation benefit to the markhor population. In fact, it is the significant results achieved through TCP that has lead the Service to propose the downlisting of the subspecies to threaten under the ESA (77 FR 47011, August 7, 2012; and 78 FR 73173, December 5, 2013).

(ii) The probable direct and indirect effect which issuing the permit would have on the wild populations of the wildlife sought to be covered by the permit.

Yes, the applicant's activities will directly and indirectly benefit the wild population.

All nine of the referenced trophies were taken from Pakistan in the Torghar Hills, Balochistan, as part of the Torghar Conservation Project (TCP) and is administered by the Society for Torghar Environmental Protection (STEP).

TCP/STEP incorporates the issuance of a limited number of markhor hunting permits. International hunters, such as our nine applicants, have been sold hunting permits in a quantity that equates to an annual harvest rate of no more than 1% to 2% so that the take is not only sustainable, but also low enough to enable steady population growth. The small percentage of authorized hunting will not lower the overall population growth because TCP/STEP operates with the concept that hunters have only been and will only be interested in hunting older males that have the largest horns. Accordingly, that implies that the reproductive cycles of females and younger males have not been affected by TCP's permitted hunting.

The revenue generated by hunting permit sales provides the TCP's operating budget. The funds generated by TCP have been and are continually proposed to be used as a means of providing enough benefits to local people to preclude converting their land to other uses, such as increased grazing or agriculture, which could decrease the biological diversity of Torghar. Through limited hunting, the TCP/STEP has encouraged the sense of community ownership. It impresses upon the tribesmen that their livelihood and other benefits are tied directly to the protection and increase in markhor populations. A healthy population of markhor is a prerequisite to the hunting which provides the much-needed employment and other community benefits.

Documentation provided by our nine applicants indicates that since 1986, the money generated from hunting permits amounts to almost two million dollars. The TCP/STEP has distributed these funds in several ways. While on average, 20% of the funds have been given to the government and 12 % (based on 2008-2009 yearly expenditures) of the funds have been used for management and administrative costs, the remaining funds have provided the following direct in-situ benefits:

- a) Awareness: The local population, particularly the younger generations, are beginning to understand the cause-and-effect relationships in natural ecosystems. During the 2008-2009 year, 21% of the permit funds were put in an endowment fund for the local community.
- b) Game guards: An average of 90 game guards receive monthly salaries. During the 2008-2009 year, 22% of the permit funds were used to provide salaries to the local community.
- c) Medical assistance and emergency relief: Health and medical expenses were provided for all of the local inhabitants. Basic necessities were also provided in times of

emergencies. During the 2008-2009 year, 9% of the permit funds were used to provide medical assistance and emergency relief for the local community.

- d) Help for the needy: A revolving fund enables the population to gain access to interest free credit when facing exceptional hardship. Donations are extended to the neediest and scholarships are occasionally given to encourage school attendance. During the 2008-2009 year, 4% of the permit funds were used to provide revolving funds, aid to the needy, and education for the local community.
- e) During the 2008-2009 year, 11% of the permit funds were also used to provide developmental works for the local community. “The habitat management plan for both wildlife and domestic livestock helped reduce interactions between domestic livestock and markhor around forage and water resources” (Frisina and Tareen 2009, p. 152).
 - i. Water management: With joint support of the United Nations Development Program (UNDP) and SUSG-Casia, water tanks, wells, storage dams, and water channels were developed.
 - ii. Livestock management: Training and sensitization campaigns to maintain fewer, but healthier livestock has been conducted.
 - iii. Improved Agriculture: There is assistance in the development of agricultural fields and provision of sapling trees for orchards.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provides additional protection for the markhor. CITES established a quota of 12 hunting trophies from Pakistan per calendar year (Resolution Conf.10.15 Rev.CoP14). Of the nine application requests to import markhor trophies, one markhor was taken in 2004, two were taken in 2008, one was taken in 2009, four were taken in 2011, and one was taken in 2013. These numbers indicate that U.S. hunters play an essential and significant role in contributing to the revenue needed for TCP/STEP to operate at its potential.

(iii) Whether the permit, if issued, would in any way, directly or indirectly, conflict with any known program intended to enhance the survival probabilities of the population from which the wildlife sought to be covered by the permit was or would be removed.

This office is not aware of any program that conflicts with the applicant’s proposed activity.

(iv) Whether the purpose for which the permit is required would be likely to reduce the threat of extinction facing the species of wildlife sought to be covered by the permit.

Authorizing the import of these nine hunting trophies will encourage hunters to participate in the TCP/STEP and it is the actions of the TCP/STEP that may reduce the subspecies’ threat of extinction. According to documentation provided by the applicants, the ungulate population has increased for the past 24 years. And as stated above, documentation provided to this office indicates that from the start of TCP in 1985 until the most recent data available in 2011, the Torghar markhor population has increased more than 2,500%, from 100 to 3,518 animals (Frisina and Rasheed 2012).

(v) The opinions or views of scientists or other persons or organizations having expertise concerning the wildlife or other matters germane to the application.


There appears to be strong consensus that the TCP and its management of markhor has benefited the subspecies. Further, Division of Scientific Authority gave a positive finding (copy enclosed).

(vi) Whether the expertise, facilities, or other resources available to the applicant appear adequate to successfully accomplish the objectives stated in the application.

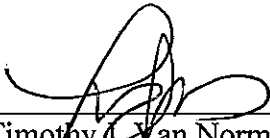
Yes, the applicants obtained the required permits and licenses to harvest the animals.

Conclusion

Having examined the information available to the Service and considering the issuance criteria established in the Service's regulations that implement the purposes of the ESA, the Service concludes that there is sufficient information to determine if the issuance of the permits would contribute to the enhancement of the survival or propagation of the species under Section 10 of the ESA. The proposed downlisting, in addition to the new information received since the 2009 determination (e.g., the 2011 population data), justify this new determination.


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Date JUN - 3 2014

Concur:  6/3/14
Timothy C. Van Norman, Chief, BOP

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