

**Interpretation and Implementation of the Convention**  
**Proposals Concerning Quotas for Specimens of Appendix-I Species**  
 ESTABLISHMENT OF QUOTAS FOR MARKHOR HUNTING TROPHIES

Preamble

1. The status of markhor (*Capra falconeri* spp.) has continued to deteriorate in spite of its listing in Appendix I of CITES in 1992. Main causes include continued hunting by local people and loss of habitat throughout most of its range. To reverse this trend, the markhor must be valued and protected by local communities. By demonstrating the potential economic value of markhor through a limited and strictly enforced community-based trophy hunting programme, communities will be provided with a powerful conservation tool.
2. The purpose of this explanatory document<sup>1</sup> is to present recent population survey data and provide a biological basis for supporting a limited export quota of markhor trophies from Pakistan.

Distribution

3. There are currently two subspecies of markhor recognized (Schaller and Khan, 1975; Hess *et al.*, in press): flare-horned markhor (*Capra falconeri falconeri*) which includes the Kashmir and Astor forms earlier described by Roberts (1969, 1977), and straight-horned markhor (*C.f. megaceros*) which includes the Kabul and Suleiman forms.
4. Most of the world's population of markhor live in Pakistan (Hess *et al.*, in press) where the species is associated with dry, steep slopes at lower elevations that provide adequate escape terrain and shallow snow cover in winter. According to Schaller and Khan (1975), bordering the Indus basin to as high as 4,000 m during summer in Chitral and Gilgit where their distribution may seasonally overlap that of the Asiatic ibex (*Capra ibex sibirica*).
5. Flare-horned markhor is mainly confined to small, scattered populations along the Indus and its tributaries in the Northern Areas (NAs), the Kohistan District of the North-west Frontier Province (NWFP) and as well as along the Kunar (Chitral) river and its tributaries in NWFP. Hess *et al.* (in press) felt the distribution map for flare-horned markhor given by Schaller and Khan (1975) was still valid although the large, continuous range along the Indus has probably since been fragmented into smaller isolated patches of distribution.
6. While Schaller and Khan (1975) showed a huge recent past range for straight-horned markhor, Hess *et al.* (in press) restricted the present range to small isolated areas in Baluchistan, a small area in NWFP, and one unconfirmed occurrence in Punjab.

Population status

7. The quality of recent survey information on markhor varies considerably between areas of its distribution. The most reliable information comes from the Chitral District where NWFP Department of Wildlife staff has carried out annual surveys of 17 known areas of markhor distribution since at least 1991. Information from two core protected areas (Chitra Gol and Tushi Game Reserve) dates back over 20 years and provides use-

ful indication of population trends. Information on markhor numbers in other districts of NWFP (e.g. Swat, Dir and Kohistan) is largely based on local reports and not confirmed by direct counts. In northern areas, systematic surveys of flare-horned markhor have not been carried out until recently largely due to lack of trained wildlife staff.

8. Similarly, systematic surveys of straight-horned markhor have not been carried out in Baluchistan until recent years. Most previous information on the distribution and status of markhor was based on reports from local shikaries, government officials, and other knowledgeable persons (including tribal chiefs). These reports were seldom confirmed through direct observation or systematic surveys. Recently, attempts have been made to determine the status of straight-horned markhor in locally managed conservation areas in the Torghar Hills and Koh-i-Sulaiman in Baluchistan.

Flare-horned markhor

9. Schaller and Khan (1975) estimated a total of 5,250 flare-horned markhor living in Pakistan, in the border areas with Afghanistan, and in India. Hess *et al.* (in press) felt populations have declined in numbers over the past 20 years and estimated that 2,500 to 3,000 flare-horned markhor now survive in Pakistan. Based on our review of more recent information, this estimate appears reasonable (Annex 1); however, some local population increases are also evident.
10. Based on the detailed information from Chitral, overall densities ranged from 1.92 to 2.58 markhor/km<sup>2</sup> between 1991-1995 and the trend suggests a population that is increasing at an average annual rate of about 7% (Annex 2). The core areas of markhor distribution in Chitral (Chitral Gol National Park and Tooshi Game Reserve) have shown a steady increase in numbers (Annex 2). Composition data also suggest excellent juvenile survival to mid-winter. The proportion of kids to total numbers of markhor observed ranged from 32 to 36% and the proportion of kids to total number of females observed ranged from 72 to 87 kids/100 females between 1991-1995 (Annex 2).
11. Information on flare-horned markhor in northern areas is considerably less reliable. A recent report by the DFO-Wildlife for Northern Areas suggests that 5,340 markhor are present in the game reserves and game sanctuaries of the northern areas (Annex 1). This seems like a grossly inflated estimate and is not based on actual counts. The more modest estimate of around 1,200 (Thir, 1995) is probably more reasonable. During a survey in December 1995 of the Skoyo-Karabathang-Basingo (SKB) Community Conservation Area in the Skardu District, a total of 84 markhor were observed (22 males, 40 females and 20 kids; Hassan 1996). These animals are part of a core population of flare-horned markhor around Bagicha (Baltistan Game Sanctuary) along the Indus river between Gilgit and Skardu. This area was also mentioned by Hess *et al.* (in press) as one of the best places in Baltistan for

<sup>1</sup> Prepared by Kent Jingfors and Amjad Tahir Virk, IUCN-Gilgit, with contributions from Dr Mumtaz Malik, NWFP Department of Wildlife, Peshawar, Pakistan.

markhor; however, they felt no single area in northern areas contains >50 animals which is not correct as suggested by the survey of the SKB area.

#### Straight-horned markhor

12. Schaller and Khan (1975) estimated that >2,000 individuals remained throughout the range of straight-horned markhor. Hess *et al.* (in press) felt that a general decline in wildlife populations of these areas has resulted in <1,500 straight-horned markhor remaining today, although they pointed out that recent survey information was lacking. Recent information from Baluchistan seems to confirm that the total population of straight-horned markhor in Baluchistan and NWFP does not exceed 1,500 animals today (Annex 3).
13. Based on systematic surveys of the Torghar Hills in 1994, Johnson (1966) estimated a total population of 840 straight-horned markhor in the Torghar Conservation Project (TCP) area. This represents a substantial increase since the mid-1980's when initial conservation measures, including limited trophy hunting, were undertaken in the TCP area. Johnson (1996) suggested the main reason for this population growth is a substantial reduction in markhor mortality as uncontrolled hunting (poaching) was replaced by controlled, limited trophy hunting which has paid for the cost of local game guards and other conservation measures. The TCP population of markhor is of adequate size and condition to continue supporting limited trophy hunts (Johnson 1996).

#### Threats

14. The tendency of markhor to move to lower elevations in winter puts them in closer contact with people and increases the likelihood of poaching. Due to new or improved roads and more mechanized transport, there is now easy access by both local people and outsiders into many areas of traditional markhor range. The use of improved firearms has increased the likelihood of success in killing wildlife (including markhor) for food, trophies or, simply for "fun". While a growing awareness of the need for conservation may have reduced the incidence of poaching, markhor are still being illegally hunted.
15. The fragmented distribution of markhor in small, scattered populations of low densities makes the species particularly vulnerable to outside threats. Further habitat loss from competition with livestock or from logging (as has been the case in the Suleiman Range) will likely continue unless markhor habitat is effectively protected from human use.
16. Schaller and Khan (1975) felt the prognosis for the flare-horned markhor in northern areas was good especially if the government established more protected areas within its range. With the exception of the recently proclaimed central Karakoram National Park, which does not include any existing markhor populations, there have been no other areas within markhor range designated as protected in northern areas since 1975. Hess *et al.* (in press) felt the population of this subspecies has declined over the past 20 years.
17. In the case of the straight-horned markhor, there are also political reasons that complicate conservation efforts as pointed out by Schaller and Khan (1975). Most of the range of this subspecies lies within the tribal areas bordering Afghanistan where application of provincial wildlife laws is difficult. While the outlook may be more promising for those populations that come under NWFP or Baluchistan laws, legal protection alone does not appear sufficient.

#### Conservation measures

18. Hess *et al.* (in press) outlined several conservation measures that, they felt, are necessary to ensure the continued survival of markhor in Pakistan. These include identifying at least 2 "focal" or key areas for each subspecies where populations and/or conditions are most likely to yield successful conservation results. For each focal area, the authors recommended that a management plan involving local people, including adequate survey data, and ensuring a prompt implementation programme be required. A sustained local hunting programme for appropriate markhor populations that are not threatened could then be considered.
19. It is quite probable that markhor in Pakistan will only survive if local people want the animal to survive. The success of future conservation efforts will largely depend on whether local communities will have sufficient reasons, or incentives, to maintain markhor populations in preference to their domestic livestock. By demonstrating the potential economic value of markhor through a limited and strictly enforced community-based trophy hunting programme, where the financial benefits can be used to sustain local conservation efforts, communities will be provided with a powerful conservation tool.
20. Pakistan is actively promoting community-based management of wild resources as a conservation tool and has already approved conservation plans for Asiatic ibex in several pilot project areas of northern Pakistan. The conservation plans provide for the monitoring and sustainable use of ibex. The net proceeds from limited trophy hunting go directly to the managing communities where Village Conservation Funds have been established. These funds will be used to sustain the management programme for the species. A similar management regime should also be considered for markhor to promote its conservation.
21. Accordingly, we recommend that an export quota for Pakistan of no more than six (6) sport hunted trophies of markhor, per calendar year, be approved as an exemption under Article VII of CITES. Although the existing markhor population can afford harvest of around ten (10) trophy animals, this very conservative harvest level recommended here would not, by itself, jeopardize existing populations and could provide the incentive necessary to establish a pro-active management programme for the community based conservation of markhor populations in Pakistan.
22. We further recommend the following conditions for issuing a markhor hunting license under this quota:
23. – The allocation of the annual quota by administrative region should be based on the relative abundance and status of markhor sub-species.
24. – A set license fee should be established and the proceeds divided between the local communities and government on a 75:25 basis. An equitable share of each portion should be used towards the cost of management and protection of markhor.
25. – Prior to issuing a hunting license for markhor, government must approve a conservation plan for the area which includes adequate data to demonstrate that the proposed harvest is sustainable, that other conservation measures have also been taken, and that all other hunting of markhor has ceased.
26. – Before issuing any markhor hunting licenses, the provincial government will make sure the population data are reliable and certified by an authorized wildlife biologist.

27. – Local communities must benefit directly from a controlled trophy hunting programme under this quota.
28. – Only over-mature male markhor will be allowed for trophy hunting through community guided hunts and all such hunts shall be monitored closely by the provincial wildlife authorities.

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#### Doc. 10.84 (Rev.) Annex 1

#### Summary of recent survey information on flare-horned markhor from NWFP and northern areas of Pakistan

Province	District	Year	Total Markhor Reported	Data Quality	Reference
NWFP	Chitral	1991	627	Good	Faraz, 1996
		1992	663	Good	Faraz, 1996
		1993	730	Good	Faraz, 1996
		1994	840	Good	Faraz, 1996
		1995	690	Good	Faraz, 1996
	Swat	1991	76	Good/OK	NWFP, 1992
		1992	82	Good/OK	NWFP, 1994
	Dir	1991	109	Good/OK	NWFP, 1992
		1992	96	Good/OK	NWFP, 1994
	Kohistan	1991	221	OK	NWFP, 1992
1992		285	OK	NWFP, 1994	
Subtotal (NAs)		1991	1033		NWFP, 1992
		1992	1126		NWFP, 1994
Northern Areas	Ghizer	1996	50	Poor	DFO, 1996
	Gilgit	1996	480	Poor	DFO, 1996
	Diamer	1996	1650	Poor	DFO, 1996
	Skardu	1996	3160	Poor	DFO, 1996
Subtotal (NAs)		1996	5340	Poor	DFO, 1996
		1996	1000-1500	Poor	Rasool, pers comm.
		1994	1194	Poor/OK	Tahir, 1995
TOTAL (estimated)			2000-3000		

**Abundance (total numbers observed) and composition (shown as "males-females-kids")  
of flare-horned markhor in Chitral District, NWFP, 1991-1995**

[based on ground surveys during the last two weeks of December (Faraz, 1996)]

Area <sup>1</sup> (km <sup>2</sup> )	1991	1992	1993	1994	1995
Chitral Gol NP (43)	195 (45-77-73)	227 (57-76-94)	176 (39-81-56)	187 (45-77-65)	208 (51-82-75)
Tooshi GR (20)	130 (39-59-32)	148 (41-57-50)	157 (48-67-42)	168 (31-83-54)	182 (39-74-69)
Gehret Gol GR (28)	49 (10-23-16)	62 (12-30-20)	77 (16-34-27)	84 (18-36-30)	62 (12-30-20)
Purit Gol GR (20)	22 (5-8-9)	17 (4-6-7)	19 (4-7-8)	31 (7-11-13)	10 (3-3-4)
Drosh Gol GR (50)	41 (7-22-12)	23 (3-14-6)	33 (6-18-9)	47 (9-22-16)	10 (2-5-3)
Goleen Gol GR (30)	36 (7-19-10)	12 (2-7-3)	14 (4-6-4)	30 (8-13-9)	16 (2-8-6)
Koghuzi Gol GR (5)	28 (8-12-8)	20 (3-11-16)	26 (5-12-9)	35 (9-13-13)	30 (11-10-9)
Beuti Gol (10)	5 (2-2-1)	8 (2-4-2)	12 (2-4-6)	24 (4-9-11)	21 (6-7-8)
Kashindal Gol (10)	12 (3-5-4)	12 (2-4-6)	15 (2-4-9)	24 (4-7-13)	14 (2-4-8)
Kessu Gol (15)	8 (1-3-4)	15 (3-8-4)	22 (5-9-8)	21 (7-9-5)	N/A
Sweer Gol (15)	5 (1-2-2)	8 (2-4-2)	17 (4-8-5)	25 (6-11-8)	22 (8-10-4)
Achulga Gol (10)	7 (2-3-2)	12 (3-6-3)	25 (5-7-13)	21 (4-9-8)	7 (2-3-2)
Ramboor Valley (25)	32 (9-14-9)	36 (11-14-11)	41 (11-16-14)	37 (13-19-5)	24 (6-10-8)
Shasta/Awiret Gol (10)	25 (6-12-7)	21 (4-10-7)	23 (4-10-9)	31 (7-16-8)	19 (5-10-4)
Danin/Jughur Gol (25)	15 (3-8-4)	17 (3-8-6)	23 (3-9-11)	25 (5-13-7)	28 (9-15-4)
Zhachga Gol (5)	13 (3-6-4)	15 (3-8-4)	31 (4-10-17)	27 (7-11-9)	25 (5-13-7)
TOTAL	627 (151-276-200)	663 (157-270-336)	730 (165-309-256)	840 (189-370-281)	690 <sup>2</sup> (165-288-237)
Ave. Density (markhor/km <sup>2</sup> )	1.92	2.03	2.24	2.58	2.22

<sup>1</sup> Protected areas as denoted as NP (national park) and GR (game reserve)

<sup>2</sup> Early winter rains kept many markhor at higher elevations and resulted in a lower count (Faraz, pers comm.)

## Summary of current population status of straight-horned markhor in NWFP and Baluchistan, Pakistan

Province	District	Year	Total Markhor Reported	Data Quality <sup>1</sup>	Reference
NWFP	Buner	1991	?		
		1992	1	OK	NWFP, 1994
	Mardan	1991	12	OK	NWFP, 1992
		1992	13	OK	NWFP, 1994
	D.I. Khan	1991	12	OK	NWFP, 1992
		1992	2	OK	NWFP, 1994
	Tribal areas		?		
Subtotal (NWFP)			25-50		
Baluchistan	Zhob	1996	<100	OK	Virk, pers comm.
	Qila Saifullah	1994	840	Good	Johnson, 1996
	Quetta	1996	<100	OK	Virk, pers comm.
	Loralai	1996	<50	OK	Virk, pers comm.
Subtotal (Baluchistan)			1000-2000		
TOTAL (estimated)			1000-1250		
<sup>1</sup> Data quality is rated as:      Good – verified through systematic counts or surveys OK – based on local reports (from shikaris, graziers or other knowledgeable people) Poor – based on hearsay or opinions  ? Data not available					

## DRAFT RESOLUTION OF THE CONFERENCE OF THE PARTIES

Establishment of Quotas for Markhor Hunting Trophies

RECALLING that, with the exception of the rare cases of exemptions granted under Article VII of the Convention, commercial trade in Appendix-I species is prohibited;

RECALLING that the markhor, *Capra falconeri*, was listed in Appendix II at the plenipotentiary Conference of the Parties in Washington D.C. and transferred to Appendix I at the ninth meeting of the Conference of the Parties (Fort Lauderdale, 1994);

RECOGNIZING also that the markhor is threatened by illegal hunting, fragmentation and loss of its habitat and competition with domestic livestock;

RECOGNIZING further that conservation of the species will depend on the capacity of the State to regulate use and on local people having sufficient incentives to maintain the species in preference to their domestic livestock;

RECOGNIZING that Pakistan is actively promoting community-based management of wild resources as a conservation tool and has approved management plans for ibex that ensure the financial benefits derived from trophy hunting of a limited number of specimens go directly to the managing communities and that the communities use an equitable share of such financial benefits to sustain the management programme for the species;

RECALLING that countries of export may trade in such dead specimens in accordance with Resolution Conf. 2.11 (Rev.), adopted at the second meeting of the Conference of the Parties (San José, 1979) and amended at the ninth meeting (Fort Lauderdale, 1994), and may grant export

permits in accordance with paragraph 2 of Article III of the Convention;

RECALLING that paragraph 3(c) of Article III of the Convention provides that an import permit shall be granted only when a Management Authority of the State of import is satisfied that the specimen is not to be used for primarily commercial purposes, and that paragraph 2(a) of Article III of the convention provides that an export permit shall be granted only when a Scientific Authority of the State of export has advised that the export will not be detrimental to the survival of the species; and

RECOGNIZING that because of the importance of monitoring the utilization of quotas by the Resolution, that Pakistan has implemented a rigorous programme to monitor community-based management plans, including annual surveys of the wild population;

THE CONFERENCE OF THE PARTIES TO THE  
CONVENTION

## RECOMMENDS:

- a) approval of an export quota of six sport hunted trophies of *Capra falconeri* from Pakistan per calendar year;
- b) that, in reviewing applications for permits to import sport hunted trophies of markhor, in accordance with paragraph 3(a) of Article III of the Convention, the Scientific Authority of the State of import approve permits if it is satisfied that the trophies being considered are from Pakistan and in accordance with the provisions of this resolution;

- c) that, in reviewing applications for permits to import trophies of *Capra falconeri*, in accordance with paragraph 3(c) of Article III of the Convention, the Management Authority of the State of import be satisfied that the said trophies are not to be used for primarily commercial purposes if:
  - i) the trophies are acquired by the owner in the country of export and are being imported as personal items that will not be sold in the country of import; and
  - ii) the owner imports no more than one trophy in any calendar year and export is authorized by law in the country of origin;
- d) that the Management Authority of the State of import permit the import of markhor sport hunted trophies in accordance with this resolution only if each trophy has a self-locking tag attached which indicates the State of export, the number of the specimen in relation to the annual quota and the calendar year to which the quota applies, and the same information as is on the tag is given on the export document;
- e) that, in the case of trophies traded according to the terms of this Resolution, the words "has been granted" in paragraph 2(d) of Article III of the Convention be deemed to have been satisfied upon the written assurance of the Management Authority of the State of import that an import permit will be granted;
- f) that Pakistan submit to the Secretariat, by 31 March of each year, a special report on the status *Capra falconeri* including its population status and the number of sport hunted trophies so exported during the previous quota year; as optional information that Pakistan include details on the permit numbers, the identification numbers of the tags attached to the trophies, the countries of destination and the number of export permits; and that the Secretariat submit a report to each regular meeting of the Conference of the Parties; and that the system adopted in this resolution be continued, with any increase in the quota or any new quota (i.e. for another State not previously having one) requiring the consent of the Conference of the Parties; and

DIRECTS the Secretariat to recommend to the Parties to suspend imports of sport hunted markhor trophies if Pakistan, or any other country subsequently approved for an export quota, has not met the reporting requirement in accordance with recommendation f) of this Resolution, but only after first checking with Pakistan (or other range State) to ascertain why the special report has not been submitted.