
The Rhino Horn Trade in South Korea: Still Cause for Concern

Cecilia Song and Tom Milliken

Introduction

The international effort to save the five extant species of rhinoceros from extinction has intensified over the last decade in response to unprecedented losses in Asia and Africa. While habitat loss, fragmentation and encroachment are long-term concerns, the rhino poaching crisis and international trading in rhino products are the most important unresolved threats jeopardizing continuation of the 60-million year existence of the Rhinocerotidae family.

World populations for all species have dropped from an estimated 70,000 in 1970 to less than 11,000 today.¹ Of Africa two species, the black rhino (*Diceros bicornis*) has suffered tremendous losses and has vanished from some areas. Current opinion is that less than 3,800 individuals exist, with only sizeable populations of more than 400 animals remaining anywhere in Africa.² The white rhinoceros (*Ceratotherium simum*) has not fared any better with the northern sub-species virtually extinct and only some 4,650 white rhinos alive today. 90% of these are in South Africa and Zimbabwe.³

The status of the three Asian species is critical. While protective measures in India and Nepal have allowed the greater one-horned Indian rhino (*Rhinoceros unicornis*) to recover to a population level of some 1,650 individuals, the Javan rhino (*Rhinoceros sondaicus*) is one of the rarest animals in the world: a small population of about 60 individuals remains in Java.⁴ Widely dispersed populations of the Sumatran rhino (*Dicerorhinus sumatrensis*) total merely some 300 to 600.⁵

The extensive illegal trade in rhino horn is driven by demand in North Yemen, where it is prized as a material for making traditional dagger hilts, and in Asia where it is used as an ingredient in traditional Oriental medicines. Conservationists have singled out North Yemen as the largest market for illegal African rhino horn, but recent diplomatic initiatives to curtail the trade have met with some degree of success.^{6,7} On the other hand, the more diffuse Asian trade is proving far more difficult to control. Despite legal prohibitions in most countries against rhino horn importation and exportation, possession and domestic sales are rarely regulated thus giving rise to an uncontrollable situation. Only Hong Kong has imposed effective legal measures to curtail domestic consumption.

In view of the serious situation facing all rhino species, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) at the Sixth Meeting of the Conference of the Parties in 1987 approved Resolution Conf. 6.10 urging exceptional measures to help save rhinos. The recommendations called for the enactment of complete prohibitions on all trade and sale, both domestic and international, of rhino products, the "destruction of all government and parastatal stocks of rhinoceros horn", the development of substitutes for rhino products and the exertion of pressure on countries which continued to trade.

This study of South Korea's rhino horn trade is a component of the



to WWF International. It was to ascertain the demand and use of rhino horn and rhino horn products in South Korea through consumer market surveys, statistical analysis of trade data and interviews with government, industry and academic figures. This report describes the current usage of rhino horn in South Korea and presents recommendations for a strategy to curtail domestic consumption.

Background

South Korea has long been identified as a major Asian consumer of rhino horn. Dr Esmond Martin's visits to South Korea in 1980, 1982 and 1986 included surveys of Oriental medicine clinics in two major cities, information concerning rhino horn use, importation routes and prices, and descriptions of the evolving legal status of the trade under South Korean law. Martin documented the extensive demand for rhino horn as an ingredient in Chung Shim Won balls, a common medicine throughout the country.^{8,9,10}

The fact that South Korea is not a Party to CITES has meant that international trade controls have remained largely inapplicable to the country's importation policy. Since 1983, however, the South Korean government has enacted a number of internal legal measures which first curtailed rhino horn consumption, then limited and, finally, banned importation. While these moves have been welcomed by conservationists, the extensive domestic practice of over-the-counter dispensation of rhino products goes unregulated and demand remains high. In this context, it is feared that illegal shipments of rhino horn may still be entering South Korea for internal consumption.

Table I
Oriental Medicine Clinics Selling Rhino Horn or Derivatives in South Korea,
November-December 1988

	Seoul	Taejon	Kwangju	Taegu	Pusan	Total	%
Clinics with:							
Rhino horn & Chung Shim Won Balls	21	4	2	3	4	34	
Powder & Chung Shim Won Balls	3	2	0	0	0	5	
Chung Shim Won Balls	27	1	1	2	1	32	
	—	—	—	—	—	—	
Clinics with Rhino Horn	51	7	3	5	5	71	64
Clinics with No Rhino Horn	8	5	2	19	6	40	36
	—	—	—	—	—	—	
Total	59	12	5	24	11	111	100

Source: TRAFFIC Japan Consumer Market Survey

Methodology

In the current study, TRAFFIC Japan staff visited Oriental medicine shops in the cities of Seoul, Taejon, Kwangju, Taegu and Pusan between 10 November and 2 December 1988. These cities are the major population centres of South Korea and together account for 40% of the country's population of 40 million people.

The principal researcher is South Korean and posed as a potential customer for medicine to send to sick relatives in Japan, usually describing an ailment for which rhino horn products are generally prescribed. Thus, during the ensuing 15 to 40 minutes of conversation, often the shop proprietors themselves raised the subject and, it is believed, gave truthful information. Unfortunately it was not possible to talk with South Korea importers and wholesalers although it is doubtful whether they would discuss with relative strangers illegal activities. However, arrangements have been made with South Korean NGO's to monitor the activities of importers and information should become available in the near future.

Government officials at the Ministry of Health and Social Welfare, Forestry Administration and the Korea Customs Service were interviewed with respect to government regulations and enforcement policies. A leading scholar at the Oriental medicine faculty of Kyung Hee University in Seoul was contacted and he kindly discussed current and possible future research efforts with

respect to rhino horn substitutes. Finally, TRAFFIC conducted a literature search for information and reports pertaining to the South Korean rhino horn trade.

Availability of Rhino Horn

A total of 111 Oriental medicine clinics were visited in the five cities surveyed, of which 71 shops, or 64%, had rhino horn or rhino horn derivatives for sale (Table I). Of the 71 shops, over half were in

possession of raw horn or powder and all offered the medicinal balls called Chung Shim Won.

The pattern of rhino horn availability was not uniform throughout the country (Table I). In Taegu, a traditional centre of Oriental medicine in South Korea where a special district of clinics exists, only 21% of the establishments surveyed had rhino horn. In Pusan, where less than half the small number of clinics visited stocked rhino horn, it appears that availability has dropped considerably for in 1982 Martin found "every one of the eight main clinics' had horn for sale."¹¹ However, both surveys in Pusan rely upon small data samples and therefore should not be treated as conclusive evidence. About 60% of the handful of shops visited in Kwangju and Taejon had rhino horn or derivative products for sale. In Seoul 86% of the clinics seen, including



South Korea is the world's biggest importer of deer antlers.

Table II
Comparison of Numbers of Oriental Medicine Clinics
Selling Rhino Horn, Including Derivatives, in Seoul, South
Korea

Year	Number of Clinics Surveyed	Number Selling Rhino Horn	Percentage Selling Rhino Horn	Average Retail Price / Kg US \$
Martin 1980	30	19	63	1,436
Martin 1982	76	47	62	1,797
Martin 1986	108	55	51	1,771
TRAFFIC 1988	59	51	86	4,410

Sources: TRAFFIC Study and Data from Martin¹³

almost all in the Tongdaemun (East Gate) and Kyung Dong market districts, offered rhino horn products.

Martin, citing survey trends and declining prices, concluded that “demand for rhino horn is decreasing in South Korea”.¹² Table II compares previous surveys conducted in Seoul with the current result. It indicates a sharp increase in the percentage of clinics dealing in rhino horn products and a reversal in the city of the tendency suggested by Martin’s work.

To assist the study, Martin provided TRAFFIC Japan with the names and addresses of the 108 Oriental medicine clinics in Seoul which he surveyed in 1986. Of the 55 clinics which Martin identified as having rhino horn, 12 of the 13 revisited in the current survey continued to offer either rhino horn or Chung Shim Won balls for sale. Of the 53 establishments reported as not offering rhino horn in 1986, the seven re-surveyed all had rhino horn in stock.

Whether this represents actual growth in rhino horn availability since 1986 or reflects different survey methods and samples remains indeterminate. However, Western provided considerable evidence to suggest that a large portion of the rhino horn illegally entering international markets. has gone undetected in previous accounts of the trade.¹³ If this is true probably previous surveys have underestimated the rhino horn available in South Korea.

Uses of Rhino Horn

A review of traditional Korean medicine prescription books found 16 different medicines which include rhino horn as an ingredient: it is rarely used alone except as a cure for nose-bleeds.¹⁴ Table III lists these medicines by use, number of ingredients and weight of rhino horn in each prescription. One to 80 g of horn is combined with anything from four to 30 other ingredients to make the various preparations prescribed for ailments as diverse as rashes, eye diseases, stomach ulcers, mental disorders and swollen feet.

While all these medicines are prescribed from time to time, most rhino horn is used in prescriptions of Uhwangchongshimwon, otherwise known as Chung Shim Won.

According to Korea’s traditional medicine literature, Chung Shim Won balls are particularly effective for the treatment of high blood pressure, unstable mental conditions such as hysteria, disorders of the autonomic nervous system and insomnia among other ailments.¹⁵ Martin also reports the use of Chung Shim Won balls for nose-bleeds, paralysis, body pains, and “contaminated blood”¹⁶(sic), although this could not be verified in South Korea’s authoritative sources of traditional medicine ingredients and prescriptions, Pang Yak Hap Pyun.^{16,17,18} In China, Jufang Niu Huang Quingxin Pills have been identified as the equivalent of Chung Shim Won and are used for treating rheumatism, hemiplegia, paralysis, convulsions, epilepsy and fever.²⁰

A total of 30 different ingredients including rhino horn are combined to make Chung Shim Won. The typical prescription is given in Table IV.

This recipe is the basic production unit and, after several hours work, yields about 100 balls individually wrapped in gold foil. Generally, special orders are for this quantity and many apothecaries said they mix the ingredients in front of the customer in order to demonstrate that all the listed substances are properly included. Most of the clinics also keep Chung Shim Won balls in stock for small quantity, over-the-counter sales.

Some pharmaceutical companies manufacture patented Chung Shim Won balls. An administrative order issued by the Ministry of Health and Social Affairs in 1983 prohibited the import or use of rhino horn for pharmaceutical purposes. The price of company manufactured balls is between 3,500 and 4,000 won (US\$5 to 6)

Table III
Korean Herbal Medicines which contain Rhino Horn

Name	Use	Number of ingredients	Amount of Rhino Horn
Sogaktaechongtang	Rashes	9	5.62g
Shihosogaktang	Mental disorders	6	3.75 g
Hwanchonghwang	All kinds of eye diseases	29	30.00 g
Sonbanghwalmiyongum	Stomach ulcers	10	3.75 g
Yongyanggaksan	Children’s fits	11	26.25g
Kamikilyongtang	Blistered lips caused by rashes on the face.	12	3.75 g
Uhwangchongshimwon	Strokes. Loss of consciousness, excessive phlegm and saliva constricting the throat, dizziness, trouble with speech. Also for troubles with mouth, eyes, and use of hands and feet. Fever in the back or the heart. Urination during sleep, high blood pressure, mental unrest, hysterics, insomnia and mental disorders.	30	8.00 g
Sogaksoonmatang	Paralysis, pain in area between the nose and the forehead, mouth mobility dysfunctions, paleness in the upper part of the cheeks. Also for fever inside and outside body (sic), and swollen gums and face accompanied by pain. Erysipelas.	9	6.00 g
Kumichongshimwon	Fever and diseases of the heart	9	80.00 g
Chongshimkontamhwang	Epilepsy and general treatment for all kinds of strange diseases. Eliminates fever when it effects secretions inside the body.	8	20.00 g
Yongnoianshinhwang	Five kinds of epilepsy both acute and chronic. Eliminates fever after smallpox.	13	40.00 g
Sogakchihwangtang	Nosebleeding and when dried blood remains in the vital organs or when the face becomes blackish.	4	4.00 g
Sohapyyangwon	General treatment for all kinds of diseases. Also for delerium.	15	80.00 g
Hwangryontang	Swelling of the tongue, when the body is dry and feverish and needs moisture owing to fever in the heart; or when the tip of the tongue is bleeding and stiff.	9	2.00 g
Soongmahwangryontang	Feverish face	10	1.00 g or 2.00 g
Sogaksodokum	Erysipelas, smallpox and nettle rash	5	6.00 g

Sources: Dung Maek Pang Yak Pyun (Korean Medicine Prescription Book), Won Shik Bae (ed.), 1987, *Jea Shin Pang Yak Hap Pyun* (Korean Medicine Prescription Book), Ui Kun Kim (ed.), 1976

which is substantially less than for those sold at the clinics. This implies they lack the most expensive ingredient, rhino horn. Proprietors of the medicine clinics asserted that their Chung Shim Won balls are more effective because not all ingredients are present in the company product and those that are of inferior quality.

Prices for Rhino Horn

Rhino horn is one of the most expensive ingredients used in traditional Korean medicine and is generally kept in locked safes. The retail price was found to range between 50,000 and 300,000 won (US\$ 75 to US\$ 451) for the traditional Korean measure of 37.5 g. Using the average price of 110,000 won, raw rhino horn currently has a market value of 2,933,000 won or US\$ 4,410 per kilogram. This is a remarkable increase in value since Martin's figure of US\$ 1,771/kilogram (Table II). Similar price rises have been witnessed in Taiwan over the same period, indicating that the phenomenon is occurring elsewhere.²¹ The retail price of Chung Shim Won balls, which weigh about 3.75 g apiece, ranged from 4,000 won to 18,000 won (US\$6 to US\$ 27) in 1988, with a mean of 7,700 won (US\$ 11.50). Martin stated that Chung Shim Won balls were US\$6 each, indicating that the price of the balls has also increased substantially.²² (During the current survey, 665 won equalled US\$ 1).

Substitutes for Rhino Horn and Extent of Their Use

It has been suggested that water buffalo horn was gaining acceptance as a substitute for rhino horn.²³ During the current survey, water buffalo horn was found to be used at certain clinics for making Chung Shim Won balls but only for customers who could not afford the expense of rhino horn itself. The belief in the efficacy of rhino horn remains strong and water buffalo horn is still not widely recognized as an effective substitute equal in therapeutic value. Consequently, customers prefer to use Chung Shim Won which contain rhino horn, and clinic proprietors clearly promote these as being more effective than those made with substitutes.

Researchers at Kyung Hee university, one of the leading academic institutions in South Korea with an Oriental medicine faculty, have conducted experiments on rhino horn substitutes in the past.²⁴ Currently, Dr Duk-kyun Ahn is seeking financial support to review the usage of rhino horn in South Korean traditional medicine and to continue experiments on the efficacy of various substitutes including bovine, water buffalo and saiga antelope horn. Dr Ahn also is attempting to identify appropriate substitutes for other substances which derive from endangered species, especially musk and bear gall bladder which are used widely in South Korea.

Legal Measures Taken to Control the Import and Use Of Rhino Horn

Over a period of years, South Korea's control policy for rhino horn importation and domestic use has been developed through a series of legal measures taken by government ministries. The first was in November 1983 when the Ministry of Health and Social Affairs issued an order under the Pharmaceutical Law prohibiting the import of rhino horn for medicinal purposes and its use as an ingredient in patented medicinal products. Then, in

Table IV
Prescription for Chung Shim Won Balls

English or Common Name	Scientific or Pharmaceutical Name	Amount
Chinese Yam Root	<i>Dioscorea Batatas</i>	28.0 g
Licorice Root	<i>Glycyrrhiza uralensis</i>	20.0 g
Ginseng Root	<i>Panax ginseng</i>	20.0 g
Cattail Polen	<i>Typha spp.</i>	10.0 g
Medicated Leaven	<i>Massa Fermentia</i>	8.0g
Rhinoceros Horn	Rhinocerotidae spp.	8.0g
Young Soybean Sprout	Glycine mas	8.0g
Saigon Cinnamon Twigs	<i>Cinnamomum cassia</i>	6.8 g
Donkey skin Gel	<i>Colla asini</i>	6.8g
Peony Root	<i>Paeonia lactiflora</i>	6.8 g
Lush Winter Wheat	<i>Ophiopogon japonicus</i>	6.8g
Baical Skullcap Root	<i>Scutellaria baicalensis</i>	6.8g
Tangkuei Root	<i>Angelica sinensis</i>	6.8 g
"Guard against Wind"	<i>Ledebouriella sesloides</i>	6.8g
Cinnebar	<i>Cinnabaris</i>	6.8 g
	<i>Atractylodes macrocephala</i>	6.0 g
Hare's Ear Root	<i>Bupleurum scorzoneraefolium</i>	6.0 g
Balloon Flower Root	<i>Platycodon grandiflorum</i>	6.0 g
Almond Kernal	<i>Prunus armeniaca</i>	6.0 g
Sclerotium of		
Tuchkahoe, China-root	<i>Poria cocos</i>	6.0 g
Szechuan Lovage Root	<i>Ligusticum wallichii</i>	5.0 g
Cow or Water Buffalo		
Bezoar or Gallstone	<i>Bos taurus domesticus</i>	5.0g
Saiga Antelope Horn	<i>Saiga tatarica</i>	5.0g
Musk	<i>Musculus spp.</i>	5.0g
Processed Resin of		
Borneol Camphor	<i>Dryobalanops aromatica</i>	4.0g
Realgar	Realgar	4.0 g
	<i>Ampelopsis japonica</i>	4.0 g
Dry Ginger	<i>Curcuma zedoaria</i>	3.0 g
Jujube Fruit	<i>Ziziphus jujuba</i>	20 pc
Gold paper		

Source: *Pang Yak Hap Pyun* (Korean Medicine Prescription Book)

July 1984, the Ministry of Trade and Industry made an order rendering the import of rhino horn for purposes other than medicinal use subject to special permission from a provincial governor. The most recent and far-reaching measure, effective from 28 June 1986, was the total prohibition of rhino horn importation under the Wildlife and Hunting Law which is administered by the Forestry Administration.

Review of South Korean Trade Records

Although a rather confused legal situation prevailed in the mid-1980s, South Korean Customs statistics show no rhino horn imports between 1984 and 1987. In 1988 an astonishing 1,900 kg was reported as coming from Japan, but this was later affirmed by Korean government officials to be cow horn erroneously classified.³¹

Overall, South Korean records from 1970 to 1983 show a relatively high level of importation, most of which contravened the conservation policies of the source countries. Between those dates, a total of 2,857 kg of rhino horn was received from 11

Table V
South Korean Imports of Rhino Horn 1970-1988

Country	CITES entry into force	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984-1987	1988	Total
USA	01.07.75	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	20
India	18.10.76	-	-	-	30	-	-	-	19	-	20	-	-	-	-	-	-	69
HongKong	31.10.76	2	-	-	-	30	-	-	-	-	-	-	5	-	-	-	-	37
Malaysia	18.01.78	-	-	-	-	-	-	-	-	-	30	21	-	-	-	-	-	51
Kenya	13.01.79	-	-	-	-	-	-	-	-	-	-	-	-	35	-	-	-	35
Indonesia	28.03.79	-	-	-	214	97	200	204	207	51	208	93	127	200	300	-	-	1,901
Japan	04.11.80	1	2	31	9	6	12	8	15	-	-	89	-	28	-	-	*(1,900)	#201
China	08.04.81	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	10
Thailand	21.04.83	-	-	-	-	81	-	65	66	-	40	4	-	-	-	-	-	256
Singapore	28.02.87	-	50	197	-	-	-	-	-	-	-	-	-	-	-	-	-	247
Burma		-	-	-	-	-	-	-	-	-	20	10	-	-	-	-	-	30
Total		3	52	248	253	214	212	277	307	51	318	217	142	263	300		*(1,900)	#2,857

*Later confirmed to be cow horn (Personal communication; Rhee and Lee) #Excluding 1988 trade

Source: South Korean Customs Statistics

Notes to Table V.

United States: No rhino species occur in the United States. The 20kg of rhino horn from there possibly represents hunting trophies.

India: Rhino populations in India have enjoyed complete protection since 1972 under the Wild Life (Protection) Act. Since October 1976, all exports of rhino horn have been subject to CITES regulations. The 69 kg of rhino horn reportedly received would have been illegal under India's domestic laws and CITES.

Hong Kong: The Territory allowed exportation until March 1986 but the five kg of rhino horn imported from Hong Kong in 1981 was illegal under CITES, as none of it was reported in Hong Kong's CITES 1981 annual report. Significantly greater volumes of rhino horn are believed to have been traded between Hong Kong and South Korea over the period examined.^{22, 23}

Malaysia: The 51 kg of rhino horn received from Malaysia occurred after CITES came into effect in peninsular Malaysia in 1978. A CITES Annual Report was not filed by Malaysia in 1979 and the 1980 report did not include any rhino horn exports to South Korea. Exports to two other Malaysian states, Sabah and Sarawak, were not subject to CITES controls until a later date.

Kenya: Kenya did not file a CITES Annual Report in 1982. Under domestic legislation the export that year of 24 kg of rhino horn would have been illegal.

Indonesia: This country is recorded as supplying a remarkable 1,901 kg of rhino horn to South Korea. This figure seems all the more excessive in view of the low density and the legally protected status of indigenous populations of rhinos. Both the Javan and Sumatran rhinos, Indonesia's two species, have been protected under the Wild Animal Protection Ordinance of 1931 which prohibits hunting, capture, killing, trading or possession of listed species.²⁴ Moreover, CITES prohibitions against exportation have been in effect since 28 March 1979: the legal export of rhino horn has never been reported in Indonesia's CITES Annual Report. Thus the 720 kg imported between 1980 and 1983 was illegal trade under CITES and previous trade would have contravened domestic legislation.

Japan: Japan was a fairly steady source of rhino horn until CITES took effect in late 1980 and largely curtailed exports to South Korea. From 1980 to 1987, the only trade with Japan recorded by South Korea Customs is one in 1982 of 28 kg. However, according to Japan's 1982 CITES Annual Report, four shipments of rhino horn totalling 133 kg were exported to South Korea under the "pre-convention" exemption allowed under Article VII of CITES. The 28kg of rhino horn correspond to one of these four shipments: apparently not all Japanese exports to South Korea are recorded in Korean statistics. In 1988, South Korea reported receiving 1,900 kg of rhino horn from Japan but, as previously mentioned, this actually represents cow horn mistakenly recorded in Customs statistics.²⁵

China: It is not known whether the import of 10 kg of rhino horn from China took place before or after April 1981, the date CITES came into effect. If the transaction took place after CITES became operative it would have contravened the Convention.

Thailand: Sporadic trade with Thailand totalled 256 kg but was conducted before Thailand became a party to CITES. Regardless, Thailand's highly endangered populations of Sumatran rhinos are protected under the Wild Animals Reservation Act of 1972, which bans hunting and exportation, so all trade from the country is illegal. (Javan rhinos were also historically distributed in Thailand but are believed to have been extirpated.)²⁶

Singapore: The 247 kg of rhino horn reportedly received from Singapore all resulted from trade in the early 1970s. No rhino species are distributed in Singapore but Singapore's role as an entrepot for both African and Asian rhino horn is well known.²⁷

Burma: Burma is one of the few countries which has not joined CITES and lacks a domestic policy which forbids the export of rhino products. Two species of rhino, the Sumatran and the Javan, have historic distributions in Burma, but their current status is unknown, although occasional and largely speculative reports indicate that at least one species is extant.



A South Korean pharmacist holds here a rhino horn which was made into Chung Shim Won balls and sold to patients in traditional clinics for the purpose of curing high blood pressure, paralysis and various types of pain.

countries (Table V) with Indonesia, Singapore, Thailand and Japan apparently accounting for over 90% of the trade.

Illegal Trade

Martin has consistently claimed that official government statistics represent only part of South Korea's rhino horn imports.³² When importation was legal, high customs tariffs and other taxes provided a ready incentive for importers to conceal shipments of rhino horn. Certainly, it has been demonstrated that the major portion of Japan's exports in 1982 were not recorded on South Korean Customs data. Either they evaded Customs or, less likely, remained in transit and did not officially enter the country. During a number of the interviews with Korean shop owners, Japan was cited as a source of rhino horn but whether these remarks referred to the situation before or after the import ban was not clarified.

Hong Kong also was mentioned as a leading source of rhino horn and some proprietors implicitly suggested that the trade continues although no direct evidence was forthcoming. After officially banning rhino horn exports in March 1986, Hong Kong has recently taken measures to curtail all use of rhino horn in the domestic market. This could have precipitated the re-export of unregistered rhino horn stockpiles to South Korean buyers. As with Japan, imports of rhino horn from Hong Kong have not always been acknowledged in official South Korean statistics.³³

Confiscations

Martin reported South Korean Customs officials as saying "there are only a few attempts to bring rhino horn into the country now"³⁴. During the current survey the South Korean Customs Service in Seoul was unable to produce any record of recent rhino horn confiscations at ports of entry.

Domestic Regulation of Distribution and Use

South Korean importers, wholesalers and dealers involved with rhino horn or derivative products have never been required to submit stock inventories to the authorities. There is no reporting requirement for the amount of rhino horn used or sold through the Oriental medicine clinics. Thus there are neither records of the amount of rhino horn in South Korea when the import ban was imposed nor

any record of the amount which has been since consumed. This situation provides an ideal climate for the continued import of rhino horn. During the current survey, none of the clinic proprietors made a point of identifying their rhino horn as deriving from stocks predating the import ban probably because there is no compulsion to do so.

Conclusions

Although the importation of rhino horn has been banned in South Korea since June 1986 and Korean Customs statistics show no import since 1984 (except for the misidentified entry in 1988), it is still widely available in Oriental medicine clinics throughout the country.

It is impossible to identify rhino horn of illicit origin in the market place. South Korean regulations prohibit only the use of rhino horn in patented medicine while the sale and use of rhino horn at the Oriental medicine clinics is uncontrolled.

Therefore, it is imperative for South Korean authorities to develop a policy to regulate domestic possession and sale of rhino horn.

Consumption of rhino horn continues to be driven by the market for Chung Shim Won balls, the medicine in which the majority of rhino horn is used. Consumer demand has not abated in the face of dramatically rising prices which have increased by at

least 150% over the last two years. The *belief* in the effectiveness of rhino horn remains strong and alternative substances, such as water buffalo horn, are not gaining the wider acceptance claimed by some observers. Few efforts are being made to identify and promote substitutes.

It seems that, for the time being and as a result of South Korea's strong economic performance over the last few years, rising per capita income has largely mitigated the necessity to seek cheaper alternatives. It is unlikely that demand for rhino horn will decrease significantly in the near future. As a result, illegal importation and concomitant poaching will be encouraged.

Recommendations

1. The South Korean government should require a general registration of all existing stocks of rhino horn and, thereafter, only allow possession under a licensing system.

Registration procedures should be designed to ensure that over-registration in expectation of obtaining future, illegal imports does not occur.

Acknowledgements

The authors would like to thank Mr Yohan Oh of the Korean Society for the Protection of Wild Animals who assisted TRAFFIC in arranging interviews with appropriate government officers. In this regard, we also wish to thank officials of the Ministry of Health and Social Affairs, Ministry of Trade and Industry, Fisheries Administration Environment Administration, Forestry Administration and Korea Customs Service for providing pertinent information on control measures and use of rhino horn in the Republic of Korea. Special thanks are also due to Dr Byong Oh Won of the Institute of Ornithology at Kyung Hee University in Seoul for introducing Dr Duk Kyun Ahn who is interested in conducting research on rhino horn substitutes. The authors also extend special thanks to Ms Keiko Sato of TRAFFIC Japan, who played a key role in the research on the trade in South Korea. And finally, we would like to thank Dr Esmond Martin who shared detailed notes of his earlier survey results with us so that we could more fully analyze our own findings.

References

1. D.M. Varisco, "Horns and Hilts, Wildlife Conservation in North Yemen (YAR)", a report prepared for Asia/Near East Bureau, Agency for International Development, December 1987, p 64.
2. J. Hanks, "WWF's Continental Strategy for the Conservation of Rhino in Africa", unpublished, December 1987, p26.
3. Hanks, "WWF's Continental Strategy".
4. Anon, "Rhinoceros Trade Factsheet", TRAFFIC USA (May 1985) P 2.
5. Anon, "Rhinoceros Trade Factsheet".
6. E.B. Martin, "North Yemen and the rhino horn trade today", Swara, Vol 7, No 2 (Mar/April 1984), pp 28-33.
7. E.B. Martin, "Technologies for Conserving Species: Saving the Endangered Rhinoceros", Testimony before the Committee on Science, Space, and Technology, US Government, Washington. 1988.
8. E.B. Martin, "The Trade and Uses of Rhino Products in Japan and South Korea", Rhino Exploitation: The Trade in Rhino Products in India, Indonesia, Malaysia, Burma, Japan and South Korea, WWF-Hong Kong, 1983.
9. E.B. Martin, "South Korea Stops Rhino Horn Imports", TRAFFIC Bulletin, Vol VIII, No 2 (25 July 1986), p 28.
10. E.B. Martin and J. Barzdo, "The Volume of the World's Trade in Rhino Horn", TRAFFIC Bulletin, Vol VI, No 1, (11 April 1984), pp 3-4.
11. Martin, "South Korea Stops Rhino Horn Imports".
12. Martin, "South Korea Stops Rhino Horn Imports".
13. D. Western, "The Undetected Trade in Rhino Horn", Pachyderm, No 11, (1989), p 26-28.

2. A deadline should be set, from which time the use of rhino horn would be banned. The ban should apply to the import, export, sale, purchase, offer for sale, or offer for purchase of rhino horn and any product containing or claiming to contain rhino horn.
3. In the interim between registration and ban, the South Korean government should require all individuals or establishments which possess, dispense or use rhino horn at either the wholesale or retail level to keep accurate records on the amount acquired, sold, or used, and periodically file inventory reports with appropriate government authorities.
4. An intensive effort to identify substitutes for rhino horn in traditional medicine prescriptions needs to be made. Research on this topic, at Kyung Hee University in particular, should be supported and any suitable alternatives given as much publicity as possible.
5. A monitoring system needs to be established in South Korea immediately so that developments in the rhino horn trade can be scrutinized.

14. Ui Kun Kim, ed., Jea Shin Pang Yak Hap Pyun (Korean Medicine Prescription Book), Daegu: Dong Yang Jong Hap Educational Publication Division, 1976.
15. Kim, ed., Jea Shin Pang Yak Hap Pyun.
16. Martin, "South Korea Stops Rhino Horn Imports".
17. Bae, Won Shik Bae edit, Dung Maek Pang Yak Hap Pyun (Korean Medicine Prescription Book), Seoul: Nam Sang Dang, 1987.
18. Kim, ed., Jea Shin Pang Yak Hap Pyun.
19. Martin, "South Korea Stops Rhino Horn Imports", p 28.
20. P. Ni-Hay But, Lai-Ching Lung and Yan-Kit Tam, "Profiles of Chinese Medicines 4, Rhinoceros Horn", Abstracts of Chinese Medicines, 2(3), 1988, pp 351-360.
21. Personal Communication, E.B. Martin, IUCN/SSC African Elephant and Rhino Specialist Group, Nairobi, Kenya.
22. Martin, "South Korea Stops Rhino Horn Imports".
23. E.B. Martin and L. Vigne, "Recent Developments in the Rhino Horn Trade", TRAFFIC Bulletin, Vol IX Nos 2-3, (13 November 1987), pp 49-53.
24. Martin, "South Korea Stops Rhino Horn Imports".
25. Martin, "The Trade and Uses of Rhino Products in Japan and South Korea".
26. Martin and Barzdo, "The Volume of the World's Trade in Rhino Horn".
27. Anon, "Mammals, Reptiles, Butterflies and Fish Protected in Indonesia", TRAFFIC Bulletin, Vol III No 6, (1982), pp 63-64.
28. Personal Communication, Deok-Gil Rhee, Environment Administration, Seoul, Republic of Korea and Joo Seong Lee, Forestry Administration, Seoul, Republic of Korea.
29. J.R. Bain and S.R. Humphrey, "Species of Thailand, Vol. I, 1982, p51 1.
30. Martin and Vigne, "Recent Developments in the Rhino Horn Trade".
31. Personal Communication, Deok-Gil Rhee and Joo Seong Lee. 32. Martin, "The Trade and Uses of Rhino Products in Japan and South Korea"; and Martin, "South Korea Stops Rhino Horn Imports". 33. Martin and Barzdo, "The Volume of the World's Trade in Rhino Horn". 34. Martin "South Korea St

