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**THE ILLEGAL TRADE IN RHINO HORN AS AN EXAMPLE OF AN  
ENDANGERED SPECIES**

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# THE ILLEGAL TRADE IN RHINO HORN AS AN EXAMPLE OF AN ENDANGERED SPECIES

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## Introduction

In the *Connepp*<sup>2</sup> *Discussion Document Towards a New Environmental Policy for South Africa*, it is stated that nearly one tenth of all known species of plants in the world are found in South Africa. A great diversity of mammals, birds, reptiles, amphibians and insects is also found here.

This article presents a review of the nature and extent of the illegal trade in endangered species, with rhino horn as a relevant South African example. As this study in the field of green environmental criminology is the first of its type, an exploratory research method has been used with the immediate goal of describing the nature and criminal profile of the illegal trade in rhino horn.

South Africa is at the forefront of the struggle to combat the illegal trade in endangered species. Criminological research, focusing on the criminal elements involved in the threat against endangered species has been conducted at the Endangered Species Protection Unit<sup>3</sup> (ESPU) of the South African Police Service (SAPS) since 1991. Official dockets concerning the illegal trade in rhino horn in South Africa, obtained from the ESPU of the SAPS for the period 01 January 1992 till 31 December 1995, have been used for the purpose of the study, thus encompassing a period of four years. A docket, which is opened when a crime is believed to have been committed. All of the 45 dockets studied in the course of this research have been opened as a result of either the poaching of but mostly the illegal trade in rhino horn. After a docket has been opened and the offenders involved in the specific case have been apprehended, the docket is entered into the judicial process for prosecution.

This study represents 35 percent of all the dockets on rhino horn which have been opened by the ESPU of the SAPS. It further represents 10 percent of all the dockets on endangered species at the ESPU of the SAPS. The data has been processed by computer and statistically analysed. The Dollar (\$) money unit has been converted to South African Rand (R) to serve as applicable example. The exchange rates were applied at the time (6th of June 1996) that they were valid, according to the South African Reserve Bank. No correction has been allowed for inflation later than June 1996.

Rhino horn has been selected as specific example of an endangered species, due to the following reasons:

- a. The rhinoceros is one of the species most affected by poaching and illegal trade and will certainly face extinction without effective regulation. South Africa has a history of successful nature conservation and due to this and strict policing measures is presently hosting more than sixty percent of the world's (black and white) rhinoceros population.
- b. Crimes related to rhino horn comprise at least 45 percent of all the endangered species dockets studied.
- c. An indepth study of the illegal trade in rhino horn has been decided upon rather than ivory, which comprises at least 50 percent of all the dockets, because there is no consensus whether this species should be classified as endangered while culling is still operational. It can be compared to the condemnation of murder while ritual killings are allowed due to cultural beliefs.
- d. Rhinoceros is lastly selected above other species, such as cycads, abalone and exotic birds, because these latter comprise only 5 percent of all the dockets at the ESPU. The information available on these species is too limited to present comprehensive results.

### **Wildlife and Green Environmental Criminology**

There seem to be various terms in use when referring to crime against wildlife and its environment. One such term is the frequently used term **environmental crime**, which denotes crime as a result of ecological/social disorganization. According to criminological theorising (Morrison, 1995:244-247) each area is symbiotic for particular types of behaviour, environmental design thus explains and prevents crime especially in urban areas. Crime against wildlife and the environment outside urban areas has been neglected, even by environmental criminology.

Another term, more recently being debated is that of environmental crime and criminality (Edwards, Edwards & Fields, 1996). Only this time it implies environmental crimes per se, such as the illegal disposition of hazardous waste. This viewpoint goes beyond the classical ecological/social disorganization and geographical discussions on crime, which focus mainly on the prevention of crime in an urban environment. It tends to exclude habitats or environments other than those of specie homo sapiens.

Wildlife and green environmental criminology should include crime which encompasses poaching, illegal trade in endangered and vulnerable fauna and flora species and other crimes against wildlife and its habitat. This include birds, cycads, succulents and other veld plants, marine life, indigenous

insects and reptiles as well as wetlands and rainforests. Apart from the above, it should also include the study of crimes such as pollution, illegal disposal of toxic waste as well as the illegal trade in radio-active substances.

The welfare and survival of wildlife and the lives of humans on earth are interrelated. Wildlife and green environmental crime seems to be destructive not only to humans but to all other forms of life on earth. If a car is stolen, a bank is robbed or murder is committed, it does not have such a significant effect on the global environment than poaching, toxic waste, pollution and illegal trade in wildlife. While the human gene pool is overpopulated, crime against endangered species can result in the extinction of these species and the destruction of bio-diversity of the planet. The result proof to be fatal to all living creatures and their environment.

### Rhino as the target of crime

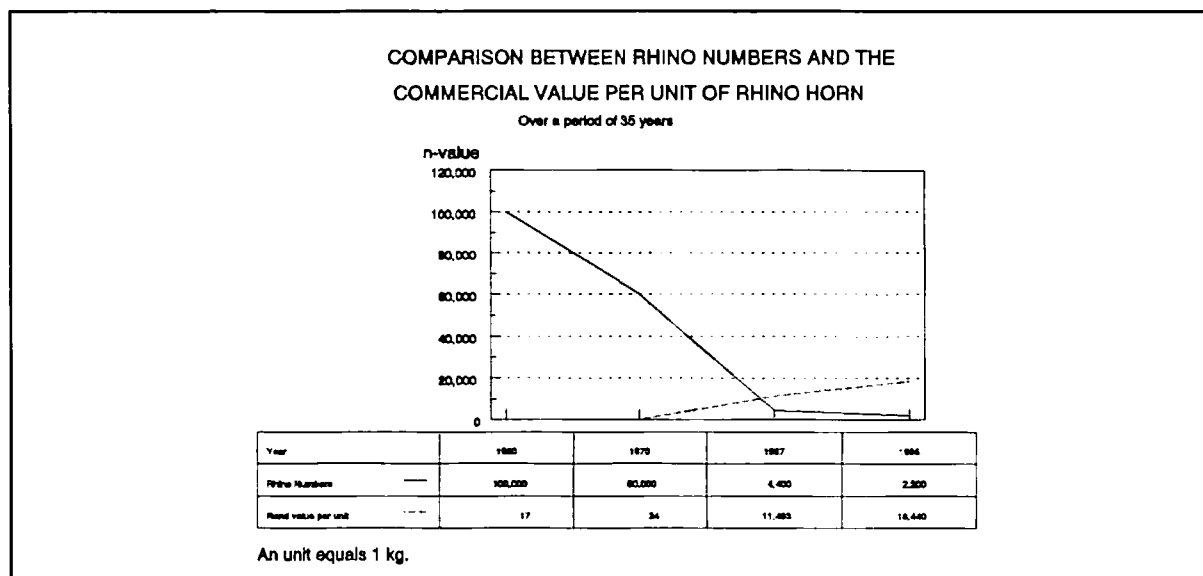
#### Rhino populations in Southern Africa

Since the dawn of the twentieth century and especially since 1970, close to 85 percent of the rhinos found on earth has been killed, leaving the rhino amongst the world's most endangered mammal species. No other species have been so rapidly depleted (Balfour & Balfour, 1991:36-61) mainly because of the commercial value of rhino horn.

According to evidence presented by Dr John Hanks<sup>4</sup> at the Kumleben Commission<sup>5</sup> the number of black rhino in Africa has decreased from an estimated 100 000 animals in 1960 to 2200 at present. By 1970, figures were down to 65 000 and the most recent estimates of its total population suggest levels of 2200. This is viewed as the most precipitous decline in numbers of any large mammal species recorded in recent times. The number of black rhino (*Diceros bicornis*) has declined more drastically than that of any other large land mammal in recent times.

Figure 1 depicts a comparison between the decrease in black rhino numbers and the increase in commercial value (expressed in South African Rand) over the past 35 years.

Figure 1



Of the estimated 2200 black rhinos still alive in Africa, 890 (40%) are found in the Republic of South Africa, as are 6300 (92%) of the estimated 6800 white rhinos. This leaves South Africa, due to effective regulations and strict law enforcement, with 66 percent of all living black and white rhino in the world today and makes the country a prime target for the illegal trade in rhino horn. The demise of the rhino population in the rest of Africa as well as the rise in the value of rhino horn, leaves South Africa's rhino population in an extremely vulnerable position.

#### Uses of rhino horn

The largest markets for rhino horn and other rhino products are situated in the Far East, North Yemen and India. The horn of a black rhino is more popular than that of the white rhino due to its smaller size. This is a result of the belief that the smaller horn contains more power. Rhino horn is mainly used for the following purposes:

- a. The making of daggers : Daggers, also called jambia, are given to Yemeni boys as initiation gifts. More than 50 000 boys are initiated in Yemen (in the Middle-East) yearly (Balfour & Balfour, 1991:63-70). This makes it evident that the demand for rhino horn far exceeds the supply. This fact promotes the illegal trade in this commodity and can have horrifying results if the species is not protected.
- b. Medicinal uses : An ancient Greek reference dating from the fifth century BC, mentioned that rhino horn was used to make drinking cups to detect poison. Rhino horn is an ingredient in many medicinal recipes (Martin, 1979:12). The medicinal recipes of China's Pen Ts'ao Kang Mu, a pharmacopoeia written in the

sixteenth century, contains over 12 000 recipes. Not only the horn but also other rhino products are used. The hide is used as a remedy for skin ailments and dried rhino blood is used as a tonic to improve general health in states like Burma, Nepal and India (Martin, 1979:52).

- c. Sexual stimulant : It seems that the male rhino's sexual stamina (it can have intercourse for long periods of time and can ejaculate on various occasions during this time) rather than the horn itself, contributes to the belief that rhino horn is an aphrodisiac (Martin, 1979:52-53).

### Victims of the illegal trade in rhino horn

Illegal trade in rhino horn not only affects the species itself but also interest groups involved in it. Victims can be divided into various categories, of which the following are the most important:

- a. Government-controlled national parks: This boils down to the fact that every taxpayer is a co-owner of the endangered species in the parks and therefore has the right to insist upon the protection of these species as stated in the new constitution of South Africa. This ensures an income from eco-tourism which in turn can contribute to economic upliftment in the country. By failing to effectively control the illegal trade in endangered species, an offence is being committed not only against every taxpaying citizen by way of loss of eco-tourist income, but also by way of destruction of natural heritage in the form of the natural environment where bio-diversity is disturbed.
- b. Private owners of endangered species: This group also contributes to the conservation of endangered species and experiences heavy individual financial losses when animals are poached and illegally traded by smugglers.
- c. Non-governmental organisations (NGO's): Although not owners of endangered species, these organisations contribute financially as well as logistically to the protection of endangered species by donating money, transport, personnel etc. and also suffer severe losses because of illegal trade.
- d. The species per se: The species itself is the specific victim (Fattah, 1995:92). A loss of bio-diversity and subsequent changes to a certain eco-system is experienced when a species becomes extinct. The cruelty involved in this crime, such as hacking off the horn from a wounded but nonetheless living animal, makes these animals victims per se.

## Criminal justice of the illegal trade in rhino horn

The globally diminishing numbers of wild fauna and flora led to the Convention on International Trade in Endangered Species (CITES) which was signed in Washington in March 1973. South Africa is one of the signatories of this international convention which regulates the illegal trade in endangered species globally.

The protection of South Africa's wild fauna and flora is not only regulated by CITES and other international institutions, but also through the application of various national laws and provincial ordinances.

In order to bring about uniform and therefore more effective legislation, South Africa is in a process of reviewing existing laws. Laws and regulations are however not applied consistently throughout the country. Bearing in mind that the maximum fine for the illegal trade can be R 250 000 with a maximum prison sentence of ten years, it is noteworthy that imposed fines vary from only R 300 to R 30 000 per case.

Taking into account the high prices that especially rhino horn, but also other products of endangered species fetch on illegal and legal markets, it is clear that an economic motive provokes this type of crime. The table below indicates rhino horn prices per weight, fetched on the illegal market in South Africa as derived from police docketts.

Table 1 : MONETARY VALUE OF RHINO HORN PER WEIGHT

Weight	Average Rand Value	Average Dollar Value (According to the April 1996 average exchange rates)
0,1kg	R 753	\$ 3 539
0,5kg	R 3 765	\$ 17 695
1,0kg	R 7 530	\$ 35 391
1,5kg	R 11 295	\$ 53 086
2,0kg	R 15 060	\$ 70 782
2,5kg	R 18 825	\$ 88 477
3,0kg	R 22 590	\$ 106 173
3,5kg	R 26 355	\$ 124 868
4,0kg	R 30 120	\$ 141 564
4,5kg	R 33 885	\$ 159 259
5,0kg	R 37 650	\$ 176 955

The best laws, however, are worthless without proper enforcement. Prior to 1988, South Africa was accused by CITES member countries, of impassively and impartially standing by while ivory and rhino horn were smuggled across our borders. It is common knowledge that endangered fauna and flora, worth millions of rand, are smuggled to international markets from Africa. To ensure the continued existence of these endangered species and others which are not listed as endangered yet and to redress South Africa's reputation as an accessory to the smuggling and brutal extermination of our endangered species the Endangered Species Protection Unit (ESPU) was formed by the South African Police Service (SAPS).

### **Policing of the illegal trade in rhino horn in South Africa**

The goal of this specialist police unit, commanded by superintendent Piet Lategan, is to operate with the powers that are defined in law and strive to provide through law enforcement a stable platform for the conservation of the South African environment. This must be done in recognition of the notion of accountability to the concept of democracy. In this process only members who possess the relevant skills and qualifications and have been evaluated will be appointed to the Unit.

The ESPU of the SAPS is in a favourable position to combat crime such as the illegal trade in rhino horn because of its ability to function not only nationally, but also internationally as opposed to nature conservation efforts which are limited to borders of national parks, provinces etc. This is made possible by the unit's links with Interpol<sup>6</sup> as well as the signing of international agreements.

In order to fulfil its duties to the best of its ability, the unit has been divided into various task groups. Besides those dealing with administrative matters the unit consists of the following investigative teams:

- a. Fauna-,
- b. Flora-,
- c. Special Overt-,
- d. Clandestine-,
- e. Environmental Crime-, and
- f. Anti-poaching teams.

Taking into account the relative short lifespan (7 years) of the unit, its success is outstanding. The hard work and dedication of its members have led to international acknowledgement. Members of the unit have contributed to the formation of an Interpol subgroup on Fauna and Flora.



The unit essentially focuses on community policing and is therefore a national asset to South Africa as well as being an international role model. It has had a lot of success in establishing consultation with interest groups in various communities, such as traditional leaders on national park borders. Such leaders are consulted and urged to become involved in the fight against wildlife and environmental crime, such as the poaching of rhinos and the illegal trade in rhino horn.

### The criminal profile of the illegal trader in rhino horn

During the course of this study it has been determined that the average weight of the rhino horns illegally traded is 4,45 kg per horn. The lightest horn weighed 0.506 kg while the heaviest weighed 7 kg. Most of the horns were not that heavy, which made it easier for smugglers to conceal, transport and trade. Illegal traders conceal the horns in plastic bags, rucksacks, sleeping bags and travel gear such as suitcases. The transport they make use of is mainly vehicles such as motorcars, landrovers and trucks. If a horn is smuggled across borders, air and road transport is used.

Ninety percent of all offenders are men and only 10 percent of the cases involve women. Most (76,5 percent) of these offenders are from the Republic of South Africa. Only 23,5 percent come from Botswana, Mozambique, Swaziland, Zimbabwe, Namibia, Ruanda and China. The daily occupations of the perpetrators include the following : general labour; student; business; panel beating; craftsmanship; hair dressing; sales; computer work; farming; pensioner; taxi driving; fireman; mining and clerk.

The age of the offenders varies from 20 to 65 years, with the average age being 35. The age group therefore includes young and old of which most (63 percent) of the offenders are married with a further 30 percent unmarried and the remaining 7 percent either divorced, widowed or marital status unknown. The fact that most of the illegal traders are married supports the above mentioned fact that most of the illegal trade in endangered species is done in order to support poor families.

The home language of the offenders is depicted in the following table:

Table 2 : The home language of the offenders

Language category	Official Language indicator	Frequency (n-value)	Percentage
Afrikaans	Yes	29	35,8%
Zulu	Yes	19	23,5%
English	Yes	13	16,0%
Other African	No	15	18,6%

Language category	Official Language indicator	Frequency (n-value)	Percentage
Asian	No	2	2,4%
European	No	3	3,7%

(Note : The total n-value = 81)

Since the start of the new dispensation, after the 1994 elections, South Africa has had eleven official languages. This however, does not have a noteworthy influence on illegal transactions as illegal traders still seem to communicate in either Afrikaans or English. It is worthwhile to note that although 53 percent of the offenders are from the black community and 46,9 percent either from the white, coloured, asian or indian communities, 51 percent have indicated Afrikaans or English as home language while a further 39,5 percent have indicated other African languages. One would rather suspect a larger percentage of African languages. A possible reason for the fact that 51 percent indicates Afrikaans or English, can be found in the fact that these two languages were the official languages before the 1994 elections. It was thus easier to negotiate for better prices in a generally known and official language.

Concerning the educational qualifications of the perpetrators, over 60 percent have some sort of education from grade 10 and higher, even though the illiteracy figure for South Africa as a whole stands at 30,6 percent. The section of the population with an educational level of grade 7 and lower, make up 45 percent. This leaves South Africa with a total of 75,6 percent of completely and partly- illiterate people. The fact that 60 percent of the offenders have a higher than average education level, relates to the fact that a certain skill is needed in the bargaining process to negotiate prices during illegal transactions. Offenders must have knowledge of currencies and certain business and persuasion skills.

It is interesting to note, that although over 60 percent of the offenders have some sort of education, the unemployment figure of the offenders equals nearly 30 percent as indicated in the table below. This reflects the present situation in the country that 29 percent of South Africans are unemployed. The figure<sup>7</sup> reflected by the results in this study therefore correlates totally with the CSS figure for the country as a whole.

Table 3 : Occupational category of the offenders

Occupational category	Frequency (n-value)	Percentage
General labour	26	32,1%
Unemployed	24	29,0%

Occupational category	Frequency (n-value)	Percentage
Business	23	28,4%
Technical	8	9,9%

(Note : The total n-value = 81)

It is interesting to note that most of the offenders fit into the general labour and unemployment category. This relates to the fact that general labourers earn a low income per annum and unemployed people none, which could lead to the rational choice motive to get involved in this type of crime. The offenders who fit into the business category may use money earned from illegal trade in rhino horn as supplementary to existing legal business deals.

### Conclusions

In the course of this article it has been established that the illegal trade takes place in and around thoroughfares, airports and cities where established crime syndicates operate. The profile drawn of the illegal trader, indicates that most of the offenders are males in their thirties. They can be either single or married. The majority of the offenders are black, followed by white and coloured offenders and speak mostly Afrikaans, Zulu or English. These three languages form part of the eleven official languages spoken in South Africa.

In one third of the cases the educational level of the illegal traders is below grade ten. Another third of the violators have obtained a senior certificate or grade twelve. In 30 percent of the cases the offenders are unemployed and the largest section of the remainder is divided between general labour and business.

This type of crime involves large financial losses as well as the loss of national heritage in the form of endangered wildlife. Those involved in the combat against the illegal trade in endangered wildlife, should take note of the fact that offenders take advantage of the public's ignorance concerning the nature and extent of the crime. The task therefore extends beyond the scope of wildlife conservation to legislators, law enforcers and the general public to deem the illegal trade in endangered species as a heinous crime deserving of their attention.

Up to now conservation agents such as TRAFFIC<sup>8</sup> have been monitoring the illegal trade in endangered species and have to a certain extent indicated the decline in numbers of endangered species as well as mainly economical reasons for smugglers to get involved in this type of crime. Limited research has been done in the field of green environmental criminology in spite of the

illegal trade in wildlife products being the second largest illegal market globally (Fitzgerald, 1989:13-15).

Contradictory viewpoints on this type of crime hamper the effective application of regulations. There are those interested only in the monetary value of endangered species. Then there are groups with a moral, sentimental approach attempting to put their views across by activism, eco-terrorism etc. Conservationists form a third group in the discussion surrounding the illegal trade in endangered species. This group focuses exclusively on the conservation and regulation of endangered species.

There also seem to be discrepancies concerning statistics compiled by conservationists such as the African Elephants and Rhinos Status Survey and Conservation Action plan<sup>9</sup>. Figures, such as counts on certain species, assembled by individual institutions concerned with conservation or governmental- and non-governmental organisations vary considerably.

Unfortunately, despite the 20 year ban in the trade of rhino horn, the illegal trade in rhino horn still continues and is a highly lucrative international trade. This explains why certain conservationists feel that the ban on trade in rhino horn, regulated by legislation and conventions such as CITES, is not successful. It is interesting to note that since the establishment of CITES and thus also the ban on trade in rhino horn and with the introduction of policing wildlife crime, there seems to be a decline in the actual killings of black rhinos. This is illustrated by the following table where the remaining number of animals in a certain year's count are divided by the total of years go by:

Table 4 : Decline in numbers of the black rhinoceros during this century

Year of count	Estimated Animal Count	Projected total of animals killed per year
1900	100 000	
1960	70 000	500
1970	65 000	500
1981	10 000 - 15 000	2857 - 2619
1987	3800	1033 - 1867
1995	2200	200

It should also be borne in mind that permit control in Africa is not up to standard and in many cases non-existent. CITES permits are issued with little intervention from official organisations.

A fact that could have contributed to the perception that the ban on the trade in rhino horn is unsuccessful is the fact that although the ban has been in place for the past 20 years, active policing in the field of endangered species in South Africa has only come into place seven years ago. This has already produced good results. Previously the task was hampered by problems such as park officials and national and private owners being restricted by national and international borders in the combat of crime and poaching. The police service has the ability to move between borders and can also conduct anti-poaching exercises in various national parks or private game parks. They do however, experience certain problems that hamper their task. The source of illegal wildlife products cannot be forensically traced, as a database has not been developed and forensic tests are too expensive for most law enforcement agencies.

Although the police and game rangers do their utmost, one cannot deny the fact that law enforcers and game rangers are not properly equipped. In some cases ammunition and even such necessities such as shoes are luxury items due to a lack of funds. They risk their lives and can be killed by the wild animals they protect, or by poachers.

There is a notion amongst certain concerned groups in South Africa to legalise and privatise the trade in rhino horn. This would allow regular harvesting of horns which can be sold to potential buyers. Profits can be beneficial as most parks and wildlife agencies have insufficient funds to protect their rhino populations adequately. Furthermore severe poverty exists amongst rural people in many African countries. These people would risk their lives to poach rhinos for a seemingly small reward.

The problem with the proposed legalisation of the trade in rhino horn, is the tendency that illegal trade continues in spite of legalisation. An example can be found in the diamond and gold industries. Trade in diamonds and gold in South Africa is legal, but in 1993\1994 665 prosecutions and 503 convictions for the trafficking in gold; and 377 prosecutions and 341 convictions for trafficking in diamonds, were documented<sup>10</sup>. The conclusion that can be drawn is that in spite of legalisation, smuggling still continues. Legalisation without any proper counter measures such as legislation and strict control, will only create a parallel opportunity for the illegal trade to exist with the legal.

## Recommendations

More extensive research has to be done in the field of green environmental criminology in order to understand the full extent of the illegal trade in wildlife products as the second largest illegal market globally.

Wildlife and environmental criminology should be studied as a criminological field in its own right, encompassing the poaching, illegal trade in endangered and vulnerable fauna and flora species and other crimes against wildlife and its habitat. Apart from the above, crimes such as pollution, illegal disposal of toxic waste and the illegal trade in radio-active substances should also receive attention.

A multi-disciplinary approach towards the understanding of this type of crime could benefit the effective application of regulations. All approaches such as private property rights, increased autonomy in state conservation agencies, moral attempts and conservation per se, should be included in the discussion surrounding the illegal trade in endangered species. One angle that should be added is that of the criminal justice process. This includes criminological research, policing and other criminal justice issues. It is now the time to realise that the illegal trade in endangered species is no longer a matter of private or moral interest, but a criminal issue that needs to be addressed in the same way as other serious crimes such as abuse, rape, murder and theft.

Active policing in the field of endangered species in South Africa, which has only come into place seven years ago, has already produced good results. In order to overcome problems such as park officials, national and private owners being restricted by national and international borders in the prosecution of illegal traders, policing agencies should be instituted to do so. A homogenised law regulating the illegal trade in endangered wildlife could contribute to better policing efforts. Law enforcement can benefit from addressing the problems facing conservation officials such as a lack of basic equipment. Money should be invested in this, rather than in the glossy reports and expensive show offs which accompany the thriving endangered species bandwagon.

In South Africa a new approach is being followed at the ESPU of the SAPS to accommodate a multi-disciplinary participation towards the understanding of the illegal trade in endangered species which could benefit the effective application of regulations. In co-ordination with the ESPU of the SAPS a Criminological Research Centre for Wildlife and Environmental Crimes (abbreviated as CROWA) has recently been established to provide a multi-disciplinary approach (criminological, juridical, social- and conservation science) to the issues of wildlife and environmental crime such as pollution

and toxic waste. The mission of this centre is to research, understand and explain crime against, for example, endangered species in order to assist those agencies concerned with controlling, combatting and preventing wildlife and environmental crime.

Statistics compiled and suggestions made by conservationists, monitoring and policing agents as well as juridical professionals should be integrated in order to accommodate the natural/conservation sciences as well as the human social sciences within an economical sphere to understand the criminal justice process underlying this type of crime. This integration of statistics can be accommodated by the CROWA as a criminological research centre. This centre is also an excellent example of community policing in South Africa, as it is a registered project of the Endangered Species Protection Unit Trust which is a privately funded trust to assist the ESPU in obtaining their goals.

There is a notion amongst certain concerned groups in South Africa to legalise and privatise the trade in rhino horn. This would allow regular harvesting of horns which can be sold. The concept is highly problematic due to the fact that illegal trade tends to co-exist with legal trade. Poachers would risk their lives to poach rhinos for a seemingly small reward. They will also go so far as to cut off one ear of de-horned rhinos to show that the rhino has been poached even though the horn has been harvested or just removed. Thus, the question that remains is whether an endangered species such as the rhino can survive pressures from both legal (rhinos used for harvesting) and illegal markets.

### **Summary**

This article reveals the results in respect of the illegal trade in rhino horn. It has been the purpose to explore the nature and extent of the illegal trade in endangered species within the field of criminology as human science in order to create an awareness of the immensity of this type of crime. Criminology is an instrument, used in a multi-disciplinary approach, to understand as well as prevent humans' misdeeds against nature. Only humans can rectify the imbalance in nature caused by their own species.

This article concludes with the words of His Royal Highness Prince Philip of the United Kingdom:

"In the long term effective conservation of the multitude of species in the plant and animal world depends upon acceptance and conscientious application of specific obligations under national and international law ... Much more needs to be done in the fields of national legislation and international conventions but the existing conventions provide a solid base ... Regretfully progress in this direction is proving disastrously slow."

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## END NOTES

1. A paper on this topic was presented by Mr Swanepoel at the *Third International Criminological Congress* hosted by Idasa (Institute for a Democratic Alternative for South Africa) and Crimsa (The Criminological Society of South Africa) at Unisa, Pretoria, South Africa during July 1996. Mr Swanepoel is a Criminologist, Human Resource Practitioner as well as the founder member and Director of the *Criminological Research Centre for Wildlife and Environmental Crimes (CROWA)* in South Africa.
2. CONNEPP : The Consultative National Environmental Policy Process.
3. Before 1988 South Africa was internationally criticised for failing to act decisively to counter illegal trade in endangered wildlife. In an effort to improve the situation the ESPU was founded on the 30th June 1989.
4. Chief executive officer of the World Wildlife Fund for Nature (WWF), South Africa.
5. The report of the Kumleben Commission of Enquiry, chaired by Mr Justice M.E. Kumleben, into the alleged smuggling of and illegal trade in ivory and rhinoceros horn in South Africa, was published in January 1996.
6. The goal of Interpol is to ensure co-operation among all participating police services within the framework of existing legislation and in view of the Universal Manifest of Human Rights.



7. Official figures by the Central Statistical Service (CSS) of South Africa in its 1994 household survey.
8. The mission of Traffic is to enhance, in accordance with the principles of the World Conservation Strategy, the conservation of biological diversity by monitoring and reporting on trade or other forms of utilisation of animals and plants and their derivatives. Traffic also facilitate on issues such as the control of trade and curtailing possible threats to species created by trade or other forms of utilisation. Traffic is supported by the WWF and IUCN.
9. Compiled in 1990 for the International Union for Conservation of Nature and Natural Resources (IUCN).
10. Criminological statistics furnished by the Central Statistical Service (CSS) of South Africa in its 1994 household survey.