# From health to wealth – understanding the trade in rhino horn in the age of affluence

Felix Patton and Karl Ammann

c/o K Ammann, Nanyuki, Kenya \*corresponding author: felixp@africaonline.co.ke

If demand reduction strategies are going to be effective, it is essential that the understanding of the usage of rhino horn and rhino horn products is accurate. Judging by what is being published in the media—in print and online—this is not the case. While the received wisdom focuses on the use of rhino horn as an ingredient of Traditional Chinese medicine (TCM), recent findings provide evidence of more widespread uses for other purposes.

Although there are few published academic studies of demand for rhino horn, there have been a number of undercover investigations in the countries where the trade is based, including Vietnam, Laos, Myanmar and China. These investigations reveal the real situation and are invaluable in helping to categorise the different components of demand for rhino horn that are ultimately responsible for the increasing level of poaching.

There continues to be a proliferation of misinformation from the West about the use of rhino horn in TCM and an overestimation of its importance in the current demand for rhino horn. In April 2012 a report was prepared for the CITES Secretariat by Kristin Nowell on behalf of TRAFFIC entitled 'Assessment of rhino horn as a traditional medicine' (Nowell 2012). The report is probably the most extensive investigation into the published literature of the medicinal usage of rhino horn. The report reviews scientific evidence regarding the medicinal properties of rhino horn:

"...Rhino horn has not been well researched in comparison with other ingredients in traditional medicine. Only one study found testing rhino horn for pharmacological effect in humans using the best-practice method of a randomized double-blind trial. That study found a short-lived significant effect on fever in children, but did not recommend its use as acetaminophen (a common nonsteroidal anti-inflammatory drug) performed better. More testing has been done in the laboratory, using lab animals as well as in vitro techniques. Most of these studies have been done in China, where rhino horn is

permitted to be used in research only to identify viable substitutes for it, and all found statistically significant pharmacological effects for rhino horn: anti-pyretic, anti-inflammatory, analgesic, pro-coagulant, among others (Nowell 2012)".

The report concludes: "Rhino horn's long history of use in traditional medicine suggests that it has proved efficacious in the experience of many people, and some scientific research supports this, although negative results have also been reported."

Despite these findings, some anti-poaching campaign reports still state that rhino horn has no medicinal value and focus on its supposed use to cure cancer or as an aphrodisiac. In a survey of the TCM pharmacies in the old town of Hanoi, investigators were told that it did not have any kind of aphrodisiac qualities and that it did not cure cancer, which was described as a rumour which had been going around, but that it did reduce fever and cleansed the body, especially after bouts of overconsumption of alcohol, food and drugs.

It was found that most TCM consumers were buying roughly cut horn pieces or powdered horn in small quantities. DNA analysis of many of these samples demonstrated that 90% were counterfeit, derived from water buffalo horn or other commonly occurring species. Where the horn is cut into small slabs or only the tip is present, it is virtually impossible to distinguish between the real product and a counterfeit

However, at the top end of the market, whole real rhino horns have been bought by the super-rich partly for medicinal use and partly as a status symbol. A patriarch may buy a whole horn to take care of the family's 'needs' by handing out pieces and powder as required. Powdered rhino horn may also be offered at parties to business acquaintances and colleagues to counter the effects of consuming alcohol and drugs. A piece of rhino horn may even be used as an inducement when the services of a government official are required.

A South African based Vietnamese-born researcher conducted a survey of more than 600 wealthy Vietnamese men in Hanoi and Ho Chi Minh City. Of

the men who admitted to using rhino horn, almost 47% reported that they used it to ease the effects of hangovers while just over 30% said they used rhino horn potions as a cleansing agent to 'detoxify' their bodies. Shavings of rhino horn were also used often during business meetings, especially to seal financial transactions.

The most recent (2015) investigations by Karl Ammann in Vietnam have shown up a rapidly developing demand for rhino horn artefacts and even jewellery that is being bought by Chinese tourists. This business is flourishing to the extent that tourist trips are organised specially to take visitors to the appropriate workshops and retail outlets. On offer, and made from genuine rhino horn, are karma bracelets, beads, imitation libation cups, bowls, signature rings and a host of other items. Thus previously unheard of uses for rhino horn are being found in the age of affluence. This is undoubtedly a worrying trend.

Here is our view of the usage of rhino horn split into several market segments based on price:

#### Top price

The price quoted in early 2015 was USD 60,000/kg but latest reports suggest this has dropped to USD 35,000/kg wholesale; the retail price is 25% higher.

At the top end of the market, rhino horn is a millionaires' status symbol. It is used as a detoxifying agent and hangover cure, and given away as a present to friends and as a bribe to officials. The fact that it is illegal, and getting away with it - contributes to the value or rhino horn as a status symbol.

A low level of medicinal use by the wealthy has been on-going from illegal purchases since the use of rhino horn was banned in 1993. The low level of horn uptake is reflected in the low level of poaching.

Speculators are also believed to have bought rhino horns as the price increased. Once the levels of USD 70–90 000/kg were reached many speculators decided that it was time to cash in on profits and put the horns for sale on the market. Some speculators are still buying horns, but smaller (lower value) ones.

#### Mid price

Rhino horn products are sold for between USD 4,000 and 15,000 per 100 gm.

Members of the growing Chinese middle class are buying imitations of libation cups, karma bracelets and rhino horn beads. The designs of these products are traditional, based on ancient culture. These are being manufactured openly by a growing number of workshops in Vietnam. Articles are generally priced on the basis of USD/gm. Importation to China is illegal but overlooked.

### Low price

Medicinal products are generally sold for prices equivalent to hundreds of dollars each. These are mostly fakes, made from water buffalo horn, according to the results of DNA tests.

These are the same medicinal items as above and advertised as the real thing for naïve buyers. USD 100 per kilo is a realistic price for fake products.

Poorer people purchase rhino horn for TCM in the form of shavings and powder from the artefact workshop floors, priced at USD 25/gm, or small blocks, generally priced on the basis of USD 40/gm.

Among poorer people in urban and rural areas, there is still a potentially very strong latent demand for rhino horn for TCM use, which has only been kept in check by the high price. It has been suggested that poaching pressure could be reduced by flooding the market with genuine horn, in order to drastically reduce the price. However adoption of this strategy could potentially lead to a surge in demand from poorer social sectors.

Demand reduction strategies may work in the long term with the TOP group, as there is no real evidence for the efficacy of rhino horn as a hangover cure or detoxifying agent. However it has been suggested by Dr Dao Truong that "while individuals may be willing to change consumption behaviour in home environments, collective interests and the symbolic place of rhino horn in social networks and events means that the refusal to consume or serve rhino horn may be interpreted as putting personal interests ahead of those in the group".

Demand reduction strategies are less likely to work with the potentially much larger MIDDLE group as the demand is much more aligned to ancient beliefs and the ranks of the affluent middle class are growing.

Demand reduction strategies against the use of rhino horn as medicine, especially with the LOW group, will probably never succeed as the usage has gone on for over 2000 years and today even some of the most respected Chinese doctors are reported to have said they take it themselves.

There is a whole neighbourhood in Guangzhou town in China where artefact shops offer hundreds of 'rhino horn products', all of them fake and sold as fakes when questions are asked. Prices are lower than those shown previously when whole or small horns

are bought. So the market is already flooded with fake products for consumers who cannot afford to purchase the real thing. What Next?

Given the above, it is reasonable to assume that poaching pressure will continue for the foreseeable future and so the high cost of security will be ongoing.

It is becoming ever clearer that rhino conservation will increasingly rely on philanthropy, i.e. on funding from donor agencies and/or donations from high net worth individuals. There is not an infinite supply of funds from these sources. Additional funds can be raised from tourism but this is also not an infinite source.

At the same time, increasing metapopulation goals mean there will have to be more "new entrants" from lower socio-economic strata into rhino conservation to provide the necessary habitat. The finite supply of funding will get even more stretched to support this.

While many may be opposed in principle to the idea of horn trade, it should at least be considered as an option if a way of controlling the level of corruption can be devised and the high price can be maintained. Though this may be a big IF, in our opinion the option of legal trade should not be written off *per se*.

Coupling a legal market to a draconian level of penalties for being caught with illegal horn could—just

maybe-provide a way of getting some much needed funding into rhino conservation.

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