



Reduce Saiga Illegal Trade in Guangzhou, China

INTERIM REPORT

to the

Saiga Conservation Alliance

from the

WILDLIFE CONSERVATION SOCIETY

Project Staff:

Dr. Zhang Mingxia
Li Fenglian
Sun Fuping

Other Staff:

In-country supervisor: Dr. Kang Aili, Director, Country Program, WCS China.
Co-supervisor: Mr. Colin Poole, Director, WCS Regional Conservation Hub, Singapore.

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INTRODUCTION

The Traditional Chinese Medicine (TCM) philosophy considers saiga antelope (*Saiga tatarica*) horn to be an effective medicinal ingredient to reduce body heat and stop spasms. One of the most important causes of the dramatic decline of saiga is believed to be the market demand for saiga horns. Guangzhou is one of the biggest cities involved in the illegal trade of saiga products in Southern China.

This project aims to reduce the illegal saiga trade and consumption in Guangzhou, China, through market surveillance, coordination of intelligence-led enforcement by government authorities, and an education program in collaboration with the Chinese government. During this reporting period, we implemented a pilot study that tested a new monitoring approach for saiga horn in TCM markets. This pilot study is intended to provide a basis for improving the efficacy and accuracy of our long-term market monitoring program in assessing patterns and dynamics of saiga horn occurrence in the TCM markets, and measuring the impact of law enforcement on reducing illegal trade in saiga horn.

METHODS

To obtain more accurate and systematic information from TCM markets in Guangzhou, we modified the survey protocol for the TCM market monitoring in order to pilot a more systematic occupancy-based approach (Barber-Meyer, 2010). The aim of this revised approach was to monitor the occurrence and patterns of trade in saiga horn in one of the largest TCM markets in Guangzhou: Qingping. The approach is unique in that it attempts to directly address the concept of 'clandestine' trade of endangered species by accounting for imperfect detection of saiga horn by the survey teams.

The new survey was designed between September 2011 and February 2012. In designing the survey we consulted WCS baseline survey data of the Qingping market conducted between 2009 and 2011. These baseline surveys consisted of 100% sampling of all stalls at least once, during which target species, including saiga, were marked as present or absent. Combining this data with a map of the TCM stalls, enabled us to focus our sampling area on those areas of the market we considered most likely to contain saiga and therefore of most interest for monitoring. We identified the 2nd floor of the Qingping TCM market H part (245 target stalls), 1st and 3rd floor of Qingping Medical Center including including Qingping Road (246 target stalls) and 1st floor of Qingping East market as being most likely to sell target species. We systematically divided the three markets up into clusters of three consecutive stalls on the map. We then randomly selected 60 clusters in each of the three market areas. Qingping East Market 1st floor hasn't enough stalls, so we just selected 30 blocks. As result of that, each of the three markets will have 180 sampling stalls to survey (except Qingping East which will have 90 sampling stalls).

The purpose of the pilot study was to test the feasibility of the new survey design,

specifically to determine appropriate survey effort and capacity of the survey design to enable monitoring of dynamics of saiga occurrence in the markets. During the pilot study, we planned to survey all 180 stalls in a single market in a single weekend, and to ensure three different observers sampled each cluster. Observers consisted of volunteers acting as potential consumers. Saiga products were grouped into five forms: whole horn with bone, whole horn without bone, top half of horn without bone, bone pieces, horn strips, pieces or powder.

To gain an in-depth understanding of Guangzhou illegal saiga trade dynamics, in February 2012 we also recruited an informant to act as a medicinal wholesaler and to conduct surveys. In order to understand more about the actual turnover of target species, this informant went back the stalls which sold saiga products again in March 2012. This dual approach of market monitoring combined with informal information has proved to be useful in monitoring illegal trade in endangered species elsewhere (Gastanaga et al, 2011). We aimed to use this pilot study to also assess the feasibility of this approach and to inform our long-term monitoring.

RESULTS AND ANALYSIS

1. Volunteer surveys

On March 4, we recruited 25 volunteers and organized a training program on investigation and data collection skills for those volunteers. A total of 450 stalls were surveyed on three consecutive weekends in March (see Table 1).

Table 1. Survey numbers and times in Qingping TCM markets on March 2012

Market	Clusters	Survey number	Survey times
2nd floor of the Qingping TCM market H part	60	180	March 10~ March 11
1st and 3rd floor of Qingping Medical Center including including Qingping Road	60	180	March 17~ March 18
1st floor of Qingping East market	30	90	March 24
Total	150	450	

According to the data from volunteers surveys in March 2012, there were 13 (8.7%) clusters directly observed or suspected (when volunteers ask the owner said they have or could get it later) selling saiga products. Among them, eight clusters were directly observed selling saiga products. The frequency and quantity of each form of saiga products are varied, saiga horn strips, pieces or powder were directly observed in larger quantities (15.8 kg) than the other forms (see Table 2). Because it's hard to distinguish saiga horn strips, pieces or powder from fake products, a volunteer expressed doubt as to the horn strip's quality then made a detailed inquiry to the stall owner who admitted its goat horn. In the next phase of data analysis, we will examine the data in an occupancy framework and provide recommendations for the method as part of a long-term monitoring program.

Table 2. The frequency, quantity and price of different saiga products directly observed in March 2012

Trade form	Frequency*	Quantity(kg)	Price(RMB)
Whole horn with bone	1	2.8	14,000
Whole horn without bone	1	0.1	32,000
Bone piece	1	0.8	/
Horn strips, pieces or powder	6	15.8	100-10,000
Total	9	19.5	100-32,000

*One stall sold two forms as bone piece and horn strips, pieces or powder, the frequency is higher than the cluster number.

2. Informant surveys

On February 7, one informant conducted a survey in Qingping Medical Center and found one stall selling a total of six saiga horns (0.5 kg, top half of horn without bone), which had been smuggled from Russia. On March 3, the informant went back to the stall and found those six saiga horns were still present. On March 8, the informant found another stall near Qingping Medical Center selling 11 saiga horns (weight unknown) from Xinjiang Province. During those surveys, the informant found it more difficult to get information from the traders than last year. The traders told the informant that due to the higher frequency and strength of interventions by enforcement authorities, the volume of illegal trade in saiga horns is decreasing.

NEXT STEPS AND CONCLUSION

This was the first time an occupancy-based approach to market monitoring had been trialled in TCM markets in China. The survey was certainly successful in detecting the target species. The next step is to a) examine the data in an occupancy framework and provide recommendations for further modifications to survey design b) establish a long-term monitoring plan to determine changes in patterns of saiga occurrence and the impact of enforcement (ie accounting for the extent of clandestine trade as measured by detection probability). The use of informants in this pilot study was also encouraging in that it also revealed the presence of saiga and provided potentially useful and complimentary information on turnover. As part of the recommendations for long-term monitoring, we will propose to develop this approach further, specifically its potential to quantify trade in the markets over a specified time period and assess the accuracy of our occupancy-based approach.

We will submit the survey report to the enforcement authorities to help crack down on the illegal saiga horn trade in these markets. During July and August 2012, we will cooperate with China's CITES Management Authority Guangzhou Office to conduct an education program in Guangzhou markets, by distributing wildlife conservation information leaflets.

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