

SEPTEMBER 2018

Hsun-Wen Chou



TRAFFIC REPORT

TRAFFIC, the wildlife trade monitoring network, is a leading non-governmental organisation working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development. TRAFFIC works in strategic alliance with WWF and IUCN.

Reproduction of material appearing in this report requires written permission from the publisher.

The designation of geographical entities in this publication, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of TRAFFIC or its supporting organisations concerning the legal status of any country, territory, or area, or its authorities, or concerning the delimitation of its frontiers or boundaries.

The views of the authors expressed in this publication are those of the writers and do not necessarily reflect those of TRAFFIC, WWF or IUCN.

Published by TRAFFIC.

TRAFFIC
Global Office
David Attenborough Building
Pembroke Street
Cambridge
CB2 3QZ, UK

+44 (0)1223 277427
traffic@traffic.org

© TRAFFIC 2018. Copyright of material published in this report is vested in TRAFFIC.

ISBN no: 978-1-85850-441-4

Chou, H. W. (2018) *China's ivory auction market: A comprehensive analysis of legislation, historical data and market survey results*. TRAFFIC, Cambridge, UK.

Front cover photograph and credit:
Display cases of ivory items showing in pre-auction exhibitions and after law enforcement investigation, showing the withdrawal of ivory products.
©WWF/TRAFFIC/H. W. Chou
©Shanghai Police

Design:
ADB Design Studio, Beijing
jihuatang99@163.com

CHINA'S IVORY AUCTION MARKET

A comprehensive analysis of legislation, historical data and market survey results



With the support of:



TABLE OF CONTENTS

Executive Summary	vi
Abbreviations and Acronyms	xi
1. Background and Purpose of Chinese Ivory Auction Market Analysis	1
2. Research Methodology	3
2.1 Legal Analysis of China's ivory antique auction	3
2.2. Analysis of historical ivory auction data on Artso.net	3
2.3 Survey of pre-auction exhibition of ivory items in China	5
3. Legal analysis of China's ivory antique auction	6
Measures for Cultural Relics Auction Management (2016)	6
The Cultural Relics Protection Law (2017)	6
The Wild Animal Protection Law (2017)	7
The Auction Law (2015)	8
Urgent Notice on the Views of State Forestry Administration regarding the auction of endangered species products (2011)	9
Summary	9
4. Analysis of historical ivory auction data on Artso.net	11
The Elephant Ivory Auction Market	11
Artso.net Data Overview	11
Mainland China	14

ACKNOWLEDGEMENTS

This report was made possible with financial support from WWF. The author would like to express thanks to the reviewers from WWF and TRAFFIC, including Xu Ling, Colman O Criodain, Tom Milliken, Wilson Lau, James Compton, Tomomi Kitade and Joyce Wu for their comments and advice on improving draft versions of this report, as well as Richard Thomas, Julie Gray and Sammi Li for their great support.

Hong Kong SAR & Macau SAR	19	6. Discussion and Conclusions	38
Taiwan POC	19	7. Recommendations	41
Japan	20	Annex 1: The Approval Application Regulations and Procedure for Antique Ivory Management	43
Other Locations	20	Annex 2: The Eligibility for Auction Approval Application of Elephant Ivory Items	44
Mammoth Ivory Auction Market	24	Annex 3: Global successful ivory action bids and transaction amount and average transaction amount on Artso.net	46
Artso.net Data Overview	24	Annex 4: Mammoth ivory identification method analysis & the background investigation regarding organisation issuing mammoth ivory certificates	47
Mainland China	25	8. References	50
Hong Kong SAR & Macau SAR	26		
Other Locations	27		
Summary	28		
5. Survey results of pre-auction exhibition of ivory items in China	30		
Pre-auction Exhibition Location and Survey Record	30		
SFGA approvals are missing in all inspected elephant ivory antique auctions	31		
Unclear criteria for SFGA approving ivory auction products	31		
The authenticity of marked age of ivory auction items is doubtful	33		
Deliberate mislabelling of ivory items to avoid scrutiny	33		
"Icy" mammoth ivory auction items as potential loophole for laundering illegal ivory	34		
Auctions of other nationally protected wild animal products	34		
Action taken by law enforcement based on reports of auction violation	35		
Law enforcement difficulties	36		
Summary	36		

EXECUTIVE SUMMARY

On 30 December 2016, the State Council issued the Notice of the General Office of the State Council on Orderly Stopping the Commercial Processing and Sale of Ivory and Ivory Products. The Notice stated the ban on commercial processing and trade of ivory in China will officially come into force on 31 December 2017 and allowed legally sourced antique ivory items, certified by a professional appraisal agency, to be auctioned under strict supervision once administrative approval has been obtained, in order to preserve cultural values. This implies that exempted ivory items should be both old (i. e. “antique”) and representative of China’s culture of ivory carving and means that the art auction market remains the only legitimate post-ban commercial outlet for ivory sales in China.

In order to better regulate the ivory auction market and prevent potential laundering of illegal ivory through auction, this study analysed existing laws and regulations related to auctions and historical ivory auction data on Artso.net, and conducted an ivory auction market survey to reveal the latest trend and scale of China’s ivory auction market. The key findings include:

Legal analysis of China’s ivory auction

In accordance with the State Council’s Notice, the exempted ivory items must meet several requirements, including “legally sourced”, “antique”, “certified by appraisal agency”, and “obtained administrative approval” in order to be legally auctioned. The legal definitions of such requirements have to be consistent with the definitions stated in existing laws and regulations.

Due to the dual nature of being both a “wildlife product” and an “antique”, as well as regulations governing the level of protection for elephants in China, auction activities involving ivory items made from Asian Elephant *Elephas maximus* and African Elephant *Loxodonta africana* have to simultaneously meet the provisions of The Wild Animal Protection Law, the Cultural Relics Protection Law, the Auction Law and the measures for Cultural Relics Auction Management.

According to existing laws and regulations, elephant ivory items which can be legally auctioned have to meet the requirements listed below:

- 1) they must be items of art or craft originating before 1949;
- 2) they must come from legitimate sources;
- 3) an application for an administrative licence for operating antique ivory trade must be submitted and obtained from the State Forestry and Grassland Administration (hereinafter referred to as “SFGA”);
- 4) an application must be submitted to the Department of Cultural Relics Preservation of the local government for auction approval and reported to the State Administration of Cultural Heritage (hereinafter referred to as “SACH”) for the record;
- 5) an application must be submitted to the Wildlife Conservation Department of the local government for auction approval, and obtained and used in accordance with the provisions.

If the conditions mentioned above are not fully satisfied, the ivory item owners and entrusted auction houses both violate the law and face the corresponding legal liability.

Despite the fact that the existing laws and regulations have conferred a certain level of governance on ivory antique auctions, further clarification in definition and detail measures are still needed, including:

- 1) the definition of qualified appraisal; the scientific method used for determining age; the qualification of the appraiser; and the format and content of the qualified appraisal;
- 2) the definition of the legality of origin, noting that the definition of the legality of origin in the Wild Animal Protection Law and that in the Cultural Relics Protection Law are not consistent, potentially leading to disagreement between government departments regarding the granting of antique ivory auction approval in the future;
- 3) SFGA should clarify the time period and eligibility of administrative licence application for operating antique ivory and other national level protected terrestrial wildlife products auctions.

Analysis of historical ivory auction data on Artso.net

According to Artso.net ivory auction data, the Chinese ivory auction market experienced rapid growth between 2008 and April 2018, peaking in 2011 in the number of ivory auction houses, auction events and ivory auction items. The mainland Chinese ivory auction market subsequently experienced a sharp decline after 2012 as a result of an emergency notice issued by the China Association of Auctioneers (hereinafter referred to as “CAA”) banning all auctions of endangered species products, including rhino horn, tiger bone, and ivory at the end of 2011, with a significant decline in the number of ivory auction houses, auction events and ivory auction items. By 2016, China’s ivory auction market hit its lowest point. At the end of 2016, the State Council issued the Notice of the General Office of the State Council on Orderly Stopping the Commercial Processing and Sale of Ivory and Ivory Products, which allows legally sourced antique ivory items, certified by a professional appraisal agency, to be auctioned under strict supervision once administrative approval has been obtained, in order to preserve cultural values. Since then, China’s ivory auction market has shown signs of recovery and the number of ivory auction items in 2017 increased dramatically from that in 2016.

The analysis of historical records of ivory auction houses in mainland China showed that more than half of the auction houses that previously held ivory auction events stopped collecting and auctioning ivory items, which means the emergency notice in 2011 did indeed have an impact on ivory auction activities. Analysis results indicated that after the State Council announcement was made at the end of 2016, auction houses with long-term ivory auction experience began to resume ivory product accumulation and auction activities. Further, the announcement also attracted new auction houses with no prior ivory auction experience to join the ivory auction market.

Ivory auction markets outside mainland China, such as Hong Kong SAR & Macau SAR, Taiwan POC, and Japan, among others, have seen an increase in the number of ivory auction houses and auction events during the time of decline of the Chinese ivory auction market (2012-2016) on Artso.net. The patterns for ivory auction markets outside mainland China seemed to be tied to the Chinese market. This limited dataset suggests a ban on auction of endangered species products in China at the end of 2011 might have caused spill over effects in ivory auction markets outside mainland China by increasing ivory auction activities to meet the global demand for ivory collection. However, due to dataset limitation, the true trends and wider dynamics between the Chinese ivory auction market and global market forces remain unknown.

The laws and regulations on ivory trade in mainland China also affected the auction market of ivory derived from other species. Since 2012, auction houses with long-term experience in ivory auctions, for instance China Guardian Auctions Co. Ltd, have turned their attention to mammoth ivory. The ivory trade ban announcement at the end of 2016 in China stated that by the end of 2017 the commercial processing and trade of elephant ivory would be fully stopped, but mammoth ivory trade and processing would not be affected by the ban. As a result, since 2015 the mammoth ivory auction market has experienced considerable growth each year in the number of auction items, turnover rate and total annual transaction value.

Survey results of pre-auction exhibition of ivory items in China

Seventeen pre-auction exhibitions (13 auctions included elephant ivory; three auctions included mammoth ivory; and one auction included both elephant and mammoth ivory) were visited in Beijing, Shanghai, Suzhou and Nanjing from the end of April 2018 to the end of July 2018, and 318 lots of ivory and 64 lots of mammoth ivory were recorded. Regarding the 13 exhibitions that featured ivory in some form, seven auctions were in apparent violation of the laws and regulations related to elephant ivory auctions, resulting in 219 lots of elephant ivory items being withdrawn by law enforcement officers who received reports from TRAFFIC. The total value of ivory items withdrawn was conservatively estimated to be around CNY6.3 to 7 million (USD974,282 to 1,082,536).

The survey results indicated that all 17 auction events were granted administrative approvals issued only by the Cultural Relics Preservation Department of the local government; no application for auction approval was made to the Wildlife Conservation Department of the local government or SFGA. Therefore, no ivory auction events in China documented during this survey complied with the State Council's requirement of "auctioned under strict supervision". The research also documented that the actual age of some ivory items in the pre-auction exhibitions was not consistent with the labelling in the auction catalogues. Some auction houses avoided or mislabelled the auction items in the catalogues in order to evade supervision.

Besides the items primarily made from elephant ivory, other products containing small amounts of ivory as an integral component or components of a larger manufactured or handcrafted item were also commonly seen in the pre-auction exhibitions. However, so far there is no clear and detailed regulation available to guide whether an auction of this type of product requires approval from SFGA or not prior to the auctions taking place.

Along with the increase in the number of elephant ivory items in the auction market, the number of mammoth ivory items has also been growing rapidly. Due to the lack of visible or identifiable Schreger lines on the surface of some mammoth ivory items, differentiation between elephant and mammoth ivory becomes difficult to observe. Moreover, the currently available appraisal certificates for mammoth ivory items that appeared in the auction market were issued by an unauthorised organisation, thus providing loopholes for illegal laundering of elephant ivory. The research also found some Traditional Chinese Medicine (TCM) products containing rhino horn, tiger bone and antelope horn, as well as craft items made from coral and sea turtle shell offered for auction; however, all of these species are listed as national protected wild animals and therefore not allowed to be auctioned in China.

Recommendations

Based on the research results, the following recommendations regarding Chinese ivory auction markets are made to relevant stakeholders:

Recommendations to the competent authorities in China

1. The SFGA and SACH should resolutely interdict any ivory auction activity which does not obtain complete administrative approvals, and should confirm that it is illegal for an ivory owner to entrust an auction house to sell ivory without obtaining proper approvals. Ivory item owners and auction houses involved in illegal ivory auctions must bear the corresponding legal liability for any non-compliance.

2. The SFGA and SACH should form a joint communication and coordination mechanism, and clarify the relevant provisions and regulations regarding ivory auction, including:

- a) Clarify the application procedure and the legal liability for application approval that stakeholders, including owners, auction houses and bidders, involved in ivory auction activities are obliged to hold, and establish a registration system for the purpose of supervising antique ivory circulation;
- b) Reach a consensus on the criteria for appraisal of antique ivory and other endangered species products, the criteria for legality of origin, those for approval process for auction application, and the required application materials;
- c) The exemption criteria for antiques in the U.S. Endangered Species Act (ESA), and antique exemption criteria in the U.S. 2014 ivory trade regulations, could be considered as a reference for regulating ivory items qualified for appraisal, methodology and standards for ivory age identification, the requisite qualifications for professional appraisal agencies, and the format and content of qualified appraisal;
- d) Related laws and regulation regarding the import, processing and sale of ivory products from species other than elephants, such as mammoth ivory, which are commonly found in the auction markets should be clarified. The regulatory responsibility of related government departments regarding non-elephant ivory trade should be clarified or integrated. A secure chain of custody should be established in order to better regulate all types of ivory markets and ensure traceability, thus reducing the risk of laundering illegal ivory;
- e) The existing ivory raw material and product management database should be utilised to the maximum, by expanding the functions for registration of antique ivory items and by encouraging owners and buyers of all types of ivory items to register them in the system, in order to effectively track the circulation of ivory items, for instance inheritance, ownership transfer, and auction, and to protect legitimate rights of legal ivory possession and ownership transfer.

3. SFGA and SACH should reach consensus on the issue of illegal ivory laundered as mammoth ivory. Once illegal ivory is found to have been laundered as mammoth ivory in the auction or shops, the perpetrator(s) should be strictly punished by law.

4. SFGA and SACH should raise awareness of the laws among auction houses by providing training workshops and by strengthening the governance of auction activities.

5. SFGA and SACH should strengthen communication with the judiciary and should reach consensus on the criteria for determining intent to conduct illegal ivory auction activities. This would ensure that strict supervision of the ivory auction market meets existing requirements from the State Council.

Recommendations to the auction houses

1. The CAA should provide training workshops to auction houses on the laws and regulations governing ivory and other wildlife auctions to better raise legal awareness within the industry to promote compliance with the laws and regulations.
2. Auctioneers should be encouraged to take voluntary measures, in line with corporate social responsibility standards, to reduce recruitment of ivory items for sale and by avoiding stimulation of demand for ivory. Auctioneers should strictly comply with the law by explaining the ivory item auction application process to elephant ivory owners in detail, by requiring the ivory owner to provide certified documentation, and to apply and receive administrative approvals from SFGA and SACH.

Recommendations to Non-Government Organisations (NGOs)

1. NGOs should work with legal experts to assist government departments in improving the legislation regarding antique ivory auctions and improving the tracking system for bona fide ivory products in circulation.
2. NGOs should assist the government in developing materials to raise the auction industry's legal awareness regarding ivory auctions, and in the convening of training workshops to communicate this information.
3. NGOs should assist the government in providing support to law enforcement with information derived from regular auction market monitoring and assessing legal compliance in the auction industry.
4. NGOs should assist local branches of the Wildlife Conservation Department in monitoring the mammoth ivory auction and retail markets, in order to improve traceability and prevent illegal ivory laundering.

ABBREVIATIONS AND ACRONYMS

A.D.	Anno Domini
AQSIQ	General Administration of Quality Supervision, Inspection and Quarantine
CAA	The China Association of Auctioneers
CITES	The Convention on International Trade in Endangered Species of Wild Fauna and Flora
CYN	China Yuan
DNA	Deoxyribonucleic acid
ESA	The Endangered Species Act
GEI	The Global Environmental Institute
Hong Kong SAR	Special administrative region of Hong Kong
ICHC	The intangible cultural heritage in China
Macau SAR	Special administrative region of Macau
NGOs	Non-Government Organisations
SACH	The State Administration of Cultural Heritage
SAIC	The State Administration for Industry and Commerce
SFA	The State Forestry Administration
SFGA	The State Forestry and Grassland Administration
Taiwan POC	Taiwan, Province of China
TCM	Traditional Chinese Medicine
UK	The United Kingdom
URL	Uniform Resource Locator, website link
U.S.A./US	The United States of America
USD	United States Dollar

1. BACKGROUND AND PURPOSE OF CHINESE IVORY AUCTION MARKET ANALYSIS

Ivory carving is an ancient and traditional art-craft technique. The history of Chinese ivory carving can be traced to the Hemudu culture of Yuyao City in Zhejiang Province during the Neolithic Age (Martin and Stiles 2003). It reached its peak in the Ming and Qing Dynasties and major production sites included Beijing, Guangzhou and Suzhou (Martin and Stiles 2003). In the first half of the 20th Century, due to political and economic turmoil in China, the ivory carving industry was severely impacted, resulting in a sharp decline in the number of ivory carving factories and ivory workers (Zhang 2012). The establishment of the Guangzhou Daxin Ivory Carving Factory in 1955 and the Beijing Ivory Carving Factory in 1958 were able to revitalise the decaying ivory carving industry in China (Zhang 2012).

Ivory carving during the 1950s and 1960s was a major foreign exchange earner in China (Zhang 2012). Later, due to sharp declines in the population of Asian and African elephants in the wild, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed these species in Appendix I in 1975 and 1989, respectively to avoid the risk of extinction due to unsustainable international ivory trade. An Appendix I listing meant that international commercial trade in ivory was completely banned, resulting in a shortage of raw material for the Chinese ivory carving industry, and also negatively affected the export of Chinese ivory carvings and the viability of the ivory carving industry. From the last decades of the 20th Century until today, average income levels and the amount of disposable income of Chinese citizens significantly increased as a result of China's economic reforms and the opening-up of its economy in the late 1970s. Since a growing number of private collectors showed a strong preference for traditional Chinese arts and crafts, such as rosewood furniture and ivory carvings, the ivory carving industry gradually shifted its attention to the demands of China's domestic market.

In 2004, China introduced a unified labelling management system for fixed locations engaged in ivory processing and sales (SFA 2008); in 2006, ivory carving was selected as the first example of a national intangible cultural heritage in China (Intangible Culutral Heritage in China 2006). For the purpose of preserving the heritage of ivory carving, in 2008 the Chinese Government, with the approval of the 57th CITES Standing Committee, purchased a total of 62 metric tonnes of legal ivory stocks from four countries in southern Africa, namely Botswana, Namibia, South Africa and Zimbabwe, and thereafter supplied an annual quota of five metric tonnes of raw ivory to legal ivory processing factories (SFA 2008). To balance the need for elephant conservation with that of preserving the Chinese heritage of ivory carving, the State Forestry Administration (now the State Forestry and Grassland Administration, SFGA, since 2018) in 2008 issued "the notice on the further strengthening of the regulation of the management of ivory and its products" (SFA [2008] No.258). This required ivory processing and sale to be in fixed locations, instituted strict controls and registration of new ivory processing factories and retail stores, and implemented the unified labelling management information system. The uniform labelling management system mandated that all legally processed ivory products must be tagged with a specialised label and certification card, which must be handed over to the buyer along with the purchased object at the time of sale.¹ The certification card acts as proof that the ivory was sourced from legitimate processing and retail establishments approved by SFA. The information management system for raw ivory and ivory products is designed to ensure that ivory products are labelled and sold in an effectively regulated manner.

The sales and circulation channels for ivory products in China are similar to those for other types of artworks, and is basically divided into two categories: primary market and secondary market (Zhao 2011). The primary market is comprised of artworks that are sold directly to consumers by merchants after being obtained from the ivory carvers. The primary ivory market includes legitimate shops with SFA licences and unlicensed illegal shops, and the major sale dynamic involves newly carved contemporary ivory products (new pieces). The secondary market entails the collection and circulation of artwork and antiques. In China the auction market is a major channel for artwork circulation and most of the ivory items auctioned are antique (old pieces).

As a major consumer markets for ivory, China has strengthened its fight against the illegal trade in ivory and reverse the poaching crisis of African Elephants. On 30 December 2016, the State Council promulgated the Notice of the General Office of the State Council on Orderly Stopping the Commercial Processing and Sale of Ivory and Ivory Products, which required all legal ivory carving factories and retail stores to close by 31 December 2017. However, the Notice also included a single provision for legally sourced antique ivory items, which if certified by a professional appraisal agency, could be auctioned under strict supervision once administrative approval was obtained, for the purpose of preserving ivory carving as a cultural heritage in China. This means that, since 31 December 2017, the primary domestic market for ivory is now completely closed, and the artwork auction market has become the only legal commercial outlet for ivory product in circulation since China's ivory trade ban was imposed.

As the only legal post-ban commercial outlet for ivory products, the artwork auction market is at risk of being used by criminals as a means of laundering illegal ivory by faking it as antique, resulting in a negative impact on the effectiveness of the implementation of the ivory trade ban.

This study aims to identify the potential loopholes and provide recommendations to relevant stakeholders by conducting:

- 1) Legal analysis regarding existing laws and regulations related to (elephant) ivory auction activities in order to understand how ivory auction activities are regulated by law;
- 2) Examination of historical ivory auction records on Artso.net, the authoritative portal for Chinese artwork auctions. The analysis result would help us to understand the patterns and changes in Chinese and of international ivory auctions with a view to providing the baseline for future evaluation of the effectiveness of implementation of the ivory ban;
- 3) Inspection of pre-auction exhibitions in order to understand the actual operation of auction events and their legal compliance, and to identify gaps between the legislation and its implementation.

¹ This is what was called "one object matches with one certificate, the object and certificate hand over together" (一物(制品)一标(标识)、物标同行).

2. RESEARCH METHODOLOGY

2.1 Legal Analysis of China's ivory antique auction

The laws and regulations in China that are relevant to wildlife conservation/protection and auction of cultural relics include: The Wild Animal Protection Law; the Cultural Relics Protection Law; the Auction Law; and the measures for Cultural Relics Auction Management. The State Council has also issued notices for auctions of endangered species products. This study assesses these legal provisions, regulations and legal definitions related to ivory auction, and analyses any gaps or inconsistencies found.

2.2. Analysis of historical ivory auction data on Artso.net

Artso.net serves as the auction information platform and historical auction record database of Artron, an art data company based in China providing various services to Chinese, as well as international, art institutions, collectors and art financiers. Artso.net has collected nearly 4.7million auction records of Chinese artwork from more than 24,000 auction events of over 1,000 auction houses since 1993, providing massive data for artwork auction market analysis.

In order to provide an overview and understand the changes in the elephant and mammoth ivory auction markets in China, as well as other regions around the globe, and to serve as a reference indicator for the implementation of the ivory trade ban in China, this research aims to answer the issues listed below by analysing the historical elephant and mammoth ivory auction data on Artso.net from 1 January 2008 to 30 April 2018:

- 1) Overview and changes in the global elephant ivory auction market;
- 2) Overview and changes in the elephant ivory auction markets in mainland China, Hong Kong SAR and Macau SAR, Taiwan POC, and Japan, among others, as well as the turnover rate and analysis of the quantities transacted;
- 3) An analysis of regional elephant ivory auction houses' historical auction data;
- 4) Examination of common product types and the age of elephant ivory items in China's auction market;
- 5) The overview and changes over time in the global mammoth ivory auction market;
- 6) The overview and changes in the mammoth ivory auction market in various regions, as well as turnover rates and analysis of the quantities transacted.

The data analysis process includes three phases: data mining, data processing and data analysis. Methodology and techniques used in each phase are as follows:

Data mining: The terms “Xiangya” (ivory in Mandarin), “Mengmaya” (mammoth ivory in Mandarin), “mammoth”, and “ivory”, as the keywords, and the category of “artwork of bamboo-wood-ivory-horn” were used to retrieve the search results on Artso.net. A total of 17,340 lots of auction data (elephant ivory: 17,133 lots, mammoth ivory: 207 lots) were downloaded. Each lot of auction data contains information including:

- 1) Item name: the name of the auction item could reveal the product type and carving material (either elephant or mammoth ivory) of the auction item, and provide the basis for ivory product type analysis;
- 2) Age: reflecting the era of origin of the auction item formation and providing the basis for the age analysis;

- 3) Product type: providing the basis for product type analysis;
- 4) Estimated price and transaction amount: to evaluate the estimated value of the item, the auction results, and the transaction;
- 5) Name of auction house: providing the basis for regional auction house analysis;
- 6) Auction date: providing the basis for auction house ivory auction history analysis and the global ivory market trend analysis;
- 7) Name of the auction event: the information of name of the auction event along with auction date could reflect the number of auction events each auction house held every year, as well as the locations;
- 8) Auction section: auction section data revealed how ivory items are usually categorised in an auction event and served as a reference for pre-auction exhibition inspection;
- 9) URL of auction item: providing a reference for verification and comparison during data analysis.

Data processing: Data pre-processing included two steps: data cleaning and data sorting. Data cleaning refers to the data integration and repeated data removal. Once the data cleaning step was completed, the whole dataset was first sorted by carving material, i.e. elephant and mammoth ivory, and then within each dataset according to type of carving material, the auction data was further classified by the location where the auction took place, including mainland China, Hong Kong & Macau SAR, Taiwan POC and Japan, and other locations. The regional data were further classified by the year the auction took place.

Data analysis: the re-classified dataset was analysed to reveal the nature of ivory trade in the auction markets, including clarifying the number of ivory auction houses, the main ivory auction house ranking list, the ivory auction houses' consecutive auction record analysis, the number of auction events, the number of elephant and mammoth ivory auction lots, and the total transaction amount in each region/Common product type of ivory auction items in mainland China were also analysed.

The purpose of undertaking the Artso.net historical ivory auction data analysis was to understand the state of, and changes in China and the global ivory auction market from January 2008 to April 2018. Although the quantity of ivory auction data retrieved from Artso.net was large, the results of analysis might still be an underestimate, and therefore represent only a partial view of the total ivory auction market at the domestic and international level. The reasons for the underestimation are as follows:

- 1) Artso.net serves as a platform which allows auction houses to post auction information, however not all auction houses in China and around the globe would actively update their auction event information on the website;
- 2) It is completely voluntary for auction houses to upload the auction results on Artso.net after auction events have concluded. If the auction houses did not actively update the auction results on Artso.net, turnover rates and transaction levels could only serve as an indication of developments in the ivory auction market.

2.3 Survey of pre-auction exhibition of ivory items in China

Before an auction event takes place, there will be a pre-auction exhibition lasting between two and four days, which allows prospective buyers to review auction items on site. The pre-auction exhibition information could be found on Artso.net by search keywords, such as Xiangya, Yadio, and Mengma (ivory, ivory carving, and mammoth ivory in Mandarin), or via an auction house's Wechat post. Research visits to pre-auction exhibitions were conducted in accordance with the information announced.

Upon arrival at the exhibition venue, research began with a perusal of the entire venue to get a general idea of the scale of the auction, and to check if SFGA administrative approval was noted in the catalogue. Elephant or mammoth ivory items appearing on Artso.net were then cross-checked by in-person observation, including any other types of ivory items also present in the venue. Once elephant or mammoth ivory items were located, photos were taken as proof of the presence of ivory items at the venue (e.g. Fig. 1). Photos might be provided to law enforcement officers as evidence if necessary. Auction items were mostly placed in glass display cases. Auction house staff would assist in taking items out of display cases for hands-on checking. Only in occasional cases can prospective buyers get access to the auction items directly from the display cases by themselves.



Fig. 1 Photos of pre-auction exhibition containing ivory items

Auction items were scrutinised through the display window, checking for the presence of Schreger lines on the objects' surface. If the Schreger lines were invisible from the distance due to the items dark or coloured surface or too much cracking, the investigator would ask the auction house staff to present the items in question for closer examination. Cattle bone carving items could be differentiated from elephant and mammoth ivory products by viewing material under strong light and noting the absence of Schreger lines. The investigator would talk with staff if the situation allowed for further understanding of the current ivory auction market in China and the level of legal compliance. If a large number of elephant ivory items were found in the exhibition, the researcher would report to the local forest police or the Wildlife Conservation Department of the local government.

3. LEGAL ANALYSIS OF CHINA'S IVORY ANTIQUE AUCTION

In accordance with the State Council's Notice, the exempted ivory items must meet several requirements, including "legally sourced", "antique", "certified by appraisal agency", and "obtained administrative approval" in order to be legally auctioned. The legal definitions of such requirements have to be consistent with the definitions stated in existing laws and regulations.

Auction items which are both a "wildlife product" and an "antique", especially those involving species protection by law in China (i.e. including Asian and African elephants), have to simultaneously meet the provisions of The Wild Animal Protection Law, the Cultural Relics Protection Law, the Auction Law and the measures for Cultural Relics Auction Management. The State Council has also issued notices for auctions of endangered species products. While the notice issued by the State Council doesn't conflict with existing related laws and regulations, it clarifies that all ivory auction activities must meet all legal requirements.

Measures for Cultural Relics Auction Management (2016)

To strengthen cultural relics' regulation and management, the SACH promulgated the Measure for Cultural Relics Auction Management on 20 October 2016. Article 2 of the provision defines the items the measures apply to:

- i) All kinds of art and craftworks prior to 1949;
- ii) Pre-1949 documents and manuscripts and books with historical, artistic and scientific value;
- iii) Physical objects representing the institution, the socio-economic and livelihood condition of all ethnic groups before 1949;
- iv) Physical objects representing major events or famous personages after 1949;
- v) Physical objects reflecting the productive activities, customs, cultural and religious beliefs of all ethnic groups after 1949;
- vi) The works of deceased calligraphers and artists after 1949, which are listed in the scope of outbound restrictions; and
- vii) Other articles as stipulated by laws and regulations.

According to the nature of the elephant ivory products, only pre-1949 elephant ivory items are qualified as antiques for auction by the definition provided in the measures.

The Cultural Relics Protection Law (2017)

According to Article 50 of the Cultural Relics Protection Law of 2017, apart from the collection agency for cultural relics, citizens, legal persons and other organisations may collect cultural relics acquired through:

- i) Inheriting or accepting gifts in accordance with the law;
- ii) Purchase from an antique collection shop;
- iii) Purchase from an auction house dealing in auction of cultural relics;
- iv) Exchange or transfer of cultural relics that are lawfully possessed by individual citizens;
- v) Other lawful means prescribed by the state.

Any cultural relics auctioned by an auction house shall carry administrative approval to the Department of Cultural Relics Preservation of the local government, and submitted to the SACH for the record (Article 56). From the articles mentioned above, pre-1949 ivory antiques can be legally auctioned if administrative approval is obtained from the Department of Cultural Relics Preservation of the local government and filed with SACH.

If an auction house auctions off unlicensed cultural relics, it may, in accordance with Article 73 of the Cultural Relics Protection Law (2017), result in the illegally auctioned items and illegal income being confiscated by the Administrative Department for Industry and Commerce. If the amount of income from illegal business operations exceeds CNY50,000 (USD7,691)², the auction house must pay a fine of more than one time to less than three times the amount of the illegal income. If the amount of income from illegal business operations is less than CNY50,000 (USD7,691), the auction house must pay a fine of between CNY5,000 (USD769) and CNY50,000 (USD7,691). If the circumstances are serious, the licence of the auction house shall be revoked by the original issuing authority.

The Wild Animal Protection Law (2017)

Since Asian and African elephants are recognised in China as first-class national protected wild animals, the sale, purchase and transportation of ivory products in China should comply with the relevant provisions of the Wild Animal Protection Law of 2017.

According to Article 3 of the Wild Animal Protection Law (2017), the State Forestry and Grassland Administration (SFGA), formerly the State Forestry Administration, is in charge of terrestrial wild animal management at national level, while the Wildlife Conservation Department of the local government is charged in the level of provinces, autonomous regions and municipalities.

Article 27 of the Wild Animal Protection Law states that “any individual who, because of scientific research, artificial breeding, public exhibition, cultural relics protection or other special circumstances, shall be approved in advance by the Wildlife Conservation Department of provinces, autonomous regions and municipalities in accordance with the relevant provisions, obtain and use specialized label to ensure traceability, except as otherwise provided by the State Council”; Article 33 states “transportation, carriage and delivery of national protected wild animal and their products shall possess or be accompanied by a license, a copy of the approval document or a specialized label, as well as a quarantine certificate”. From the above-mentioned articles, ivory items which have been approved by the authority in charge of wildlife protection can be legally sold or purchased and, when transporting ivory items, relevant documents should accompany the items as proof of legality of origin and the legality of the act of carriage. The SFGA official website requires those who wish to sell, purchase and use antique ivory products to submit an administrative approval application to the provincial forestry administrative department along with valid documents and other relevant materials evidencing their legal origin. The SFGA will then examine these and make an administrative decision (SFA 2014) (please see Annex 1 for a detailed description of the application and the flow chart for approval).

When elephant ivory antiques originally purchased abroad are to be auctioned in China, import and export certificates shall be presented in accordance with the provisions of Article 35 of the Wild Animal Protection Law, the regulations of the Endangered Wildlife Import and Export Management Regulations of 2006, and the Measures of Wildlife Import and Export Certificate Management of 2015 to prove that the source is legal.

If any person sells, purchases, uses, transports or delivers ivory objects without permits, the Wildlife Conservation Department or the Administration for Industry and Commerce at (or above) the county level may, in accordance with the provisions of Article 48, confiscate the ivory products and illegal income and impose a fine of two to ten times the value of the products. Where a crime has been committed, criminal liability shall be investigated in accordance with the law. According to Article 341 of the Criminal Law of 2017, a person who illegally purchases, transports or sells national protected endangered wild animals and their products shall be sentenced to fixed-term imprisonment of not more than five years or criminal detention. If the circumstances are serious, the perpetrator shall be sentenced to fixed-term imprisonment of not less than five years but not more than 10 years and shall also be fined. If the circumstances are particularly serious, the perpetrator shall be sentenced to fixed-term imprisonment of not less than 10 years and shall also be fined or have the items confiscated. Article 151 states that whoever smuggles cultural relics prohibited by the state or which are prohibited by the state from import or export shall be sentenced to fixed-term imprisonment of not less than five years but not more than 10 years and shall also be fined. If the circumstances are particularly serious, the perpetrator shall be sentenced to at least 10 years to life imprisonment, and shall be sentenced to confiscation of property; if the case is less serious, the perpetrator shall be sentenced to fixed-term imprisonment of not more than five years and shall also be fined.

In order to prevent those seeking to justify their activities of sale, purchase and use of nationally protected wildlife by using improper means of obtaining administrative approval or supporting documents, Article 39 of the Wild Animal Protection Law clearly states that forging, altering, buying, selling, transferring or leasing approval documents or import and export certificates is an offence. In accordance with Article 55, the wildlife protection authorities at or above the county level should confiscate the illegal documents, specialised label, relevant approval documents and the illegal proceeds, and the perpetrator shall be liable for a fine of CNY50,000 to 250,000 (USD7,691 to 38,453). If the case constitutes a violation of public security management, the law enforcement shall impose punishment to the perpetrator according to law; if the case constitutes a crime, it shall be investigated according to the law. Article 280 of the Criminal Law stipulates that whoever forges, alters or buys or sells official documents, or documents or seals of a State body, shall be sentenced to fixed-term imprisonment of not more than three years, criminal detention, public surveillance or deprivation of political rights, and shall also be fined; if the circumstances are serious, the perpetrator shall be sentenced to fixed-term imprisonment of not less than three years but not more than 10 years and shall also be fined.

The Auction Law (2015)

Article 8 of the Auction Law stipulates that review and approval procedures shall be conducted in accordance with the law or the notice of the State Council for the transfer of articles or property, and that such review and approval procedures shall be conducted in accordance with the laws before the auction. It can be concluded that the ivory antiques shall be approved by the departments in charge of wildlife protection and cultural relics’ management before the auction.

When a principal entrusts auction of articles or goods or property rights, she/he shall provide proof of ownership or legal disposition of the subject matter of the auction as required by the auctioneer (Article 41). In addition to having the right to require the principal to state the origin and defects of the subject matter of the auction (Article 18), the auctioneer shall verify the relevant documents and materials provided by the principal (Article 42).

Article 61 of Chapter 5 of the Auction Law only regulates what happens if any irregularities in the auction procedure are not explained by the principal and auctioneer, thus resulting in the buyer’s loss. In these circumstance buyers have the right to seek compensation from the auctioneer and

²The currency conversion rate is calculated based on the average of the middle price of the Bank of China exchange from January 2008 to April 2018 (USD1= CNY6.5015) and applied to all currency conversion in legal analysis section.

the auctioneer has the right to recover from the principal as the case may be. However, Article 61 also states that “the auctioneer and the principal, before the auction, may declare that they do not guarantee the authenticity or quality of the subject matter of the auction, and shall not bear liability for the warranty of defects”, and therefore it weakens the scope for regulating the legal norm of the behaviour of the principal and auctioneer.

Urgent Notice on the Views of State Forestry Administration (SFA) regarding the auction of endangered species products (2011)

In 2011, there were some auction houses that auctioned products of nationally protected species, such as rhino horn, tiger bone, and ivory, thus violating laws related to wildlife protection and arousing SFA's attention. An urgent notice issued by SFA was promulgated by the China Association of Auctioneers (CAA) on the issue of auction of wildlife articles, reaffirming that the acquisition, transport and sale (including auction) of nationally protected wildlife products within the territory of China, regardless of age of the product concerned, should strictly abide by the provisions of the Wild Animal Protection Law, the Terrestrial Wildlife Protection Implementation Regulations, and the State Council regarding the rhino horn and tiger bone trade ban (State Council [1993] No.39). Where the trade is prohibited by the State, it shall not be subject to auction. Subject to the approval of the Wildlife Conservation Department or its authorised unit, the review and approval procedures must be strictly complied with.

The Department of Wildlife Conservation and Nature Reserve Management of SFA also issued a press release in January 2012, to specify that products of nationally protected wildlife species and those listed in CITES Appendices I and II which are not native to China, such as ivory, tiger skin, bear paw, musk, sea turtle shell, pangolin scales, crocodile skins, and seahorses, are not allowed to be sold, purchased, transported, carried, mailed, imported and exported without permission. Violators of these provisions would be held liable (Wan and Liu 2012).

Summary

According to the existing laws and regulations mentioned above, ivory items which can be legally auctioned have to meet the requirements listed below:

- 1) They must be art and craft items originating before 1949;
- 2) They must come from legitimate sources; and
- 3) An application for administrative licences for operating antique ivory trade must be submitted to and approved by the SFGA;
- 4) An application must be submitted to the Department of Cultural Relics Administration of the local government for auction approval and reported to the SACH for the record;
- 5) An application must be submitted to the Wildlife Conservation Department of the local government for auction approval, and once approved must be used in accordance with the provisions. If the conditions mentioned above are not fully satisfied, both the ivory item owners and entrusted auction houses violate the law and must bear the corresponding legal liability.

Despite the fact that the existing laws and regulations have conferred a certain level of governance on ivory antique auctions, further clarification in the definition and detail of existing measures are still needed.

According to the measures for Cultural Relics Auction Management, ivory products manufactured before 1949 may be legally auctioned as cultural objects. However, the existing laws and regulations relating to ivory auctions do not define the scientific methodology for determining the age of ivory products, the qualifications of the appraiser doing so, or the format and content of a qualified

appraisal. Without specific definitions, the relevant authorities have no reliable basis for making the final decision in the administrative approval process in the future, resulting in a divergence of views on the qualification of the auction of ivory objects and a negative impact on the effectiveness of governance.

With regard to legality of origin, the definition under the Wild Animal Protection Law and that under the Cultural Relics Protection Law are also inconsistent. The legal means of obtaining cultural relics in Article 50 of the Cultural Relics Protection Law include inheriting or accepting gifts in accordance with the law, purchasing from an antique collection shop and an auction house dealing in auction of cultural relics, exchange or transfer of cultural relics that are lawfully owned/possessed by individual citizens, and other lawful means prescribed by the state. On the other hand, according to the Wild Animal Protection Law, the documents and materials eligible and acceptable to SFGA for verifying the first-class nationally protected terrestrial wildlife and its products coming from legal sources include a hunting permit, a permit for wildlife domestication and reproduction, import and export certificates, law enforcement documents for the disposal of articles, invoices for purchase and sale of and proof of individual genealogy. Moreover, before 31 December 2017 when the ban on ivory trade was imposed, SFA approved ivory retail stores were the channels for legally purchasing ivory, and the specialised label and certificate could be used as a proof of legal origin.

Proof of legality for ivory antiques has to both meet the definitions of the Cultural Relics Protection Law and the Wild Animal Protection Law; otherwise the item cannot be recognised as coming from legal sources. For instance, an ivory antique purchased from an antique collection shop is considered as a legally sourced item according to the Cultural Relics Protection Law; however, the antique collection shop is not qualified as an SFA-approved ivory retail store. Even though the ivory antique owner keeps the invoices of purchase and sale, the ivory antique would not be recognised as a legally sourced item in accordance with the Wild Animal Protection Law and the notice of ivory product regulation and management issued by SFA (SFA [2008]No. 258). The Wild Animal Protection Law and the criteria of eligible documents for verifying the legal source of first class nationally protected wildlife and wildlife products does not define or specify if gifting, inheritance or transfer could be considered as legal sources for obtaining ivory antiques. The consensus is that further clarification and definition are needed from relevant authorities' coordination and communication (for the eligibility of elephant ivory items for auction approval review process, please see Annex 2).

The SFGA official Web page stipulates that administrative approval is needed by anyone wishing to sell, purchase or use first-class nationally protected terrestrial wildlife or its products. However, it is not clear whether the owner of the ivory item or the auction house should carry out the relevant procedures. In addition, it is not clear how many days after the auction ended the person who purchased the ivory item at the auction has to submit approval application. The SFGA needs to clarify and define the qualification and timetable of approval application in order to better manage the trade in legally sourced elephant ivory products in China.

4. ANALYSIS OF HISTORICAL IVORY AUCTION DATA ON ARTSO.NET

The Elephant Ivory Auction Market

Artso.net Data Overview

From January 2008 to April 2018, a total of 17,133 lots of ivory auction was retrieved from Artso.net (mainland China: 14,193 lots; Hong Kong SAR and Macao SAR: 1,617 lots; Taiwan POC: 74 lots; Japan: 426 lots; other locations: 823 lots). According to Artso.net data, the number of ivory auction houses, and ivory auction events in mainland China showed an increase from 2008 to 2011 (Fig. 2, 3, and 4), with the total number of annual ivory auction lots increasing by 442% over that period. Since 2012, the auction market showed a sharp decline in the number of ivory auction lots due to the urgent notice from the CAA at the end of 2011, with the lowest number of ivory auction lots, auction houses and auction events in 2016. After the State Council announced at the end of 2016 that ivory antiques could still be auctioned, the mainland Chinese ivory auction market began to show slow recovery from 2017.

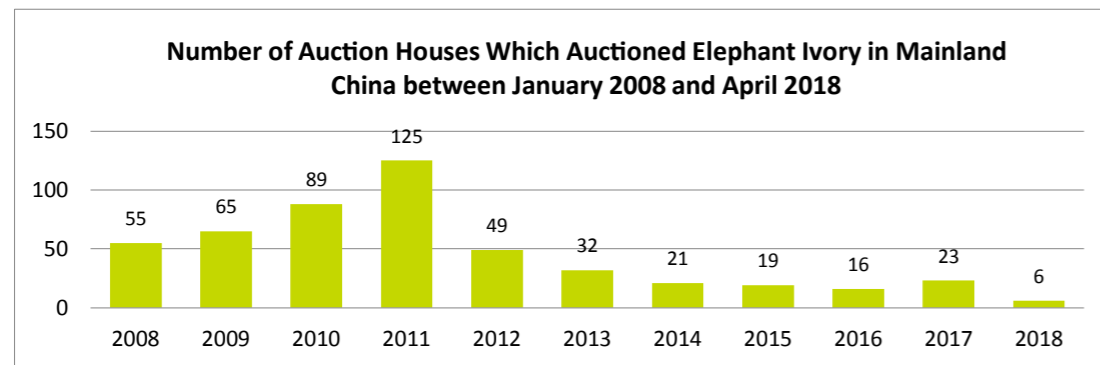


Fig. 2 Number of auction houses which auctioned ivory items in mainland China between January 2008 and April 2018 on Artso.net

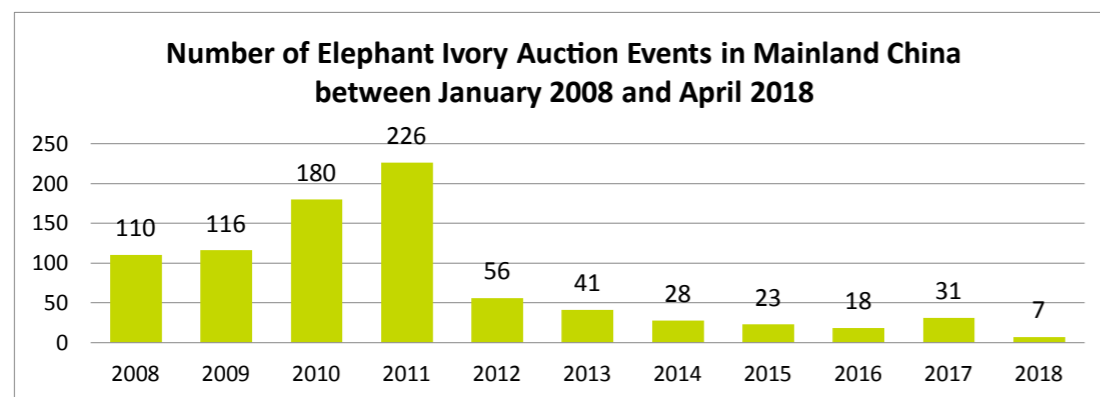


Fig. 3 Number of ivory auction events in mainland China between January 2008 and April 2018 on Artso.net

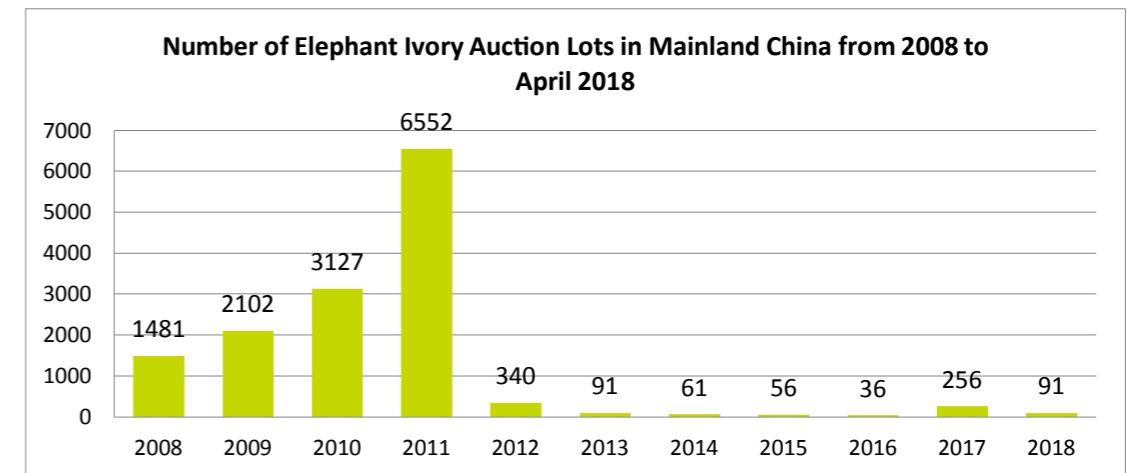


Fig. 4 Number of ivory auction lots in mainland China from 2008 to April 2018 on Artso.net

The number of ivory auction houses and auction events in Hong Kong SAR and Macao SAR gradually increased since 2008 with a decrease from 2016 (Fig. 5 and 6). The annual number of ivory auction lots was volatile (Fig. 7), with the highest number of ivory auction lots in 2008 and 2011. The annual number of ivory auction lots was around 100 to 200 between 2012 and 2016, with a significant decrease in 2017.

The number of ivory auction houses in Taiwan POC between 2008 and 2018 was relatively low compared with other markets in the region, with a maximum of four in a year, without a sign of significant increase. The number of ivory auction events in Taiwan POC ranged from zero to six a year during this period, while the number of ivory auction lots exceeded 16 lots in 2013 and 2014 only, while the remainder of the years analysed had below 10 lots recorded (Fig. 5, 6 and 7).

Auction records in Japan showed that the number of ivory auction events and ivory auction houses had increased since 2011, and remained fairly stable thereafter (Fig. 5 and 6). The number of ivory auction lots increased significantly from 2011 to 2012 and then fluctuated above 40 lots per year (Fig. 7).

Ivory auctions were also recorded elsewhere in Asia (Singapore), Oceania (Australia), North America (U.S.A. and Canada) and Europe (UK, Italy, France, Switzerland, Czech Republic, Germany, and Austria). The number of ivory auction houses in other locations was relatively stable from 2008 to 2012 and remained at four to six auction houses (Fig. 5). Since 2013, the number of ivory auction houses began to increase, reaching more than 14 houses per year. The number of ivory auction events also changed in line with changes in the number of auction houses (Fig. 6). The number of ivory auction lots showed a rapid increase between 2008 and 2010 but declined significantly in 2011 (Fig. 7). Since 2012, the number of other locations ivory auctions rose again, and after reaching a peak in 2016, a significant decline was observed in 2017.

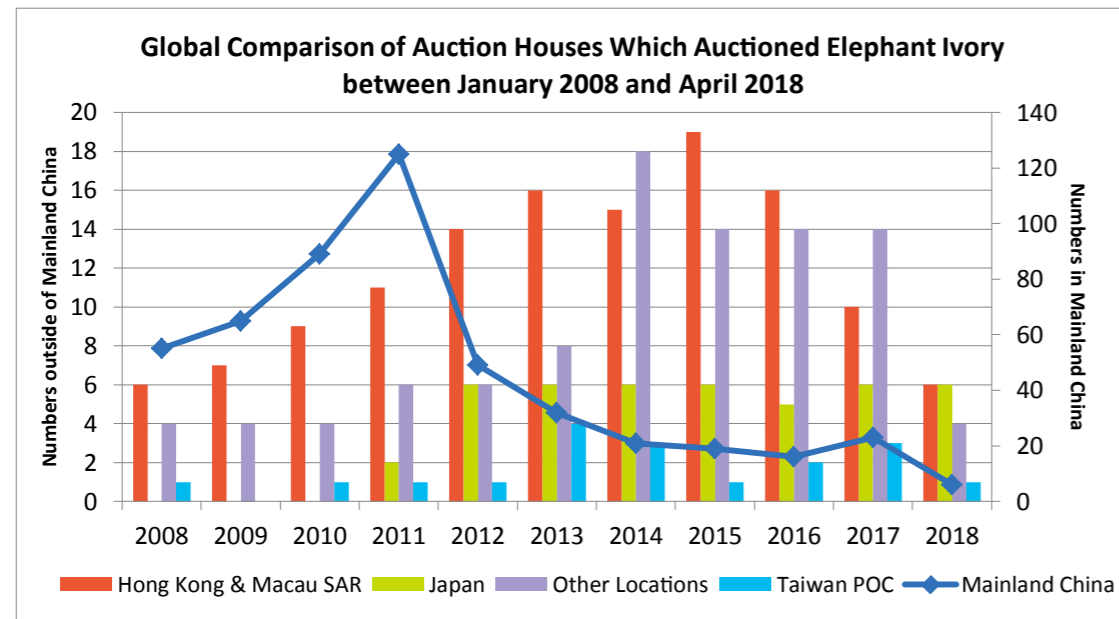


Fig. 5 Global comparison of auction houses which auctioned elephant ivory between January 2008 and April 2018 on Artso.net

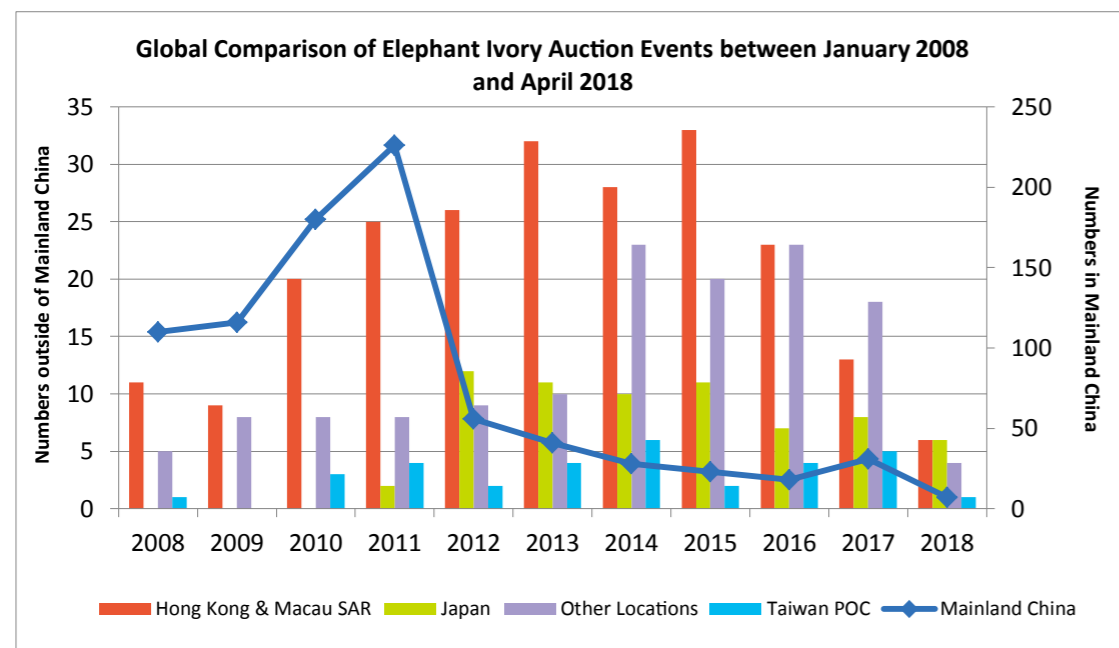


Fig. 6 Global comparison of elephant ivory auction events between January 2008 and April 2018 on Artso.net

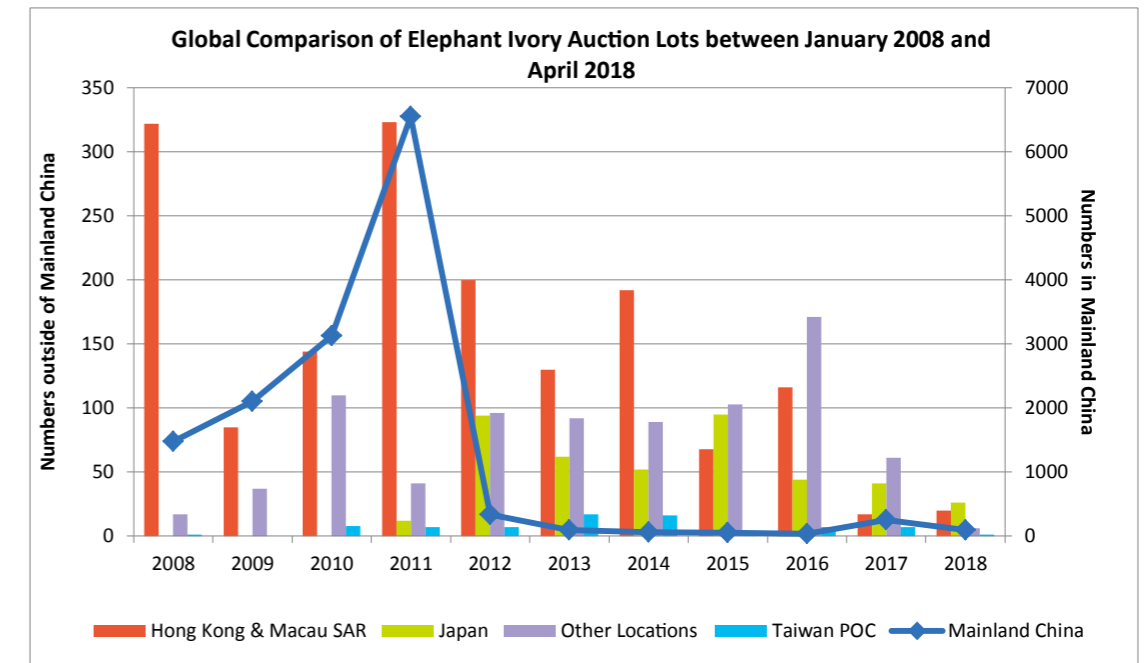


Fig. 7 Global comparison elephant ivory auction lots between January 2008 and April 2018 on Artso.net

The pattern of ivory auction data in this limited dataset suggests that there has been an increase in ivory auctions abroad following China's moves to curtail such trade in 2011. However, as reporting data to this website is completely voluntary and does not necessarily reflect the total number of ivory product auctions in these locations, it provides only an indicative insight to true trends and relationships in the global auction market for ivory.

A total of 1,330 ivory auction records showed successful bids on Artso.net over the time period studied. In terms of the average transaction amount based on best available auction data on Artso.net, the highest was other locations, followed by mainland China, Hong Kong SAR & Macau SAR, Japan and Taiwan POC. (For detail calculation results, please see Annex 3)

Mainland China

Between January 2008 and April 2018, a total of 230 auction houses in mainland China had auctioned elephant ivory items according to Artso.net. Of these, 36 auction houses accounted for 43.54% of all ivory auction events in mainland China during that period and 80.15% of all ivory auction lots (Table 1). Analysis results showed that ivory auction events and items were concentrated among a handful of auction houses, including China Guardian Auctions Co. Ltd, Poly International Auction Co. Ltd, Shanghai Jiatai Auction Co. Ltd, and Shanghai Bohai Auction Co., Ltd.

Among the 36 major ivory auction houses, 15 have ceased to hold ivory auctions since 2012 (marked * in Table 1). Of the remaining 21 auction houses, 15 had ivory auction event records between 2012 and April 2018, but the total number of elephant ivory auction lots was fewer than 10 (marked @ in Table 1); and the remaining six auction houses had more than 10 ivory auction lots (marked # in Table 1).

The 21 major ivory auction houses accounted for 64.55% of the total number of ivory auction lots in mainland China after 2012. Poly International Auction Co. Ltd, Shanghai Jiatai Auction Co. Ltd, accounted for 18.26 and 32.55%, respectively, of the total number of ivory auction lots in mainland China after 2012. The majority of ivory auction lots of Poly International Auction Co. Ltd appeared in 2012, with a sharp decline thereafter. Even so, Poly International Auction Co. Ltd remained the major ivory auction house in mainland China.

The amount of ivory auctioned by Shanghai Jiatai Auction Co. Ltd between 2012 and 2015 was quite low. Notably, after the State Council announced the phasing out of commercial ivory trade at the end of 2016, while allowing ivory antiques to continue to circulate through auctions, the number of ivory auction lots of Shanghai Jiatai increased since 2017, with up to 266 lots in total from January 2017 to April 2018.

Table 1. Major ivory auction houses, auction events and ivory auction lots in mainland China from 1 January 2008 to 30 April 2018

		Number of Ivory Auction Event	Number of Ivory Auction Lot	Proportion of Ivory Auction Lots (%)	Ivory Auction Lots After 2012	Proportion of Post 2012 Ivory Auction Lots (%)
Mainland China		836	14193	-	931	-
1	China Guardian Auctions Co. Ltd@	24	2158	15.20	4	0.43
2	Poly International Auction Co. Ltd (Beijing)#	36	1926	13.57	170	18.26
3	Shanghai Jiatai Auction Co. Ltd #	28	957	6.74	303	32.55
4	Shanghai Bohai Auction Co., Ltd.*	11	619	4.36	0	-
5	Beijing Yinqian International Auction Co., Ltd.@	12	385	2.71	1	0.11
6	Suzhou Wumen Auction Co., Ltd.#	12	340	2.40	19	2.04
7	Xinhua Auction Co. Ltd *	9	331	2.33	0	-
8	Pacific International Auction Co. Ltd *	11	305	2.15	0	-
9	Beijing Hanhai Auction Co. Ltd@	24	304	2.14	5	0.54
10	Shanghai Auction House Co., Ltd. @	7	295	2.08	1	0.11
11	Suzhou Dongfang Auction Co. Ltd	5	281	1.98	4	0.43
12	Shizhuzhai Auction Co. Ltd *	6	246	1.73	0	-
13	Xiling Yinshe Auction Co. Ltd @	10	238	1.68	3	0.32
14	Beijing Wanlong Auction Co., Ltd. *	10	217	1.53	0	-
15	Zhongdu International Auction Co. Ltd*	9	216	1.52	0	-
16	Beijing Googut Auction Co. Ltd@	7	200	1.41	1	0.11
17	Council Auction Co. Ltd #	14	171	1.20	19	2.04
18	Shanghai Dazhong Auction Co. Ltd@	11	169	1.19	3	0.32
19	Beijing East Art Center Auction Co. Ltd*	14	161	1.13	0	-
20	Jiabao Auction Co. L td	8	156	1.10	5	0.54
21	Beijing Yihejiacheng Auction Co., Ltd. *	6	151	1.06	0	-
22	Zhejiang Qiantang Auction Co., Ltd. @	7	151	1.06	6	0.64
23	Jinhao International Auction Co., Ltd. *	4	142	1.00	0	-
24	International Auction Co of China	6	129	0.91	1	0.11
25	Fujian Auction House *	5	117	0.82	0	-
26	Treasure Auction Co. Ltd *	3	112	0.79	0	-
27	Forever Auction Co. Ltd *	6	109	0.77	0	-
28	Beijing Xuanshi International Auction Co. Ltd@	4	100	0.70	9	0.97
29	Shanghai Arts & Crafts Auction Co. Ltd @	13	96	0.68	1	0.11
30	Jiangsu Artall Auction Co. Ltd #	12	91	0.64	26	2.79
31	Auction Co. Ltd of Shenzhen City @	7	90	0.63	1	0.11
32	Suzhou Orient Artworks Auction Co. Ltd *	6	90	0.63	0	-
33	Liaoning Zone Auction Co. Ltd #	9	85	0.60	18	1.93
34	Beijing Asia Ronghai International Auction Co., Ltd. @	3	82	0.58	1	0.11
35	Jiangsu Provincial Auction Office / Co., Ltd. *	3	79	0.56	0	-
36	Zhejiang Minhe Auction Co., Ltd. *	2	77	0.54	0	-
Total of other auction houses		472	2817	-	330	-
Total of 36 major ivory auction houses		364	11376	-	601	-
Proportionof36 major ivory auction houses		43.54%	80.15%	-	601	64.55
*Auction houses without any ivory auction records since January 2012 until April 2018						
@ Auction houses had fewer than 10 ivory auction lot records since January 2012 until April 2018						
# Auction houses had more than 10 ivory auction lot records since January 2012 until April 2018						

The major ivory auction houses listed in Table 1 are located in Beijing (47.22%), followed by Jiangsu-Zhejiang-Shanghai area (44.44%). Liaoning, Fujian and Guangdong only accounted for three auction houses. There was 58.33% of the auction houses still actively engaged in ivory auction after 2012. Predictably, under the circumstance of allowing post-ban ivory antique auction by the State Council, it is highly likely that major ivory auction houses will actively resume ivory item recruitment and auction activities. The geographical distribution analysis of major ivory auction houses would provide support to law enforcement in the locations above to strengthen the governance of ivory auction events.

An in-depth analysis of the auction records of ivory auction houses in mainland China (Table 2) showed that the auction houses with less than five years of historical auction records accounted for 93.9% (216 auction houses) of the total number of ivory auction houses, and only 6.1% (14 auction houses) of the auction houses had five to 10 years ivory auction experience. The results indicate that the number of auction houses with long years of experience in ivory auctions is small, including the major ivory auction houses.

There were 118 auction houses with only ivory auction records before 2012 (Table 2), which accounts for 51.3% of all ivory auction houses. This indicates that the auction ban on endangered species products such as ivory, rhino horn and tiger bone at the end of 2011 did have a deterrent effect on the auction houses. There were 27 auction houses that held ivory auctions after 2017, accounting for 11.74% of the total number of auction houses that held ivory auctions in mainland China between 2008 and 2018. Ten of those are new auction houses with one year of ivory auction records and had 25 ivory auction records, while the remaining 17 auction houses had at least two years of experience in ivory auctions. The State Council's announcement at the end of 2016 not only reinvigorated auction houses with past ivory auction experiences to become active again (e.g. Shanghai Jiatai), it had also attracted new auction houses with no experience in ivory auctions to join the ivory auction market in mainland China.

Table 2. An in-depth analysis of the Artso.net auction records of elephant ivory auction houses in mainland China

Year of Historical Ivory Auction Record	Number of Auction Houses	Historical Records only Appeared Before End of 2011	Historical Records across 2011/2012	All Historical Records only Appeared After 2012
1 Year	123	70		53 (10 new auction houses joined ivory auction market between 2017 and 2018)
2 Years	38	23	11 (two auction houses' second year auction records appeared after 2017)	
3 Years	29	16	13 (two auction house auctioned ivory after 2017)	
4 Years	16	9	7 (one auction house auctioned ivory after 2017)	
5 Years	10		10 (two auction houses auctioned ivory after 2017)	
6 Years	6		6 (two auction houses auctioned ivory after 2017)	
7 Years	5		5 (three auction houses auctioned ivory after 2017)	
8 Years	0		0	
9 Years	2		2 (two auction houses auctioned ivory after 2017)	
10 Years	1		1 (auctioned ivory after 2017)	

A summary of the common product types and ages of elephant ivory auction items in mainland China

The summary of the common product types of ivory auction items from January 2008 to April 2018 reveals a wide variety of ivory products appearing at auctions. The product types could be divided into the following categories: Ornamental Objects, Writing and Stationary Supplies, Aromatherapy, Appreciated Objects, Jewellery and Other Accessories, Table and Kitchen supplies, and Others.

Table 3. Summary of the common types of elephant ivory auction items on Artso.net in mainland China from January 2008 to April 2018

Auction Item Type	Amount	Proportion (%)	Note
Ornamental Objects	5,026	35.41	Small to large size of portrait, animal and flower baskets ornaments (4509), bottles (256), screens (73), sceptre (154), swords (34)
Writing and Stationary Supplies	3,452	24.32	Pen holders (1515), arm rest (301), writing brushes (146), ink plate (67), paper weights (147), writing brush washer (74), stamps and seal boxes (917), paper cutters (135), business card cases (150)
Aromatherapy	228	1.61	Incense tubes (64), incense boxes, incenses, sachets, incense insertions and incense burners (164)
Games and Functional Objects	1,341	9.45	Chess (209), fans and fan bones (503), snuff bottles (265), grasshopper cages and bird cages (95), mah-jong (98), boxes with lids (100), telescopes (46), wardrobes and jewellery cabinets (25)
Jewellery and Other Accessories	865	6.09	Accessories and pendants (463), jewellery, rings and bracelets (402)
Table and Kitchen Supplies	258	1.81	Tableware and chopsticks (126), pots and cups (119), tea cans (13)
Others	3,023	21.30	

In terms of their period of origin, the highest proportion of elephant ivory auction items was from Qing Dynasty (A.D.1644-1911), accounting for 47.4% (6,728 lots), followed by the period of the Republic of China (A.D.1911-1949) accounting for 17.98% (2,552 lots), and 3.89% (552 lots) from after the founding of the People's Republic of China. The Ming (A.D.1368-1644) and pre-Ming dynasties accounted for 4.71% (669 lots), while 26.01% of the records' age (36,993 lots) were not provided.

Hong Kong SAR & Macau SAR

Elephant ivory auction records of Hong Kong SAR & Macau SAR from January 2008 to April 2018 showed a total of 44 auction houses had auctioned ivory items. Five of the 44 auction houses had a total of 37.17% of all ivory auction events in Hong Kong SAR & Macau SAR, 74.52% of all ivory auction lots (Table 5), showing a concentration of ivory auctions among certain auction houses in Hong Kong SAR and Macau SAR. The majority of ivory auction lots appeared in the auction events of Treasure Auctioneer Ltd and Fortune Auctioneers Ltd.

There were 13 auction houses in Hong Kong SAR & Macau SAR which held ivory auctions before the end of 2011. The remaining 31 auction houses commenced ivory auction records after 2012, accounting for 70.45% of the total number of ivory auction houses in Hong Kong SAR & Macau SAR. The ivory auction lots from these 31 auction houses accounted for 22.75% of all lots in Hong Kong SAR & Macau SAR after 2012.

With effect from 1 May 2018, the Agriculture, Fisheries and Conservation Department of Hong Kong SAR began to implement three phases to phase out of the commercial ivory trade, except antique ivory sourced from 1925 or earlier, by 31 December 2021 (LegCo 2018). A rigorous definition for antique ivory exception and qualified appraisal or other method that proves the age of the ivory have been introduced for further regulating the post-ban commercial trade of antique ivory in Hong Kong. In the long run, it is important to conduct long-term and continuous monitoring of antique ivory trade/auction policy compliance and market change in Hong Kong SAR in case of laundering.

Taiwan POC

From January 2008 to April 2018, there were nine auction houses in Taiwan POC that held ivory auctions. Six out of nine auction houses accounted for 71.88% of all ivory auction events and 83.78% of the number of ivory auction lots during that time (Table 5). Ivory items were mainly auctioned by Security International Auctioneer Limited, Art Emperor Technology & Culture Co. Ltd and Fu Der International Auction Co. Ltd.

Only two auction houses in Taiwan POC had auctioned ivory before the end of 2011 (JSL International Art Auction House and Security International Auctioneer Limited) and the remaining seven auction houses began to auction ivory since 2012, accounting for 77.78% of all auction houses. These auction houses accounted for 52.05% of ivory auction lots in Taiwan after 2012.

From the total number of auction houses, auction events (32 events), ivory auction lots (73 lots), and the average number of ivory auction lots per event (2.28 lots per event), it is evident that ivory is not a popular object for auction in Taiwan, according to Artso.net auction data.

The Forestry Bureau of Taiwan POC officially announced in July 2018 that the domestic ivory trade will be closed from 1 January 2020 (FOREST 2018). Currently, the relevant implementation rules have not yet been published, and it is unclear whether antique ivory is exempted from the ban. It is expected that the announcement and implementation of the ivory trade ban in Taiwan will have an impact on the local auction market. In the future, it will be important to keep track of the ivory ban implementation rules and the trend of ivory auctions in Taiwan if the antique ivory is exempted from ivory ban. In case the auction market is used as a channel for illegal ivory laundering.

Japan

From January 2008 to April 2018, a total of 13 auction houses in Japan on Artso.net had auctioned ivory. Six of the 13 auction houses accounted for 76.12% of the total number of ivory auction events and 86.38% of the number of ivory auction lots recorded on Artso.net in Japan (Table 5). On Artso.net, Est-Ouest Auctions Co. Ltd is the auction house which had the largest number of ivory auction lots in Japan, followed by Japan Art Dealers Enterprise Co. Ltd, New Japan Auction Co., Tokyo Chuo Auction, and iARTCo. Ltd.

Ivory auction records in Japan on Artso.net began to appear after 2012. Only 2 of the 13 companies had auctioned ivory before 2011, while the remaining 11 auction houses did not auction ivory until 2012. Post-2012 ivory auction houses accounted for 84.62% of the all auction houses and 59.15% of the total ivory auction lots appearing in Artso.net.

It is worth noting that ivory is a popular commodity in Japan, but there were just over 450 physical ivory auction records on Artso.net in the past 10 years. This is mainly due to the fact that the ivory trade in Japan is still legal. The largest auction house recorded by TRAFFIC in Japan is the Mainichi Auction trading over 423 ivory items in 2017 but not included in the Artso.net (Kitade and Nishino 2017). Besides the open physical auction market, ivory can also be traded in the form of indoor or outdoor physical/offline antique bazaars, online auctions by Yahoo and closed auctions open only to ivory dealers (Kitade 2017; Kitade and Nishino 2017; Kitade and Naruse 2018). In the case of Yahoo Auction, according to TRAFFIC's Japan analysis, in a total of a four week market survey between May and June 2017, there were 9,788 items of ivory successfully auctioned on Yahoo Auction (excluding whole-and semi-processed products) (Kitade 2017). The survey of antique markets in three Japanese cities found more than 5,000 ivory items (Kitade and Nishino 2017). The data set out above indicate that there are a wide variety of channels for buying ivory in Japan and physical auctions are not the main platforms for ivory trade. Therefore, the auction data on Artso.net only partially reflects the ivory auctions in Japan, and additional data is needed to characterise the pattern of auction trade in Japan.

Other Locations

Artso.net auction records from other locations from January 2008 to April 2018 showed that 41 auction houses had auctioned ivory items overseas. Twelve out of the 41 auction houses' auction events (the number of ivory auction lots of each house is greater than 20) accounted for 43.38% of overseas ivory auction event and 82.14% of the number of ivory auction lots (Table 5). It showed that ivory auctions are concentrated in certain auction houses in certain locations overseas.

According to data on Artso.net, only seven out of the 41 auction houses (Christies London, Security International Auctioneer Limited, Christies New York, I.M. Chait Gallery, Sotheby's New York, Sotheby's London, and Sotheby's Paris) had auctioned ivory before 2011; the remaining 34 auction houses began auctioning ivory after 2012, accounting for 82.93% of all ivory auction houses in other locations recorded on Artso.net. The total number of ivory auction lots after 2012 accounted for 45.08% of all overseas ivory auction lots.

From the limited data retrieved from Artso.net, it suggests that the overseas ivory auction houses tend to hold auction events in certain cities and countries. With the exception of CITIC International (the major ivory auction house in both Hong Kong SAR & Macau SAR and Taiwan POC), and Est-Ouest Auctions Co. Ltd (the major ivory auction house in Hong Kong SAR & Macau SAR and Japan), the remainder of the major ivory auction houses in all regions held auctions in specific countries or cities and seldom conducted transnational or cross-border auction activity. So far expansion of overseas ivory auction houses into new territories has not been observed from the limited available data.

Table 4. The number of elephant ivory auction lots in “other locations” from Artso.net

Continent	Country (Total number of ivory auction lots)	City	Number of Ivory Auction Lots
Asia	Singapore (106)	Singapore	106
Oceania	Australia (26)	Melbourne	26
North America	U.S.A (286)	New York	155
		Los Angeles;	57
		San Francisco	54
		Virginia	20
	Canada (5)	Toronto	5
Europe	U.K (286)	London	283
		Cambridge	2
		Edinburgh	1
	Italy (36)	Florence	28
		Brescia	5
		Milan	3
	France (29)	Paris	28
		Cannes	1
	Switzerland (19)	Zurich	19
	Czech Republic (15)	Prague	15
	Germany (13)	Berlin	10
		Cologne	3
Austria (2)	Salzburg	2	

Table 4 summarises the locations of ivory auctions held in other locations and the number of auction events reported to Artso.net during this period. At first glance, it seems that the ivory auction markets in other locations were not active in the past 10 years, except in the U.S.A (286), UK (286) and Singapore (106), according to Artso.net data. However, in these three countries and other European countries listed in Table 4, ivory is typically traded through antique shops, markets and fairs. Ivory traded at auction is usually either of exceptional antique and historic value or is traded as part of the estate auctions.

Although historical overseas ivory auction records on Artso.net only partially reflects the antique ivory trade market in other locations, it still provides some insights for understanding ivory auction market outside China. The three countries mentioned above have played an important role in the history of international ivory trade. The U.S.A. was assessed as the world’s second largest ivory market (Martin and Stiles 2008) only 10 years ago. The UK was one of the world’s leading markets for ivory in the 19th and early 20th centuries (Lau, Crook et al. 2016). To date, antique ivory can still be acquired in the UK through physical markets and online channels. Singapore has traditionally been a legal and illegal ivory market and an important ivory trafficking transit point, while survey results showed a sharp decline in the market availability of ivory in Singapore (Webber, Shepherd et al. 2013).

These three countries have been taking or going to take further action in regulating the domestic ivory trade. The United States introduced stricter regulations on commercial trade in African Elephant ivory in July 2016, but still allows sales and auctions of antique ivory and objects containing a small amount of ivory.

The UK announced in April 2018 that it would legislate against trade in ivory, with only few types of ivory products being exempted, including objects containing small amounts of ivory and antique ivory that has been licensed for more than 100 years and approved by a national appointing Authority (GOV.UK 2018). It is noteworthy that the rest of the EU already bans trade in ivory except pre-1947 antique and ivory that entered into the EU before CITES Appendix I listing took effect on a case by case basis in the relevant country in order to strictly regulate the domestic ivory trade.

Singapore also announced in 2017 that it would consider the implementation of a total ivory trade ban (Lee 2017); however, the timing of implementation and the regulatory specifications (including any exemptions) have not been clearly defined.

Since antique ivory is often listed as exemption from ivory trade bans, consideration should be given in the future to the monitoring trends in auction markets, as well as the physical antique markets and fairs, in the U.S.A, UK and Singapore, as one of the indicators of effectiveness of ivory “ban” implementation.

Table 5. Major ivory auction houses, the number of auction events and ivory auction lots from January 2008 to April 2018 in regions outside of mainland China

		Number of Ivory Auction Event	Number of Ivory Auction Lot	Proportion of Ivory Auction Lots (%)	Ivory Auction Lots After 2012	Proportion of Post 2012 Ivory Auction Lots (%)
Hong Kong SAR & Macau SAR		226	1617	-	743	-
1	Treasure Auctioneer Ltd (Taiwan)	22	530	32.78	60	8.08
2	Fortune Auctioneers Ltd (Hong Kong)	22	444	27.46	276	37.15
3	Est-Ouest Auctions Co. Ltd(Japan)	6	81	5.01	10	1.35
4	Security International Auctioneer Limited (Taiwan)	24	78	4.82	35	4.71
5	Paidegao International Auctioneer Limited (Hong Kong)	10	72	4.45	33	4.44
Proportion of top 5 major ivory auction houses in Hong Kong & Macau		37.17%	Total: 1205	74.52%	Total: 414	55.72%
Taiwan POC		32	74	-	57	-
1	Security International Auctioneer Limited (Taiwan)	11	26	35.13	11	19.30
2	Art Emperor Technology & Culture Co. Ltd (Taiwan)	1	11	14.86	11	19.30
3	Fu Der International Auction Co. Ltd (Taiwan)	3	10	13.51	10	17.54
4	Xinguang International Art Co. Ltd (Taiwan)	3	6	8.11	6	10.53
5	Mandarin Auction Co. Ltd (Taiwan)	4	5	6.76	5	8.77
6	Mu Chun Tang Auction Co. Ltd (Taiwan)	1	4	5.41	4	7.02
Proportion of top 6 major ivory auction houses in Taiwan		71.88%	Total: 62	83.78%	Total: 43	82.46%
Japan		67	426	-	414	-
1	Est-Ouest Auctions Co. Ltd (Japan)	14	168	39.44	160	38.65
2	Japan Art Dealers Enterprise (JADE) Co. Ltd(Japan)	13	69	16.20	69	16.67
3	New Japan Auction Co.(Japan)	2	50	11.74	50	12.08
4	Tokyo Chuo Auction(Japan)	12	45	10.56	45	10.87
5	iART Co. Ltd(Japan)	10	36	8.45	36	8.70
Proportion of top 5 major ivory auction houses in Japan		76.12%	Total: 368	86.38%	Total: 360	86.96%
Other locations		136	823	-	618	-
1	Christies London (UK)	14	149	18.10	111	17.96
2	Christies New York (USA)	11	91	11.06	16	2.59
3	I.M. Chait Gallery (USA)	4	78	9.48	76	12.30
4	Sotheby's London (UK)	16	69	8.38	33	5.34
5	Bonhams Fine Art Auctioneers &Valuers (UK)	11	65	7.90	65	10.52
6	Singapore Gianguan Auctions (Singapore)	4	49	5.95	49	7.93
7	Sotheby's New York (USA)	9	44	5.35	8	1.29
8	Chiswick Auctions (UK)	5	35	4.25	35	5.66
9	Pandolfini Casa d'Aste (Italy)	1	28	3.40	28	4.53
10	Mossgreen Pty Ltd (Australia)	6	26	3.16	26	4.21
11	Singapore International Auction Pte. Ltd (Singapore)	2	22	2.67	22	3.56
12	Quinn's Auction Galleries (USA)	1	20	2.43	20	3.24
Proportion of top 12 major ivory auction houses in other locations		43.38%	Total: 676	82.14%	Total: 489	79.13%

Mammoth Ivory Auction Market

Artso.net Data Overview

From January 2008 to April 2018, a total of 207 mammoth ivory auction lots were recorded on Artso.net (mainland China: 192 lots; Hong Kong SAR and Macau SAR: eight lots; Other Locations: seven lots; no mammoth ivory auctions recorded in Japan and Taiwan POC) (Fig. 8), with 32 mammoth ivory auction events recorded (mainland China: 22; Hong Kong SAR & Macau SAR: five; Other Locations: five). Before 2012, only four mammoth ivory auction records were found (three in mainland China and one elsewhere). Since 2012, the number of auction houses holding mammoth ivory auctions in mainland China, the number of mammoth ivory auction events and the number of mammoth ivory auction lots all began to increase. The mammoth ivory auction records in Hong Kong SAR & Macau SAR began to appear after 2015, while those in other locations began to appear after 2017. However, the overall mammoth ivory auction activities in Hong Kong SAR & Macau SAR and other locations were not many compared with that in mainland China, indicating that mainland China is the major mammoth ivory auction market in the world and the mammoth ivory auction markets outside mainland China has not been very active.

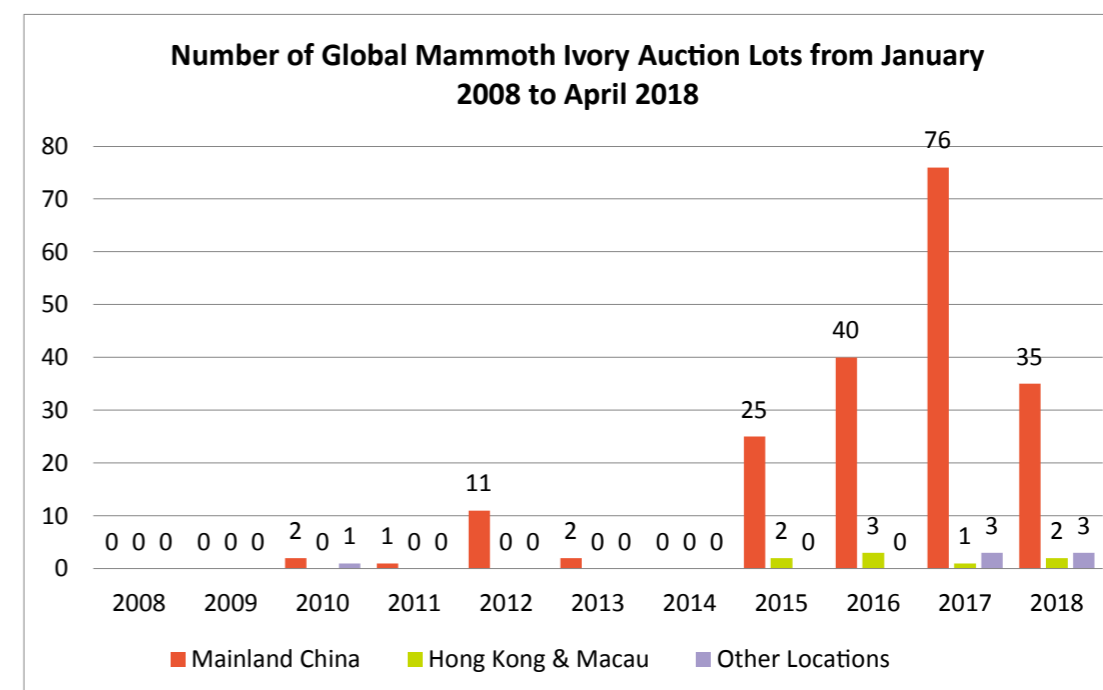


Fig. 8 Number of global mammoth ivory auction lots from January 2008 to April 2018 on Artso.net

Mainland China

A total of 14 auction houses in mainland China had auctioned mammoth ivory items during the time between January 2008 and April 2018. Only three mammoth ivory auction lots were recorded before 2012, compared with 164 lots appearing after that year. The recent increase in the number of auctions lots for mammoth ivory suggests that auction houses have tapped into an emerging interest of auction bidders. There were five auction houses that carried out mammoth ivory auctions between 2017 and April 2018, indicating that such auctions for now are concentrated amongst a small group of auction houses.

Table 6. An In-depth analysis of auction records of mammoth ivory auction houses in mainland China

Year of Historical Mammoth Ivory Auction Record	Number of Auction Houses	Historical Records only Appeared before End of 2011	Historical Records across 2011/2021	All Historical Records only Appeared after 2012
1 Year	11	1		10 (3 new auction houses joined ivory auction market between 2017 and 2018)
2 Years	1	0	0	1 (auctioned in 2013 and 2015)
3 Years	1	0	0	1 (joined ivory auction market between 2017 and 2018)
4 Years	1	0	0	1 (joined ivory auction market between 2017 and 2018)

Among the 14 auction houses that have ever auctioned mammoth ivory, four auction houses were responsible for the majority of mammoth ivory lots between 2008 and April 2018 with 90.1% of all mammoth ivory auction lots, despite being present in just over half (55.56%) of all mammoth ivory auction events in mainland China (Table 7). This result shows that mammoth ivory auction activities were highly concentrated in certain auction houses in mainland China. Among the four major mammoth ivory auction houses in mainland China, China Guardian Auctions Co. Ltd and Poly International Auction Co. Ltd are also major ivory auction houses. The total number of mammoth ivory auction lots of China Guardian Auctions Co. Ltd accounted for 77.6 % of all mammoth auction lots in mainland China between 2008 and April 2018; the number of auction lots of China Guardian Auctions Co. Ltd. after 2012 accounted for 78.84% of all mammoth auction lots after 2012.

There were 119 successful bids for mammoth ivory lots, with a total transaction amount of CNY4,161,620 (USD640,102), and an average price of CNY34,972 per lot (USD5,379 per lot). China Guardian Auctions Co. Ltd accounted for the majority of all successful bids (105 mammoth ivory lots, out of a total of 119), and has a turnover of CNY3,844,450 (USD591,317), which amounts to 92.38% of all mammoth ivory auction transaction value. The amount of mammoth ivory auctioned at Poly International Auction Co. Ltd was minute, which might suggest it is still in a tentative transition phase. Although the average price per lot of mammoth ivory auction is less than one-quarter of the average price (CNY155,207 per lot/ USD23,872 per lot) for elephant ivory, the existing data shows that the auction market for mammoth ivory is on the rise.

Table 7. Major mammoth ivory auction houses, auction events and auction lots in mainland China from January 2008 to April 2018

		Number of Mammoth Ivory Auction Event	Number of Mammoth Ivory Auction Lot	Proportion of Mammoth Ivory Auction Lots (%)	Mammoth Ivory Auction Lots After 2012	Proportion of Post 2012 Mammoth Ivory Auction Lots (%)
Mainland China		27	192	-	189	-
1	China Guardian Auctions Co. Ltd	10	149	77.60	149	78.84
2	ZhonghengYipin International Auction Co., Ltd. (Beijing)	1	9	4.69	9	4.76
3	Poly International Auction Co. Ltd (Beijing)	1	8	4.17	8	4.23
4	Pacific International Auction Co. Ltd	3	7	3.65	7	3.70
Total of other auction houses		12	19	9.9%	16	8.46%
Total of 4 major ivory auction houses		15	173	-	173	-
Proportion of 4 major ivory auction houses		55.56%	90.10%	-	91.53%	-

Hong Kong SAR & Macau SAR

Only seven auction houses in Hong Kong SAR & Macau SAR had auctioned mammoth ivory items between 2008 and 30 April 2018, for a total of eight auction events and eight auction lots (Table 8). All of the mammoth ivory auctions in Hong Kong SAR & Macau SAR were recorded after 2015, with only one auction house having a two-year track record and the remaining six having a one-year record. According to the analysis result above, mammoth ivory items have begun to appear in the auction market in Hong Kong SAR & Macau SAR, but they are not a popular product at auctions.

There was no overlap between auctions houses putting up elephant ivory and those with mammoth ivory in Hong Kong SAR & Macau SAR, suggesting that two separate groups of auction houses are responsible for the sale of elephant and mammoth ivory. There is no sign that the major elephant ivory auction houses in Hong Kong SAR & Macau SAR is turning to auction mammoth ivory.

Table 8. Major mammoth ivory auction houses, auction events and auction lots in Hong Kong SAR & Macau SAR from January 2008 to April 2018

		Number of Mammoth Ivory Auction Event	Number of Mammoth Ivory Auction Lot	Proportion of Mammoth Ivory Auction Lots (%)	Mammoth Ivory Auction Lots after 2012	Proportion of Post 2012 Mammoth Ivory Auction Lots (%)
Hong Kong & Macau		8	8	-	8	-
1	Hong Kong Qianlong International Auction Co., Ltd.	2	2	25.00	2	25.00
2	AAA China Yihai Exhibition Auction Co., Ltd.	1	1	12.50	1	12.50
3	Hong Kong Rongsheng International Auction Co., Ltd.	1	1	12.50	1	12.50
4	Sotheby's Hong Kong	1	1	12.50	1	12.50
5	Zhengding-Hong Kong Int'l Auction Co. Ltd	1	1	12.50	1	12.50
6	Lawrence's International Auction Inc	1	1	12.50	1	12.50
7	Hong Kong Guoda Dingsheng Cultural Relics Auction Co., Ltd.	1	1	12.50	1	12.50
Total Proportion		100%	100%	100%	100%	100%

Other Locations

There were four auction houses in other locations that auctioned mammoth ivory items between 2008 and 30 April 2018, with five auction events and seven lots (Table 9). With the exception of one auction record, which appeared before 2012, the remainder of the auction records appeared after 2012. Only one auction house had a two-year track record of mammoth ivory auction, and the remaining auction houses had just one year of mammoth ivory auction experience. From the total number of auction events and the average number of mammoth ivory auction lots per event, mammoth ivory has yet to gain popularity as an auction item in other locations.

Sotheby's New York was the only auction house which appeared in both the major elephant and mammoth ivory auction house lists in other locations, but the number of auction events and auction lots of mammoth ivory was quite low, which means that the major overseas elephant ivory auction houses have yet to shift their attention to mammoth ivory.

Table 9. Major mammoth ivory auction houses, auction events, and auction lots in other locations from January 2008 to April 2018

		Number of Mammoth Ivory Auction Event	Number of Mammoth Ivory Auction Lot	Proportion of Mammoth Ivory Auction Lots (%)	Mammoth Ivory Auction Lots After 2012	Proportion of Post 2012 Mammoth Ivory Auction Lots (%)
Other Locations		5	7	-	6	-
1	Hong Kong Royal Aristocrats Auction Co. Ltd	2	4	57.14	4	66.67
2	Birmingham Auction of Singapore	1	1	14.29	1	16.67
3	Zhongzheng Auction Co., Ltd	1	1	14.29	1	16.67
4	Sotheby's New York	1	1	14.29	0	0.00
Total Proportion		100%	100%	100%	100%	100%

Summary

According to historical ivory auction data on Artso.net, the Chinese elephant ivory auction market experienced rapid growth between 2008 and April 2018, peaking in 2011 in the number of ivory auction houses, auction events and ivory auction items. The mainland Chinese elephant ivory auction market has seen a sharp decline since 2012 as a result of an emergency notice issued by the CAA banning all auctions of endangered species products, including rhino horn, tiger bone, and ivory at the end of 2011, with a significant decline

in the number of ivory auction houses, auction events and ivory auction items. By 2016, mainland China's ivory auction market had hit its lowest point. At the end of 2016, the State Council issued the Notice of the General Office of the State Council on Orderly Stopping the Commercial Processing and Sale of Ivory and Ivory Products, which allowed legally sourced antique ivory items certified by a professional appraisal agency to be auctioned under strict supervision once the administrative approval is obtained in order to preserve cultural values. Since then, the Chinese ivory auction market has been showing signs of recovery and the number of ivory auction items in 2017 increased dramatically relative to that of 2016.

The analysis results of historical auction records of ivory auction houses on Artso.net in mainland China showed that more than half of the auction houses that have held ivory auction events stopped recruiting and auctioning ivory items, which mean the emergency notice in 2011 did indeed have an impact on ivory auction activities. Analysis results indicate that after the State Council announcement was made at the end of 2016, auction houses with long years of ivory auction experience began to resume ivory item recruitment and auction activities, and the announcement also attracted new auction houses with no prior ivory auction experience to join the ivory auction market.

Ivory auction markets outside mainland China, such as Hong Kong SAR & Macau SAR, Taiwan POC, Japan and other locations, have seen an increase in the number of ivory auction

houses and auction events during the time of decline of the Chinese ivory auction market (2012-2016) on Artso.net. The patterns for ivory auction markets outside mainland China seemed to be tied to the Chinese market, which suggests in this limited dataset a ban on auction of endangered species products in China at the end of 2011 might have had a spill over effect on ivory auction markets outside mainland China by increasing ivory auction activities elsewhere to meet the demand for ivory collection, thus affecting the dynamics of the global ivory auction market. However, due to dataset limitation, the true trends and relationships between the Chinese and global ivory auction market remain unknown.

The laws and regulations on ivory in China also affected the auction market of ivory of other species. The China ivory trade ban announcement at the end of 2016 stated that by the end of 2017 the commercial processing and trade of elephant ivory would be completely ceased, but mammoth ivory trade and processing were not affected by the ban. Therefore, since 2012, some auction houses having extensive past experience in ivory auction have turned their attention to mammoth ivory. For instance, while the number of elephant ivory items auctioned at China Guardian Auction Co., Ltd had fallen sharply since 2012, the number of mammoth items has increased annually since 2015. As a result, since then 2015 the mammoth ivory auction market has experienced considerable growth each year in the number of auction items, turnover rate and total annual transaction amount.

5. SURVEY RESULTS OF PRE-AUCTION EXHIBITION OF IVORY ITEMS IN CHINA

Pre-auction Exhibition Location and Survey Record

The investigator visited a total of 17 pre-auction exhibitions, which included elephant or mammoth ivory auction items in Beijing, Shanghai, Suzhou and Nanjing between April 2018 and the end of July 2018 (13 for elephant ivory auctions, three for mammoth ivory, and one for both elephant and mammoth ivory) and recorded 318 ivory and 64 mammoth auction lots, as well as TCM/tonics containing the ingredients of endangered species products whose trade is prohibited by the State, and jewellery and artwork made by corals and sea turtle shells (Table 10).

Table 10. List of pre-auction exhibition survey sites, recorded items and report results of the Chinese ivory auction from April to July 2018

Auction house	Date	City	Auction Items (lots)	Report results
Auction house 1	2018.4.20	Shanghai	Elephant Ivory (29), TCM containing ingredient of rhino horn, tiger bones and antelope horn (32)	Reported and withdrawn (TCM)
Auction house 2	2018.4.20	Shanghai	Elephant Ivory (34)	NA
Auction house 3	2018.4.28	Shanghai	Elephant Ivory (96), TCM containing ingredient of rhino horn, tiger bones and antelope horn (15)	Reported and withdrawn (Ivory and TCM)
Auction house 4	2018.5.15	Beijing	Mammoth Ivory (21), Coral (11), Sea Turtle Shell (3)	NA
Auction house 5	2018.5.24	Shanghai	Elephant Ivory (26), Mammoth Ivory (20), Coral (5)	NA
Auction house 6	2018.6.6	Suzhou	Elephant Ivory (5), Coral (3), Sea Turtle Shell (1)	NA
Auction house 7	2018.6.7	Suzhou	Elephant Ivory (9)	Reported and withdrawn
Auction house 8	2018.6.8	Beijing	Elephant Ivory (1)	NA
Auction house 9	2018.6.14	Beijing	Elephant Ivory (3), TCM containing ingredient of rhino horn, tiger bones and antelope horn (65), Coral (4)	Reported and withdrawn (Ivory and TCM)
Auction house 10	2018.6.16	Beijing	Elephant Ivory (2)	NA
Auction house 1	2018.6.22	Shanghai	Elephant Ivory (65)	Reported and withdrawn (Ivory)
Auction house 11	2018.6.22	Shanghai	Elephant Ivory (20)	Reported and withdrawn (Ivory)
Auction house 12	2018.6.23	Beijing	Elephant Ivory (2)	NA
Auction house 13	2018.6.26	Beijing	Mammoth Ivory (11), Coral (4)	NA
Auction house 14	2018.7.19	Nanjing	Elephant Ivory (21)	Reported and withdrawn (Ivory)
Auction house 15	2018.7.20	Nanjing	Elephant Ivory (5)	Reported and withdrawn (Ivory)
Auction house 16	2018.7.25	Beijing	Mammoth Ivory (12), Coral (6), Sea Turtle Shell (2)	NA

SFGA approvals are missing in all inspected elephant ivory antique auctions

In accordance with the relevant legislation in force, the legal auction of elephant ivory antique must be accompanied by administrative approvals issued by the Department of Cultural Relics Preservation and the Wildlife Conservation Department of the local government, as well as the acquisition and use of specialized labels from SFGA. Otherwise, the auction activity should be considered illegal.

According to the contents of the auction catalogues provided by the auction houses at the exhibition sites, nine auction houses printed the full text of the administrative approvals issued by the Department of Cultural Relics Preservation of the local government in the catalogue of nine auctions, and four auction houses only contained the document lot number of administrative approval, while the catalogues of three auction houses did not show any approval information (no catalogue was found in one pre-auction exhibition).

The full text of the administrative approval issued by the Department of Cultural Relics Preservation of the local government contains the document lot number, the auction house, the name of the auction event, the date of the auction, and the number of approved and declined items. The administrative approvals were issued by the department of Cultural Relics of the province of Jiangsu, Shanghai Municipal Administration of Cultural Relics and Beijing Municipal Bureau of Cultural Relics, and the relevant departments informed were listed at the bottom section of the approval, including SACH, Shanghai Municipal Administration for Industry and Commerce, Shanghai Municipal Administration of Cultural Marketing, Municipal Commerce Commission (Beijing) and Beijing Industry and Commerce Bureau. However, neither the Wildlife Conservation Department of the local government or SFGA appeared in any administrative approval issued by the Department of Cultural Relics Preservation of the local government as an informed authority.

Moreover, no full content of administrative approval issued by the Wildlife Conservation Department of the local government or the administrative approval document lot number was found in any auction catalogues. No specialized label has been observed during the time of investigation, indicating that the auctions did not comply with the law to submit application to the SFGA and the Wildlife Conservation Department of the local government for the ivory auction approval.

The urgent notices issued by the CAA by end of 2011 clearly stated nationally protected wildlife products, regardless of when they were manufactured, should strictly abide by the provisions of relevant laws and regulation, and be subject to the approval of wildlife protection authorities, with the review and approval procedures being strictly complied with. If the SFGA did not approve an elephant ivory antique auction, then the auction activity is illegal.

Unclear criteria for SFGA approving ivory auction products

During the inspections, elephant ivory auction items found in the pre-auction exhibitions could be generally classified into two categories:

1. Items made entirely of ivory, such as ivory carvings and artworks (Table 11);
2. Items where ivory was used for decorative purposes on furniture, screens or other items with ivory inlay, human head and foot stitching materials, decoration accessories for Chinese folding fans, and pedestals for other auction objects.

The majority of ivory auction items observed mainly fell into the first category, while the number of ivory objects in the second category was relatively small. The proportion of products that could be classified as “Ornamental Objects”, “Writing and Stationary Supplies” and “Jewellery and other accessories” recorded in the pre-auction exhibitions was higher than that found in the historical auction records of Artso.net between January 2008 and April 2018 (Ornament Objects 35.41%; Writing and Stationary Supplies: 24.32%; Jewellery and other accessories: 6.09%). The proportion in the category ‘Others’ recorded in the pre-auction exhibitions was lower than that of historical auction records, while the remaining categories were similar in percentage terms. Compared with TRAFFIC’s surveys of physical ivory markets in China in 2018, which was found to be dominated by machine-made accessories, the ivory auction market by contrast was much more varied with ornamental objects, pendant or traditional study supplies, implying that the preferences for ivory objects among these two consumer populations are distinctly different.

Table 11. The common types of elephant ivory auction items in pre-auction exhibitions in mainland China from April to July 2018

Auction Item Type	Amount	Proportion(%)	Detail item name (lots)
Ornamental Objects	140	44.03	Small to large size of portrait, animal and flower baskets ornaments (107), bottles (9), screens (15), sceptre (8), swords (8)
Writing and Stationary Supplies	73	22.96	Pen holders (19), arm rest (5), writing brushes (2), ink plate (5), paper weights (9), writing brush washer (4), stamps and seal boxes (27), paper cutters (0), business card cases (2)
Aromatherapy	8	2.52	Incense tubes (4), incense boxes, incenses, sachets, incense insertions and incense burners (4)
Games and Functional objects	29	9.12	Chess (3), fans and fan bones (11), snuff bottles (6), grasshopper cages and bird cages (3), mah-jong (0), boxes with lids (4), telescopes (0), wardrobes and jewellery cabinets (2)
Jewellery and other accessories	48	15.09	Accessories and pendants (39), jewellery, rings and bracelets (9)
Table and Kitchen supplies	8	2.52	Tableware and chopsticks (5), pots and cups (2), tea cans (1)
Others	12	3.77	

Despite existing laws and regulations clearly stating that the sale and purchase of ivory antiques require approval from SFGA, it is not clear whether antiques containing small amounts of ivory have an exemption and may be auctioned without being authorized by SFGA and the Wildlife Conservation Department of the local government. In this regard, the SFGA should further clarify the types of ivory antiques that require authorisation from SFGA and the Wildlife Conservation Department of the local government. If objects containing small amounts of ivory are exempted from approval in advance, the criteria for the exemption should also be specified.

The authenticity of marked age of ivory auction items is doubtful

The Measure for Cultural Relics Auction Management regulates how ivory items made before 1949 can be legally auctioned. The analysis of the age of ivory auction items results revealed that ivory items made during the Qing dynasty (A.D.1644-1911) and the Republic of China period (A.D.1911-1949) accounted for 70.39% of the ivory auction items in the period from January 2008 to April 2018. The majority of ivory items recorded during pre-auction exhibition inspections dates back to the Qing Dynasty (231 lots, 72.33%), followed by the Ming dynasty (47 lots, 14.78%) and the Republic of China period (31 lots, 9.75%). There were six undated elephant ivory auction items. All the items found in post-ban auctions were said to have originated in the years preceding the 1940s.

However, during inspection, it was found that the ivory item age analysis result might not reflect the true proportions of ivory items of different ages found in the auction market. An auction house staff member at the Shanghai Jiatai pre-auction exhibition stated that, because of existing regulations, only pre-1949 ivory items could be auctioned, indicating that the age of ivory item does affect the eligibility of ivory being auctioned. Further discussions with and replies from the auction house staff (Shanghai International Commodity Auction Co., Ltd and Shanghai Jiatai) on how to verify if the ivory items were actually in line with the date of marking, and whether there was a need to provide appraisal, suggested the era marked at the auction was provided by the auction house or ivory owner as reference point for buyers, and that the purpose of having a pre-auction exhibition was to allow an opportunity for prospective buyers to closely check and confirm the age of the item on-site before deciding whether to place a bid.

The auction houses do not make any guarantee regarding the age of ivory auction items. In this regard, the auction house staff indicated the auction house is merely serving as a trading platform. Moreover, one auction house staff member (Shanghai International Commodity Auction Co., Ltd) pointed to a group of ivory snuff bottles, claiming that the objects were made during the period between 1950 and 1965 for earning foreign exchange, whereas the catalogue showed the items were made during the Qing Dynasty. These examples, including inconsistencies between the actual age and provenance of objects with what was indicated in the catalogues, suggest a lack of standardized determination on actual age of ivory items.

Contemporary ivory objects could look like antique objects by creating yellowish colour or fine fissures on the surface and the auction houses may intentionally mislabel the age of ivory knowing full well that the actual age is not in compliance with the existing laws in order to avoid legal liability. Such an operation might result in contemporary ivory or illegal ivory items being sold freely in the auction market. In the absence of an explicit method for age identification, standards for appraisal, and the content and format of the appraisal, SFGA and SACH clearly lack solid evidence on which to decide whether ivory antique auction items should be approved or not in order to ensure effective enforcement of the ivory ban.

Deliberate mislabelling of ivory items to avoid scrutiny

One auction house (Shanghai Heyun) had published a large number of photos showing ivory items during an online preview of the spring 2018 auction, however, none of the objects were labelled as “ivory” or “ivory carvings”. Furthermore, photos of the ivory items on Artso.net were labelled as cattle bone carvings, even though Schreger lines were clearly visible on the item’s surface which would indicate the objects being made with elephant ivory rather than cattle bone. The auction house staff only confessed to familiar buyers that these objects were in fact made of ivory. These findings suggest that there may be some fraudulent activities by some auction houses in terms of deliberate mislabelling and obfuscation of ivory items for auction, as well as non-compliance with the letter of the law.

“Icy” mammoth ivory auction items as potential loophole for laundering illegal ivory

The historical ivory auction data analysis indicated that the number of mammoth ivory auctions has begun to rise since 2015, therefore while conducting pre-auction exhibition inspections, mammoth ivory auctions were also visited or recorded when visiting elephant ivory auctions.

The investigator first noticed that the auction house (Shanghai International Commodity Auction Co., Ltd.) strongly recommended mammoth ivory over elephant ivory to prospective buyers. The reasons behind this recommendation included:

1. It was clearly stated that the trade in elephant ivory was prohibited, therefore buying and selling elephant ivory was risky, while mammoth ivory is not restricted by the ban;
2. The scarcity and non-renewable nature of the mammoth ivory was emphasised, which gave it a better potential for long-term collection investment over elephant ivory; and
3. Mammoths are already extinct so it is not subject to the Wild Animal Protection Law and could be traded freely on the online auction platform.

Most of the mammoth ivory objects seen in the exhibition were very white in colour, commonly known as “icy material”. The surface of the icy material lacks any visible Schreger lines on the surface, so it is difficult to differentiate worked objects from elephant ivory. Several factors could cause identification confusion, including the lack of a flat cross section on the surface of the object from which to read the angle of the Schreger lines, an inability to read the angle of the Schreger lines to ensure that they fall between 90 and 120 degrees, or failure to see web-like fissures on the surface of flat cross sections.

From the mammoth ivory auction description on Artso.net and during the exhibition visits, research showed that there are two types of mammoth ivory certificates or appraisal documents commonly seen in auction markets: 1) from the Jewellery and Wildlife Species Identification Centre; and 2) collection certificates issued by the Chinese Mammoth Ivory Art Research Association. However, more in-depth investigation found that the credibility of commonly used mammoth ivory certificates and appraisal documents appearing in the market to be questionable because of inherent limitations in the existing national standard identification method and the lack of legitimacy and credibility of the issuing institutions or organizations (see Annex 4 for more details of mammoth and elephant ivory differentiation methods and background checks on organisations issuing certificates).

If those wishing to circumvent the ivory trade ban chose to use mammoth ivory auctions as an outlet for selling illegal elephant ivory, the lack of credible mammoth ivory certificates through an unofficial certification system make it possible for illegal ivory to be laundered as mammoth ivory.

Auctions of other nationally protected wild animal products

In addition to ivory items, jewellery and artwork made from sea turtle shells and coral as well as TCM products containing ingredients of endangered species were also observed on display at the auctions, although such trade is prohibited by the State. A total of 33 coral auction lots were recorded, of which eight were jewellery items such as necklace pendants, earrings and 25 pieces of handicrafts. Six sea turtle auction lots were recorded, all of which were decorative ornaments.

TCM products containing ingredients of endangered species were the most common items displayed at the exhibitions. For these items, the date of manufacturing was mostly claimed to be in the 1980s or before 1993 when the trade ban on rhino horn and tiger bone was imposed. A total of 112 lots of TCM were recorded. There were 66 auction lots of Peaceful Palace Bovine Bezoar Pill (containing rhino horn), with an estimated auction market value was of CNY7,500-30,000 per pill (USD1,160-4,639 per pill)³. There were six auction lots of Da Huoluo Dan (containing tiger bone and rhino horn), with an

estimated auction market price of CNY500-1200 per pill (USD77-186 per pill). Other TCM products containing rhino or saiga horn were also recorded, such as Purple Snow Powder.

Auction houses openly displaying and auctioning TCM containing tiger bones and rhino horn made before 1993 are apparently violating the ban on tiger bone and rhino horn issued by the State Council in 1993, and other relevant provisions. The fact that these items could be displayed at the exhibitions means that the auction activities were approved by the Department of Cultural Relics Preservation of the local governments, and likely indicates that both the auction company and the local department did not strictly screen the items they collected for auction. Probably due to lack of knowledge of the relevant laws and regulations governing the sale and purchase of nationally protected wildlife products, the Department of Cultural Relics Preservation of the local government might therefore approve the auction activities without questioning the auction houses.

Action taken by law enforcement based on reports of auction violation

Among all 17 pre-auction exhibitions, the investigator found 14 exhibitions that had elephant ivory items and endangered species products in contravention of the law, which was subsequently reported to the Beijing Forest Police, Jiangsu Public Security Food and drug branch, and the Shanghai Wildlife Conservation Department for enforcement action, as appropriate. After receiving reports verifying the presence of ivory products, these departments immediately sent law enforcement authorities (local forest public order or local public security) to the auction venues to conduct investigations (Fig. 9). All illegally auctioned ivory items were inventoried and subsequently withdrawn from the auctions (Fig. 10), and the auction houses were to undergo further investigation conducted by law enforcement. In total, there were seven illegal ivory auctions reported and 219 ivory auction items withdrawn. The overall value of the withdrawn ivory items, according to the prices listed in auction catalogues, was conservatively estimated to be between CNY6.3million and CNY7million (approximately USD974,282 -1,082,536).

It has been subsequently reported that the Shanghai Cultural Relics Department has reached a consensus with Shanghai Wildlife Conservation Department that no more auction items containing ivory will be approved for auction and any mammoth ivory auction items will also be strictly reviewed.



Fig. 9 Beijing Forest Police conducting an investigation in the pre-auction exhibition after receiving information. Later, they asked the auction house to withdraw illegally auctioned ivory items.



Fig. 10 Display cases after law enforcement investigation, showing the withdrawal of ivory products.

³The currency conversion rate is calculated based on the average of the middle price of the Bank of China exchange from April to July 2018 (1 USD=6.4663 RMB) and applied to pre-auction exhibition survey section.

Law enforcement difficulties

According to post-violation report follow-up discussion with enforcement agencies, law enforcement authorities are often unable to prosecute the auction houses or the ivory owners behind the trade successfully, even when involving large numbers of ivory items with estimated high value. Law enforcement officers stated the main challenge is that the prosecutors consider responsibility and reviews of antique auctions to lie with the Department of Cultural Relics Preservation of the local government, and that antiques management should follow the provisions related to laws and regulations on the management of cultural relics. For proving criminal intent, law enforcement officials and the judiciary had differing points of views. Prosecutors also considered that the auction houses had made declarations to the Department of Cultural Relics Preservation regarding auction activities, which demonstrates a willingness to comply with the law and, therefore, the absence of criminal intent to evade regulation. In addition, the Department of Cultural Relics Preservation, according to the laws, has been the executive administrative authority responsible for the auction house management and review for approval application. The auction companies, thus, subjectively assume the approval is only needed from the department of cultural heritage. Therefore, the missing approval from the Department of Wildlife Management, according to prosecutors, should be considered as an administrative offence, rather than a criminal offence.

The aforementioned circumstance revealed that regarding the legal ivory auction approval process, the understanding and interpretation of the relevant administrative authorities, law enforcement and judicial sectors on existing legislation and the State Council Notice were quite diverse. As a result, any gaps in coherent understanding between relevant agencies may weaken the power of law enforcement and the binding force to auction houses.

Summary

The original intention of the State Council's notice allowing legally-sourced antique ivory items, certified by professional appraisal agency to be auctioned after the ivory trade ban is imposed, was to preserve some aspect of the nation's cultural values. Inspections of pre-auction exhibitions found a large number of ivory items appearing in China's antique auction markets, just seven months into the implementation of China's ivory trade ban. Records of ivory auction data from January to April 2018 on Artso.net also shows over 400 ivory items on auction in mainland China, with a conservative estimated value of CNY8.5 million (USD1.314 million). Both the number of ivory auction lots and the market value behind the trade indicate that the post-ban ivory auction market in mainland China is experiencing rapid recovery from a previous state of dormancy following government interventions in 2011.

Even more worrisome is that findings of all pre-auction exhibition inspection show the post-ban ivory auction market did not meet the strict supervision requirements outlined in the State Council's notice. In the case of administrative approvals, all the auction activities inspected were only approved by the Department of Cultural Relics Preservation of the local government, and the relevant departments informed at the bottom section of approval form did not include SFGA or the Wildlife Conservation Department of the local government. No administrative approval or specialised labels were issued by the Wildlife Conservation Department of the local government for ivory or other endangered species products found during auction inspections. Such trade violates the Wild Animal Protection Law and the Urgent Notice regarding the auction of wildlife products, issued in 2011. From informal communication with SFGA, it was indicated that no antique ivory auction application was received by SFGA.

Due to inconsistent understanding and interpretation of the relevant legislation, the law enforcement and judicial sectors were unable to reach consensus on the evidence of criminal intent regarding the lack of administrative approval from the Wildlife Conservation Department of the local government during the prosecution process. The auction houses which illegally auctioned elephant ivory items, therefore, did not receive serious punishment. This severely weakens the power of law enforcement and the constraints onto auction houses.

Despite the fact that the State Council notice only allowed elephant ivory objects certified by a professional appraisal agency to be auctioned, the actual ages of ivory items displayed in the pre-auction exhibition were not necessarily consistent with that written in catalogues. Further, the auction houses would not guarantee the authenticity of the age of ivory objects. This indicated that the auction houses did not comply with the State Council's notice requiring the ivory owner to provide a professional appraisal document or, failing that, to send ivory items to a professional appraisal agency for verification. Auction houses also tried to mislabel or tried not to use keywords (i.e. "ivory") as the material of certain products to avoid scrutiny.

Besides the items primarily made from ivory, items containing small amounts of ivory as integral components or as components of a larger manufactured or handcrafted item are also commonly seen in the pre-auction exhibitions. However, so far there is no clear and specific regulations available to guide whether or not the auctions of this type of items require approval from SFGA prior auctions take place.

With the increase in the number of ivory items in the auction market, the number of mammoth ivory items has also been growing rapidly. However, due to the selection of material for carving, material optimization or carving techniques, the surface of some mammoth ivory items found in exhibitions did not show visible or identifiable Schreger lines for further differentiation between elephant and mammoth ivory. Moreover, the current available appraisal certifications for mammoth ivory items appearing in the market were issued by the Gem Appraisal Centre or Chinese Mammoth Ivory Art Research Association. Although the National Standards were compiled by the Gem Appraisal Centre for identifying ivory products, the criteria listed in the National Standards for identifying elephant and mammoth ivory were insufficient to distinguish between these two materials. Some obvious physical traits for differentiation, such as the angle of the Schreger lines, the texture of the ivory, and the colour of outer layer of tusk, might impede identification due to bleaching or colouring. The most accurate methodology for distinguishing elephant and mammoth ivory was through DNA testing; however, because it is destructive to the test subject, it is not listed as National Standards for Gem Appraisal. Since the current National Standards were not able to accurately differentiate these two types of ivory, the creditability of mammoth ivory certificates is questionable. An in-depth study is also needed for clarifying the legality of the Chinese Mammoth Art Research Institute, as a private civil organisation, in the issuance of certificates and the legal validity of such certificates. The format and content of certificates emanating from this institute are quite similar to other documentation issued by SFA, and therefore certificate issued by this institute is suspected of causing confusion in the management of the ivory market.

During the pre-auction exhibition inspections, a large number of artefacts made from nationally protected wildlife or TCM containing ingredients of endangered species were observed, the trade in which is prohibited by the State. These findings indicate that auction houses are not complying with the provisions related to wildlife protection nor are they submitting ivory auction applications to SFGA for approval. In order to evade legal liability for ivory age appraisal, auction houses may also attempt to mislabel the age or claim that the information regarding the age of the item was given by the owner. While the Department of Cultural Relics Preservation of the local government reviewed auction events containing wildlife products without informing the Wildlife Conservation Department of the local government, it was clear that the cultural heritage authority has insufficient legal knowledge regarding the sale and purchase of nationally protected wildlife products. The relevant administrative authorities should strengthen communication and coordination and reach a consensus on the auction application procedure for antique ivory objects to meet the requirement of strict supervision of the State Council.

6. DISCUSSION AND CONCLUSIONS

The ban on commercial ivory processing and trade in China officially came into force on 31 December 2017, resulting in the auction market becoming the only legitimate post-ban commercial outlet for ivory items according to the State Council notice. Due to the dual nature of antique ivory objects as both "wildlife products" and "antiques," auction activities of ivory items have to simultaneously meet the provisions of The Wild Animal Protection Law, the Cultural Relics Protection Law, Auction Law and the measures for Cultural Relics Auction Management.

In accordance with the relevant laws and regulations, legal ivory auctions must be reviewed and approved by the Departments of Cultural Relics Preservation and Wildlife Protection of the local government, respectively, and be accompanied by administrative approvals from both departments and specialized label from SFGA. The ivory objects eligible for legal auction must be legally sourced pre-1949 ivory artworks. Whoever wishes to sell and purchase of antique ivory objects must also submit an application to and receive administrative approval from SFGA.

Despite the fact the existing laws and regulations have conferred a certain level of governance on ivory antique auctions; the pre-auction exhibition inspection showed that the auction houses are not strictly complying with relevant provisions regarding ivory auctions. First of all, the catalogues presented in the auction venues only contained administrative approval from the Department of Cultural Relics Preservation of the local government, but neither approval nor specialized labels from the Wildlife Conservation Department were found in the exhibition, indicating SFGA and the Wildlife Conservation Department of the local government might not be informed regarding the ivory auction events. SFGA subsequently confirmed that it did not receive any application for antique ivory prior to these auction events. During the post-report prosecution process, the inconsistent recognition of criminal intent between law enforcement authorities and prosecutors regarding lack of administrative approval from the local department of wildlife management reduces deterrent for non-compliance by auction houses or ivory owners offending the law. This results in weakened governance of the ivory auction market.

Secondly, the auction house staff in the exhibitions indicated that, while the auction houses recruited ivory items as auction objects, the age of the ivory item was only based on the information provided by the client and no further verification of the source of origin or appraisal was conducted. The investigator found that the age of ivory item the auction house staff claimed was apparently inconsistent with that in the catalogue. Attempts by some auction houses to mislabel or avoid the use of "ivory" as a keyword for the material being used in products were also evident in order to avoid scrutiny. A comprehensive set of criteria and standards with respect to the definition of legal sources, how to name auctioned ivory objects, the methodology and standards of age identifications, the qualifications for appraisal agencies, and the format and content of appraisal are needed to prevent laundering illegal ivory and providing the basis for future ivory antique auction review processes.

By way of comparison to best practices outside China, the most comprehensive criteria and qualification regarding antique ivory object auction exemption and appraisal is contained in the Endangered Species Act of 1973 of U.S. Federal Law. The person executing the appraisal either must obtain an appraisal designation from a recognised professional appraisal organisation with demonstrable competency in appraising the type of property in question or else demonstrate verifiable education and experience in assessing the type of property being appraised. The person undertaking the appraisal cannot be the importer, exporter, buyer, recipient or seller of the article in question, and does not benefit from the results of the appraisal (other than for the cost of the appraisal); this person cannot be a party to any of the transactions associated with the article (including any person acting as an agent for the transaction); nor can this be an employee of any business that is a party to the transaction or be related to the person claiming the exemption. The evaluation standards for the reliability of the appraisal include:

1. A description of the article in sufficient detail for a person who is not generally familiar with the type of article to determine that the appraisal is about the article in question;
2. The name and address of the qualified appraiser; or if the appraiser is a partner, an employee, or an independent contractor engaged by a person other than the person claiming the exception, the name and address of the partnership or the person who employs or engages the appraiser;
3. The qualifications of the appraiser who signs the appraisal, including the background, experience, education and any membership in professional appraisal associations;
4. The date on which the article was appraised;
5. The scientific method in detail used to determine the age or species;
6. Descriptive information on the article including but not limited to: the size of the article; the medium; the artist or culture; approximate date the article was created; and a professional quality image of the article;
7. A detailed history of the article including proof of authenticity;
8. The facts on which the appraisal was based including analyses of similar works by the artist on or around the creation date.

The proof of an object's age might include, but not be limited to, a detailed history of the article, including but not limited to family photos, ethnographic fieldwork or other information that authenticates the article and assigns the work to a known period of time or, where possible, to a known artist, or price lists and other similar materials from past catalogues to determine the origin and year of the object (USFWS 2016).

The above information can be used as a reference for relevant administrative authorities in China to formulate standards for the evaluation and appraisal of antique ivory.

In addition, elephant ivory items found in the pre-auction exhibition covered a wide range of product types and the amount of ivory in each auction object containing ivory varied. However, so far there is no regulation or measure to explicitly define if auction approval is required from the Wildlife Conservation Department of the local government and SFGA for the auction of objects which contain ivory but use ivory as the main constituent material. It is recommended that having all items subject to control is the preferred option. But if the government and auction houses have concerns about the administrative burden, then the de minimise exemption used in the U.S. could be considered as a reference standard for further formulating approval application criteria in China for any auction object containing a small amount of ivory

The analysis of historical auction data in mainland China showed that explicitly defined regulation and notices, such as CAA's urgent notice in late 2011, did have a powerful and effective impact on regulating the collection and auction of ivory items through this sales channel. However, allowing antique ivory auctions without an accompanying exemption with the announcement of clear regulations has caused some auction houses to resume ivory auction activities that do not necessarily comply strictly with existing laws and regulations. Under the circumstances of weak compliance and the absence of criteria for appraisal of age and legality of origin, large numbers of ivory auction activities serve as loopholes and channels for illegal ivory laundry, thus weakening the effectiveness of implementation of the ivory trade ban.

On the other hand, apart from elephant ivory, there has been a steady increase in the presence of mammoth ivory products in the auction market. Artso.net's mammoth ivory historical auction data analysis revealed that the trade ban on endangered species products in 2012 had prompted a corresponding increase in mammoth ivory in recent years. During pre-auction exhibition inspections, 21 mammoth ivory artworks were auctioned in China Guardian Auctions Co., Ltd 2018 Spring Auction. Some auction houses which had never auctioned mammoth ivory before have begun to accept and auction mammoth ivory and actively promote mammoth ivory to prospective buyers.

The auction houses have begun to auctioning mammoth ivory largely due to its status as an extinct species, which is not subject to the Wild Animal Protection Law and the 2017 elephant ivory ban, and thus can be traded without restrictions. Moreover, because of the scarcity and the non-renewable nature of mammoth ivory, it is seen by some as having a better market investment potential over elephant ivory. The number, turnover rate, and transaction amounts of mammoth ivory on Artso.net indicate the rapid rise of the mammoth ivory market.

That mammoth ivory is closest in appearance and texture to elephant ivory makes it an ideal alternative to elephant ivory, but the emergence of the mammoth ivory market may also pose a potential risk to the ivory trade ban. The Global Environmental Institute (GEI) has conducted an in-depth analysis of the legal status of the mammoth ivory and the related laws and regulations on the processing, sale and import of mammoth ivory (GEI *in press*). The results show that the legal status of mammoth ivory should also comply with relevant provisions of the Cultural Relics Protection Law. However, the industrial supply chain of mammoth ivory is governed by the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) for imports, the State Administration for Industry and Commerce (SAIC) for processing and sale, and SACH for sales and auction. Due to this dispersal of legal responsibility amongst these government departments, considerable gaps and contradictions exist in the management and governance of the mammoth ivory industry in China. Indeed, the legal analysis done by GEI confirms that the governance of import, processing and sale/auction of mammoth ivory in mainland China is not as strong as that of elephant ivory. The findings of pre-auction exhibition inspection also recorded that the increase of 'icy' mammoth material in the auction market and confusion over the credibility of mammoth ivory certificates poses a challenge for law enforcement. There is the risk, therefore, for auction markets to be exploited by criminals in laundering illegal elephant ivory as mammoth ivory. Relevant administrative authorities should communicate and coordinate with each other to improve the regulation of the mammoth ivory trade and close legal loopholes to ensure effective enforcement of the ivory trade ban.

7. RECOMMENDATIONS

In order to prevent illegally sourced and non-compliant ivory objects from entering the auction market, and causing negative impacts on the effectiveness of ivory trade ban implementation, the following recommendations to the stakeholders regarding China ivory auction are made based on the results of this study:

Recommendations to the competent authorities in China

1. The SFGA and SACH should resolutely interdict any ivory auction activity which does not obtain complete administrative approval, and should confirm that it is illegal for an ivory owner to entrust an auction house to sell ivory without obtaining proper approvals. Ivory item owners and auction houses involved in illegal ivory auctions must bear the corresponding legal liability for any non-compliance.
2. The SFGA and SACH should form a joint communication and coordination mechanism, and clarify the relevant provisions and regulations regarding ivory auction, including:
 - a) Clarify the application procedure and the legal liability for application approval that stakeholders, including owners, auction houses and bidders, involved in ivory auction activities are obliged to hold, and establish a registration system for the purpose of supervising antique ivory circulation;
 - b) Reach a consensus on the criteria for appraisal of antique ivory and other endangered species products, the criteria for legality of origin, those for approval process for auction application, and the required application materials;
 - c) The exemption criteria for antiques in the U.S. Endangered Species Act (ESA), antique exemption criteria in the U.S. 2014 ivory trade Regulations could be considered as a reference for regulating ivory items qualified for appraisal, methodology and standards for ivory age identification, the requisite qualifications for professional appraisal agencies, and the format and content of qualified appraisal;
 - d) Related laws and regulation regarding the import, processing and sale of ivory products from species other than elephants, such as mammoth ivory, which are commonly found in the auction markets should be clarified. The regulatory responsibility of related government departments regarding non-ivory trade should be clarified or integrated. A secure chain of custody should be established in order to better regulate all types of ivory markets and ensure traceability, thus reducing the risk of laundering illegal ivory;
 - e) The existing ivory raw material and product management database should be utilised to the maximum, by expanding the functions for registration of antique ivory items and by encouraging owners and buyers of all types of ivory items to register them in the system, in order to effectively track the circulation of ivory items, for instance inheritance, ownership transfer, and auction, and to protect legitimate rights of legal ivory possession and ownership transfer.
3. SFGA and SACH should reach consensus on the issue of illegal ivory laundered as mammoth ivory. Once illegal ivory is found to have been laundered as mammoth ivory in the auction or shops, the perpetrator(s) should be strictly punished by law.
4. SFGA and SACH should raise awareness of the laws among auction houses by providing training workshops and by strengthening the governance of auction activities.
5. SFGA and SACH should strengthen communication with the judiciary and should reach consensus on the criteria for determining intent to conduct illegal ivory auction activities. This would ensure that strict supervision of the ivory auction market meets existing requirements from the State Council.

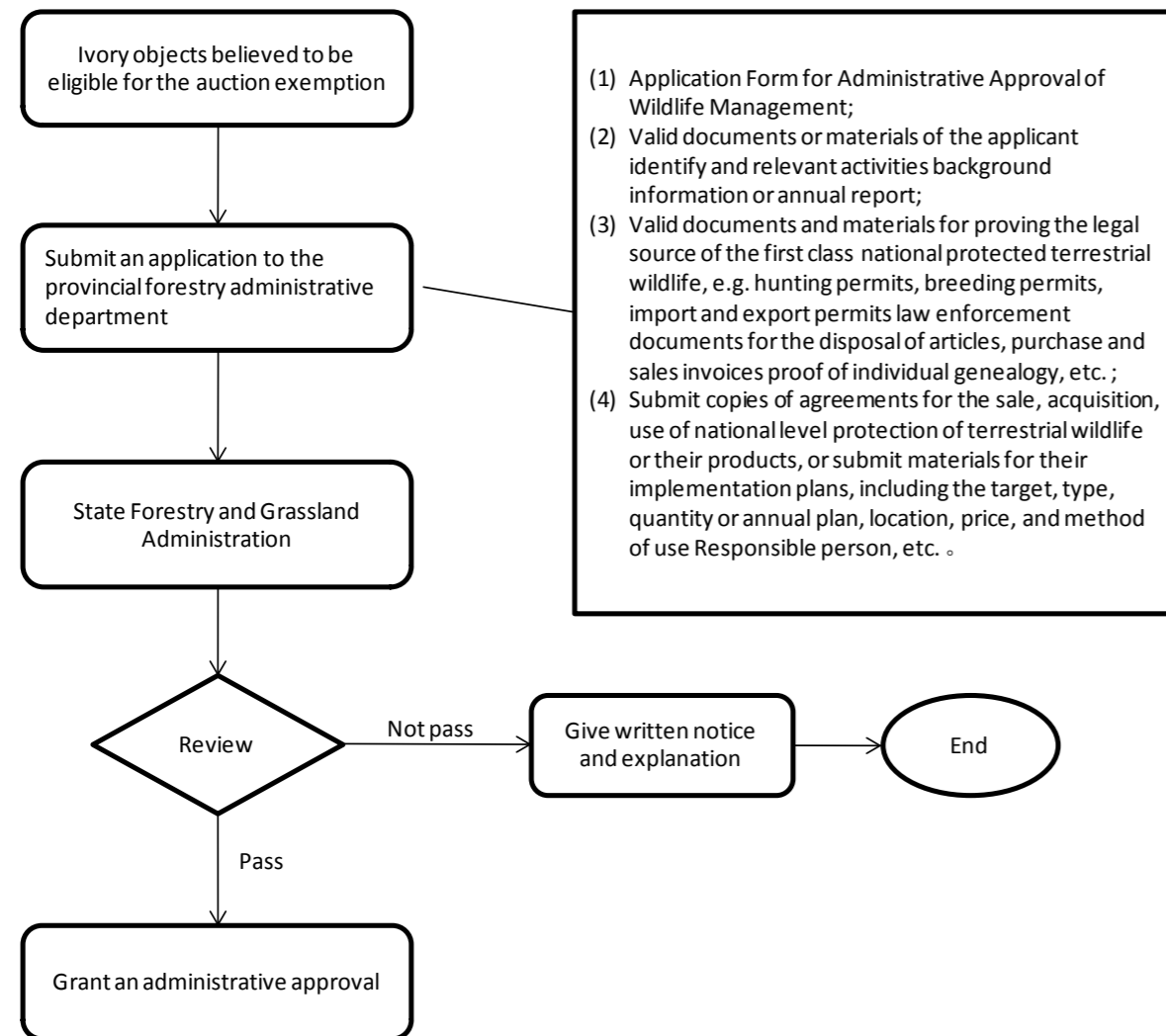
Recommendations to the auction houses

1. The China Association of Auctioneers should provide training workshops to auction houses on the laws and regulations governing ivory and other wildlife auctions to better raise legal awareness within the industry to promote compliance with the laws and regulations.
2. Auctioneers should be encouraged to take voluntary measures, in line with corporate social responsibility standards, to reduce recruitment of ivory items for sale and by avoiding stimulation of demand for ivory. Auctioneers should strictly comply with the law by explaining the ivory item auction application process to elephant ivory owners in detail, by requiring the ivory owner to provide certified documentation, and to apply and receive administrative approvals from SFGA and SACH.

Recommendations to Non-Government Organisations (NGOs)

1. NGOs should work with legal experts to assist government departments in improving the legislation regarding antique ivory auctions and improving the tracking system for bona fide ivory products in circulation.
2. NGOs should assist the government in developing materials to raise the auction industry's legal awareness regarding ivory auctions, and in the convening of training workshops to communicate this information.
3. NGOs should assist the government in providing support to law enforcement with information derived from regular auction market monitoring and assessing legal compliance in the auction industry.
4. NGOs should assist local branches of the Wildlife Conservation Department in monitoring the mammoth ivory auction and retail markets, in order to improve traceability and prevent illegal ivory laundry.

Annex 1: The Approval Application Regulations and Procedure for Antique Ivory Management

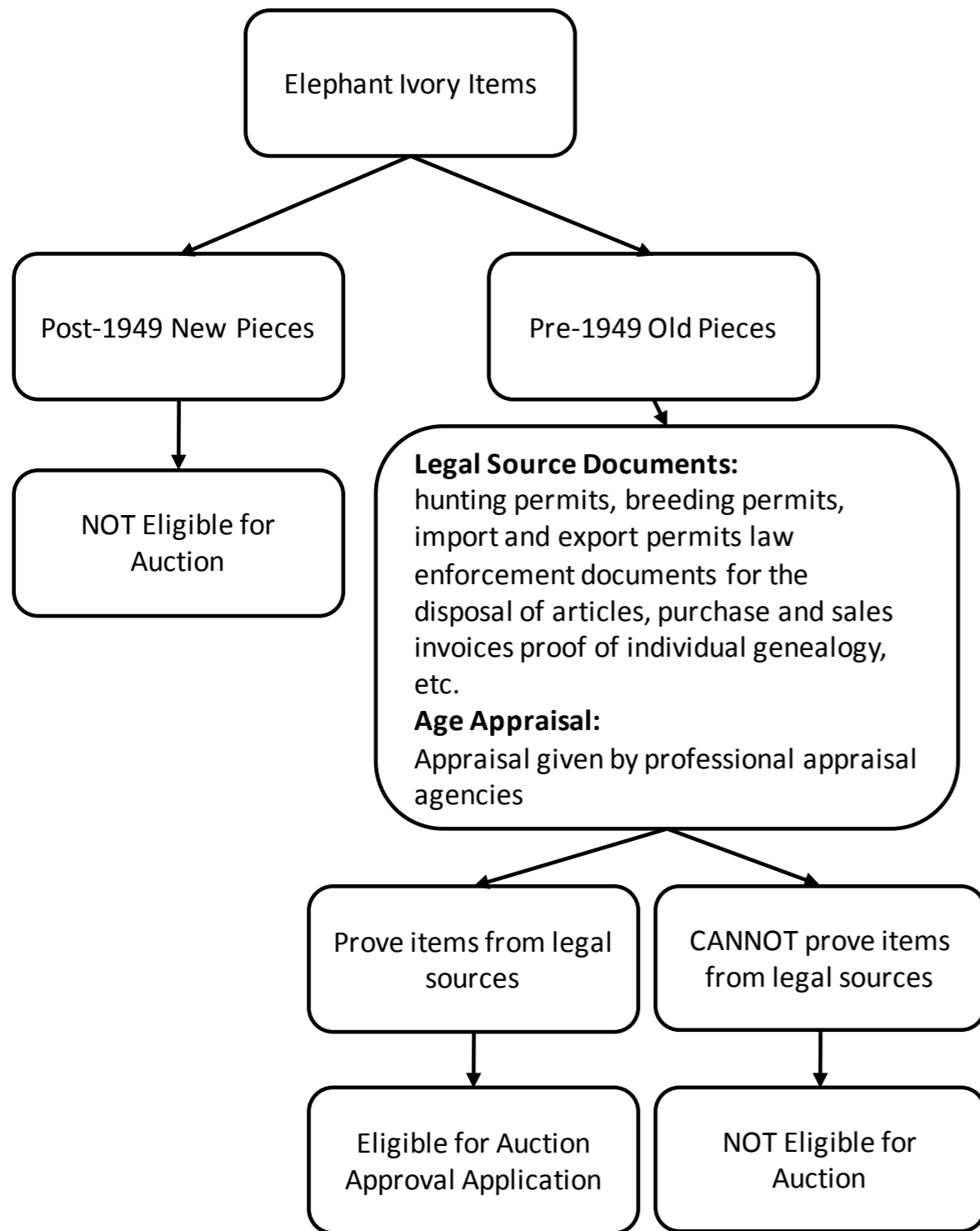


Resource: China Forestry Network >What kind of documents and procedures are required for the management of antique ivory products?
<http://www.forestry.gov.cn/main/4048/content-637064.html>

Annex 2: The Eligibility for Auction Approval Application of Elephant Ivory Items

Sources	Eligibility	Explanation
Contemporary ivory items purchased from the legal ivory retail stores approved by SFA with collection certificates	Not Eligible	Legal source, but not pre-1949 antique item
Contemporary ivory items purchased from the legal ivory retail stores approved by SFA without collection certificates	Not Eligible	Can't prove coming from legal sources and not pre-1949 antique item
Ivory items purchased from sources other than legal ivory retail stores approved by SFA, including online, off-line, personal, and antique shop sales	Not Eligible	Not necessarily a pre-1949 antique item and from illegal sources
Contemporary ivory items obtained in China that are transferred by law, inherited, or donated	Not Eligible	Not pre-1949 antique item
Antique ivory items obtained in China by transferred by law, inherited, or donated	Pending	Pre-1949 antique item but the definition of legal source has not been clarified by law yet
Contemporary ivory items purchased/obtained outside of China and brought into China without import permissions	Not Eligible	From illegal source and /or illegal import procedure and not pre-1949 antique item
Antique ivory items purchased/obtained outside of China and brought into China without import permissions	Not Eligible	Pre-1949 antique item but from illegal source and/or illegal import procedure
Contemporary ivory items purchased/obtained outside of China and brought into China with CITES permits	Not Eligible	From legal source but not pre-1949 antique item
Antique ivory items purchased/obtained outside of China and brought into China with CITES permits	Eligible	Legal source and pre-1949 antique source

Note: Contemporary ivory items are those products made after 1949; antique ivory items were made before 1949.
Reference laws and regulations: The Wildlife Protection Law of 2017, Cultural Relics Protection Law of 2017, and Auction Law and the measures for the Cultural Relics Auction Management of 2015.



Annex 3: Global successful ivory action bids and transaction amount and average transaction amount on Arso.net

Location	The number of successful bids	The transaction amount in CNY	The transaction amount in USD ⁴	The average transaction amount in CNY	The average transaction amount in USD
Mainland China	221	34,300,786	5,275,827	155,207	USD23,872 per lot
Hong Kong SAR and Macao SAR	744	51,154,079	7,868,042	68,755	USD10,575 per lot
Taiwan POC	14	150,048	23,079	10,718	USD1,649 per lot
Japan	62	1,964,613	32,178	31,687	USD4,874 per lot
Other Locations	289	91,213,754	14,029,648	315,619 per lot	USD48,546 per lot
Total	1,330	178,783,280	7,498,774		

⁴The currency conversion rate is calculated based on the average of the middle price of the Bank of China exchange from January 2008 to April 2018 (USD1 = CNY6.5015) and applied to historical auction data analysis section.

Annex 4: Mammoth ivory identification method analysis & the background investigation regarding organization issuing mammoth ivory certificate

There are two sources of mammoth ivory certificate/appraisal in the market, including: 1) Gem Appraisal Centre, including National Jewellery Quality Supervision and Inspection Centre, South China Wildlife Species Identification Centre, China Chamber of Commerce Jewellery Quality Supervision and Inspection Centre, Guangdong Province Gold and Silver Jewellery Testing Centre, Guangdong Provincial Quality Supervision Gold and Silver Jewellery Testing Station Certificate, Zhonggong Jewellery Testing Centre, Zhongwei Jewellery Testing Centre (the certificates for 39 Artso.net historical mammoth ivory auction lots came from forgoing appraisal centres); 2) Chinese Mammoth Ivory Art Research Association (110 of the 192 Artso.net historical mammoth ivory auction lots in mainland China had collection certificate from this organisation).

The photo of appraisal issued by the Zhongwei Jewellery Appraisal Centre taken from the pre-auction exhibition (Fig. a) showed the methodology of identification was based on the national standard GB/T 16652 (Name of Gem and Jade), GB/T 16553 (Gemstone Identification), GB/T 18043 (Fluorescence spectrometry method for determining the content of precious metals in jewellery), GB 11887 (Jewellery, rules for the purity of precious metals and nomenclature) and the identification result indicated the object was made of mammoth ivory (Fig. b).



Fig. a Certificate from Zhongwei Jewellery and Jade Quality Inspection Centre

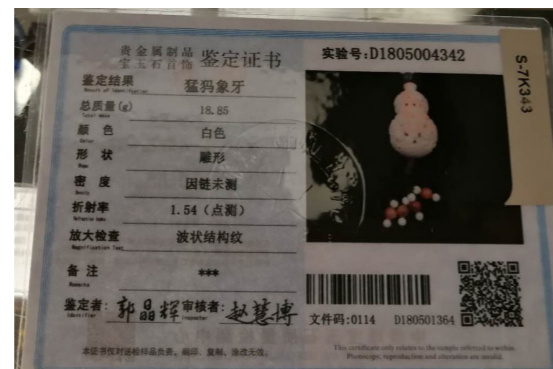


Fig. b Identification result from Certificate from Zhongwei Jewellery and Jade Quality Inspection Centre

However, after a comprehensive comparison the methodology for identifying elephant and mammoth ivory in (5.3.7 and 5.3.8 of GB/T16553-2017, respectively), except Schreger lines and colour of outer layer of tusk which could be applied as obvious physical traits for distinguishing these two types of ivory, other factors were insufficient to be absolute criteria for differentiation (Table i). The bleaching and colouring for material optimisation mentioned in National Standards bleaching and colouring might hinder the identification ability of forgoing traits for differentiation. The mammoth auction items found in the exhibitions, except raw tusks or artwork retaining the outer layer of a tusk, did not exhibit clear Schreger lines on the surface or coloured, raising the doubts whether items claimed to be made from mammoth ivory are actually genuine. Under these circumstances, the credibility of the mammoth ivory appraisals issued by the accreditation centres is in doubt.

Table i. Comparison of identification criteria for elephant and mammoth ivory in National Standard GB/T 16553

Name of Material	Elephant Ivory	Mammoth Ivory
Material properties		
chemical composition	Mainly composed of calcium hydroxyl phosphate and collagen	Mainly composed of calcium hydroxyl phosphate and collagen, with the increase of petrochemical level, collagen is gradually reduced
Crystal state	The inorganic component is a cryptocrystalline aggregate, and the organic component is an amorphous body.	The inorganic component is a cryptocrystalline aggregate, and the organic component is an amorphous body.
Colour	White to light yellow, light yellow	Light yellowish white to pale yellow, brown, outer layer of tusk often brown to brownish blue.
Lustre	Grease gloss to waxy luster	Grease to waxy luster. A high degree of weathering could show earthy luster.
Cleavage	NA	NA
Mohs hardness	2~3	2~3. As the degree of solidification increases, the hardness gradually increases.
Density	1.70 g/cm ³ ~2.00g/ cm ³	1.69 g/ cm ³ ~1.81 g/ cm ³
Optical characteristics	Aggregate	Aggregate
Polychromaticity	Not testable for aggregate	Not testable for aggregate
Refractive index	Point measurement is usually around at 1.53~1.54	Point measurement is usually around at 1.52~1.54
Birefringence	Not testable for aggregate	Not testable for aggregate
Fluorescence observation	Weak to strong, blue-white or purple-blue fluorescence	Weak to strong, blue-white or purple-blue fluorescence
UV-visible spectrum	No feature	No feature
Magnification check	Wavy texture	Wavy texture; The maximum angle between the two groups of Schreger lines pointing to the centre of the teeth is usually less than 100. "watermark" (the phenomenon of surface colour depth changes mottled distribution); weathered tusk outer layer
IR	Characteristic infrared absorption band caused by vibration of functional groups in organic compounds such as phosphate ions and proteins in Mid-infrared region	Characteristic infrared absorption band caused by vibration of functional groups in organic compounds such as phosphate ions and proteins in Mid-infrared region
Special nature	Nitric acid and phosphoric acid can make it soft	Nitric acid and phosphoric acid can make it soft
Optimisation processing		
Bleaching	Make it lighter or remove spots. Stable and difficult to detect.	Make it lighter or remove spots. Stable and difficult to detect.
Filling	The elephant ivory powder mixed resin or simple resin is often used to fill the cracks. The magnified inspection shows that the surface gloss of the filling part is different from that of the main gemstone, and the bubbles are visible at the filling; in the long and short wave ultraviolet light, the filling part of the fluorescence is different from the main gemstone; The filling shows infrared absorption band in IR test	The mammoth ivory powder mixed resin or simple resin is often used to fill the cracks. The magnified inspection shows that the surface gloss of the filling part is different from that of the main gemstone, and the bubbles are visible at the filling; in the long and short wave ultraviolet light, the filling part of the fluorescence is different from the main gemstone; The filling shows infrared absorption band in IR test
Dyeing/ coloring treatment	Magnification inspection shows that the color distribution is uneven, and it is mostly enriched in cracks or growth defects regions; under long and short ultraviolet light, the dye can cause special fluorescence; it can be faded by wiping with acetone or absolute ethanol.	Magnification inspection shows that the color distribution is uneven, and it is mostly enriched in cracks or growth defects regions; under long and short ultraviolet light, the dye can cause special fluorescence; it can be faded by wiping with acetone or absolute ethanol.

The other type of commonly seen mammoth ivory certificates in the auction market is the collection certificate awarded by the China Mammoth Elephant Art Research Association. The China Mammoth Ivory Art Research Association is a private civil organisation, which recruits members and has its own collection certificate system. The collection certificate contains information, such as the product name, size, weight and the name of manufacturing company on the front of the certificate card (Fig. c). Buyers could check the mammoth ivory items in the collection certification system on its website. On the back of the card, a sticker was attached. The colour and layout of the sticker was similar to specialized labels issued by SFGA. It seems to be suspicious the organisation is mimicking the format of elephant ivory collection certification issued by SFA.



Fig. c. Front of collection certificate issued by the Chinese Mammoth Ivory Art Research Association



Fig. d Back of collection certificate issued by the Chinese Mammoth Ivory Art Research Association

The Chinese Mammoth Ivory Art Institute, which claimed to be founded in 2008, is the first professional institution in China to study and appreciate the Mammoth Ivory Art. However, the registration information of this organization was not found in the China Social Organization Network (<http://www.chinanpo.gov.cn/search/orgindex.html>), the local social organization inquiry or the National Enterprise Credit Information Publicity System (<http://www.gsxt.gov.cn/index.html>). In Hong Kong, a company called the Chinese Mammoth Ivory Art Research Association Limited was registered claiming to have been established on 14 August 2013.

The Chinese Mammoth Ivory Art Research Association did not complete registration in accordance with law governing private civil organizations in China, but publicly began recruiting members and awarding collection certification to mammoth products. With this background, it is inevitable to question the credibility of the collection certificate. Moreover, the certificate issued by this organization has similar format to elephant ivory certificate issued by SFA, which are suspected of causing confusion in terms of management for the ivory market.

Furthermore, Chen Shu, founder of the Chinese Mammoth Ivory Art Research Association, established the China Mammoth Ivory Carving Art Heritage Committee in 2016. Again the committee did not display registration information on the Chinese Social Organization Network, the local social organization inquiry and the National Enterprise Credit Information Publicity System. The Chinese Mammoth Ivory Art Research Association and the Chinese Mammoth Ivory Carving Art Heritage Committee are likely to be illegal social civil organizations in China.

8. REFERENCES

- FOREST (2018). Since 1 January, 2020, domestic ivory trade will be prohibited in Taiwan. Taipei, Taiwan POC, Forestry Bureau, Council of Agriculture, Executive Yuan.
- GEI (in press). Study on the Mammoth Ivory Market as a Risk Factor of China's Ivory Trade Ban Implementation. Beijing, China, Global Environmental Institute.
- GOV.UK. (2018). "Government confirms UK ban on ivory sales." from <https://www.gov.uk/government/news/government-confirms-uk-ban-on-ivory-sales>.
- IntangibleCulturalHeritageinChina. (2006). "The Intangible Cultural Heritage in China National List--Traditional Art." Retrieved 28 August, 2018, from http://www.ihchina.cn/5/5_1.html.
- Kitade, T. (2017). An Updated Review of Online Ivory Trade in Japan, TRAFFIC.
- Kitade, T. and Y. Naruse (2018). System Error, Reboot Required: Review of Online Ivory Trade in Japan, TRAFFIC.
- Kitade, T. and R. Nishino (2017). Ivory Towers: An Assessment of Japan's Ivory Trade and Domestic Market, TRAFFIC.
- Lau, W., V. Crook, et al. (2016). A Rapid Survey of UK Ivory Markets, TRAFFIC.
- Lee, P. (2017). "Parliament: Singapore may ban domestic sale of ivory." from <https://www.straitstimes.com/singapore/parliament-singapore-may-ban-domestic-sale-of-ivory>.
- LegCo (2018). Protection of Endangered Species of Animals and Plants (Amendment) Ordinance 2018 (Commencement) Notice. E. P. Department and F. a. C. D. Agriculture. Hong Kong, Legislative Council of the Hong Kong Special Administrative Region of the People's Republic.
- Martin, E. and D. Stiles (2003). The Ivory Markets of East Asia. London, Save the Elephant.
- Martin, E. and D. Stiles (2008). Ivory Markets in the USA. London, Care for the Wild International, Save the Elephant.
- SFA (2008). Notice on Further Strengthening the Management of Ivory and Its Products. StateForestryAdministration. Beijing, China.
- SFA. (2014). "The Approval Application Regulations and Procedure for Antique Ivory Management." from <http://www.forestry.gov.cn/main/4048/20141030/637064.html>.
- Wan, Z. M. and S. W. Liu (2012). Prohibition of Illegal Auction of Rhino horns and Ivory. The Green Times. Beijing, China, SFA.
- Webber, L., C. R. Shepherd, et al. (2013). "Reduction in Demand for Ivory in Singapore, but Transit Trade Vigilance Needed." TRAFFIC Bulletin 25(2): 79-84.
- Zhang, J. M. (2012). Intangible Cultural Heritage Series: Ivory Carving. Beijing, China, Beijing Publishing Group and Beijing Fine Arts Photography Publishing House.
- Zhao, X. X. (2011). Seventy Questions About Art Collection Investment. Beijing, China, Culture and Art Publishing House.

TRAFFIC, the wildlife trade monitoring network, is a leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

For further information contact:

TRAFFIC
Global Office
David Attenborough Building
Pembroke Street
Cambridge CB2 3QZ
UK
Telephone: (44) (0) 1223 277427
Fax: (44) (0) 1223 277237
E-mail: traffic@traffic.org
Website: www.traffic.org

*UK Registered Charity No. 1076722,
Registered Limited Company No. 3785518.*

TRAFFIC
the wildlife trade monitoring network

