

A CRIME PATTERN ANALYSIS OF THE ILLEGAL IVORY TRADE IN CHINA

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TRANSNATIONAL ENVIRONMENTAL CRIME PROJECT

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Transnational Environmental Crime Project

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The project investigates emerging trends in transnational environmental crime and examines the conditions for successful regulatory and enforcement responses. It focuses on three themes:

- advancing our understanding of the ways in which environmental commodities that are either sourced illegally or destined for illegal markets are traded and the ways in which profits are then laundered into the legal economy;
- applying conceptual tools to advance our understanding of the organisation of TEC and the asset structures that sustain illicit chains of custody and profit laundering; and
- mapping and analysing existing transnational and intergovernmental practices in the areas of policy-making, compliance and enforcement.

The Project is led by three Chief Investigators:

- Professor Lorraine Elliott, Department of International Relations, The Australian National University
- Professor Greg Rose, Faculty of Law, University of Wollongong
- Julie Ayling, Fellow, Regulatory Institutions Network, The Australian National University

The Project team also includes a Research Assistant and a PhD student funded by an Australian Postgraduate Award (Industry) scholarship and an ANU HDR Merit Scholarship. Five Partner Organisation Visiting Fellows will join the project team, based at the ANU, for a period of three months, each to bring specific policy and operational expertise to the research project.

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Abstract

The illegal ivory trade fuels illegal elephant poaching in both Africa and Asia. The illegal ivory trade in China is considered a key threat to the survival of the elephant species: since 2009, China has become the largest illegal ivory market in the world. Although China has uncovered a great number of cases of illegal ivory trade with the seizure of illegal ivory in the past decade, this trade is still growing. A deeper understanding of the nature and patterns of illegal ivory trade through an analysis of ivory seizure data should improve the efficiency of efforts to prevent the illegal ivory trade in China. This paper analyses data on 106 seizures of illegal ivory that was collected from Chinese news reports between 1999 and 2014, with a particular focus on its frequency and illegal trade ‘hotspot’ locations in China. The analysis found three illegal ivory trade cycles (2001–2005, 2006–2010, and 2011–2014) and four hotspots. Preventing the illegal ivory trade will require more international cooperation and coordination between China and other countries.

About the author

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A crime pattern analysis of the illegal ivory trade in China

JIANG NAN

INTRODUCTION

Ivory trade stimulates elephant poaching. Illegal wildlife trafficking is a type of wildlife crime, and the international ivory trade has caused elephant populations to decline rapidly both in Asia and Africa.¹ With the expansion of the international wildlife trade in the twenty-first century, a great number of elephants are being slaughtered annually for their tusks. According to reports from Monitoring the Illegal Killing of Elephants, almost 20,000 African elephants were killed for their tusks in 2013.² To protect the elephant species, the African elephant ivory trade has been banned under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1989, while the Asian elephant ivory trade has been banned since 1975. However, the ivory trade has not dropped substantially, and the illegal poaching of African and Asian elephants has continued.³ According to surveys, the black market in illegal wildlife trade is now the fourth largest in the world, ranking alongside illegal trafficking of drugs, people, and arms, and illegal ivory ranks first among illegal wildlife trade sectors.⁴ A meeting of CITES officials in Bangkok in 2013 identified China, Kenya, Malaysia, the Philippines, Tanzania, Thailand, Uganda, and Vietnam as instrumental in fuelling the illegal ivory trade, either as suppliers, transporters, or consumers.⁵ Analysts have demonstrated that many criminal groups have been attracted by the high profits involved in the international ivory trade.⁶

Illegal ivory trade in China is considered to be a severe threat to the survival of the elephant species. China signed CITES in January 1981, and established the Wildlife Protection Law and National Protected Wild Species Lists to prohibit illegal ivory trade. Ivory demand in China was not dominant in the international market before 1996.⁷ With the development of the economy, the middle class demand for ivory products increased. In addition, as more and more Chinese travel abroad, especially to Africa, for business or for jobs, some have been inspired by ivory's price gap between Africa and China. China has therefore come to play an important role in the international illegal ivory market since 1996.⁸ Illegal ivory has been transported from Africa or other regions in the world to China, and China has become one of the largest markets for illegal ivory in the world. China has made efforts to prevent this illegal trade by establishing a comprehensive law enforcement regime which includes the Forest Public Security Agency, Customs Services, and the Border Armed Police Agency who work together to

- 1 Cynthia Moss, *Elephant memories: Thirteen years in the life of an elephant family*, Chicago, IL: University of Chicago Press, 2000.
- 2 Christopher Torchia, 'Africa's elephant haven: Botswana a rare bright spot in dire battle against poachers', National Post, 24 January 2014, news.nationalpost.com/2014/08/04/africas-elfphant-haven-botswana-a-rare-bright-spot-in-dire-battle-against-poachers/ (accessed 2 December 2014).
- 3 CITES Secretariat, IUCN/ SSC African Elephant Specialist Group, TRAFFIC International, 'Status of African elephant populations and levels of illegal killing and the illegal trade in ivory: A report to the African Elephant Summit', December 2013, cmsdata.iucn.org/downloads/african_elephant_summit_background_document_2013_en.pdf (accessed 2 December 2014). See also Stuart Wiggin, 'China's ivory trade: Reeducating the masses', CRIEnglish, 24 August 2012, english.cri.cn/6909/2012/08/24/2941s718735.htm (accessed 15 December 2014).
- 4 'Illegal trade in wildlife', *UNEP Year Book 2014 emerging issues update*, www.unep.org/yearbook/2014/PDF/chapt4.pdf (accessed 26 December 2014); Edward van Asch, 'The illegal wildlife trade in East Asia and the Pacific', in United Nations Office on Drugs and Crime, *Transnational organized crime in East Asia and the Pacific: A threat assessment*, UNODC, April 2013, pp. 75–86.
- 5 Daniel Stiles, 'CITES-approved ivory sales and elephant poaching', *Pachyderm* 45 (July 2008–June 2009): 150–3.
- 6 See, for example, Mara E. Zimmerman, 'Black market for wildlife: Combating transnational organized crime in the illegal wildlife trade', *Vanderbilt Journal of Transnational Law* 36, no. 5 (2003): 1657–89; Samuel K. Wasser, William Joseph Clark, Ofir Drori, Emily Stephen Kisamo, Celia Mailand, Benezeth Mutayoba, and Matthew Stephens, 'Combating the illegal trade in African elephant ivory with DNA forensics', *Conservation Biology* 22, no. 4 (2008): 1065–71.
- 7 International Fund for Animal Welfare, 'Ivory market in China: China ivory trade survey report', June 2006, pp. 1–3, www.ifaw.org/sites/default/files/Ivory%20Market%20in%20China%20China%20ivory%20trade%20survey%20report%20-%202006.pdf (accessed 20 April 2015).
- 8 CITES Secretariat Technical Mission Report, Verification mission related to the control of internal trade in ivory in China, SC53 Doc. 20.1 Annex, 7–11 March 2005.

investigate the illegal ivory trade. Chinese authorities have also confiscated a great amount of illegal ivory annually. Yet the illegal ivory trade is still a severe problem and China has been urged by CITES, as a country of primary concern, to produce national action plans on ivory trade.⁹ China submitted its plans (one for China and one for Hong Kong) to the CITES Secretariat in 2013 although these plans have not been made public.

Exploring patterns of the illegal ivory trade may prompt improvements in the efficiency of law enforcement in China. Illegal ivory on the black market is smuggled into China from Africa and Southeast Asia directly and indirectly. But without precise knowledge of illegal ivory trade patterns, it is difficult for law enforcement agencies to identify illegal ivory and ivory products among millions of packages or containers which pass through the border every day. However, once law enforcement officers have a better grasp of these patterns, they will be in a better position to prevent ivory crimes efficiently.

This paper explores the illegal ivory trade pattern in China through an analysis of confiscated ivory cases. Crime patterns hide inside the collected data of those confiscated ivory cases, especially those that relate to large-scale ivory seizure. This analysis of confiscated ivory helps to disclose global trends and illegal ivory trade patterns.

Methods: Using a crime pattern theory

Effective methods are needed to improve the efficiency of combating the illegal ivory trade. Intelligence-led policing as a new concept and method of law enforcement has had wide-ranging effects in law enforcement practices since 2001 in Britain and the US.¹⁰ As one part of practical policing intelligence work, crime pattern analysis helped law enforcement officers and detectives to speed up the process of solving crimes.¹¹ As suggested above, once the pattern of illegal ivory trade is understood by law enforcement officers, more effective efforts to prevent illegal ivory trade should be possible.

Crime pattern theory can be applied to reveal patterns of the illegal ivory trade. As a type of wildlife crime, the illegal ivory trade has its unique pattern. Paul Brantingham and Patricia Brantingham claim that crime pattern theory can be used to explain why some districts experience a lot of crime while others do so rarely. Crime pattern theory can also help predict how potential offenders tend to search for opportunities to commit crimes.¹² Lawrence Sherman *et al.* have pointed out that crime distribution is not random but is concentrated heavily in hotspots.¹³ Bartosz Hieronim Stanislawski found that three factors help to define black spots which are taken advantage of by criminals and terrorists to commit crimes: (1) they are outside of effective governmental control, (2) they are controlled by alternative, mostly illicit, social structures, and (3) they are capable of breeding and exporting insecurity (for example, illicit drugs, conventional weapons, terrorist operatives, illicit financial flows, strategic and sensitive know-how and so on) to faraway locations.¹⁴ Anita Gossman discovered that illegal elephant poaching gangs are focused on Central Africa and the Congo Basin, while illegal ivory is mainly distributed in China, Japan, Singapore, Thailand, and other states in Asia. She also found that the rise in demand from East Asia (including China) had been assisted further by poorly regulated domestic ivory markets, porous borders, and limited local law enforcement capability.¹⁵ Despite these broader findings, there is little research about illegal ivory trafficking patterns in China.

9 Kevin Heath, 'Gang of 8 becomes gang of 19', *Wildlife News*, 15 July 2014, wildlifeneews.co.uk/2014/07/gang-of-8-becomes-gang-of-19/ (accessed 26 December 2014).

10 David L. Carter and Jeremy G. Carter, 'Intelligence-led policing: Conceptual and functional considerations for public policy', *Criminal Justice Policy Review* 20, no. 3 (2009): 310–25.

11 Shyam Varan Nath, 'Crime pattern detection using data mining', in Proceedings of the 2006 IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT 2006 Workshops), Hong Kong, December 2006, pp. 41–4.

12 Paul Brantingham and Patricia Brantingham, 'Crime pattern theory', in Richard Wortley and Lorraine Mazerolle, eds, *Environmental criminology and crime analysis*, Cullompton, Devon: Willan Publishing, 2008, pp. 78–93.

13 Lawrence W. Sherman, Patrick R. Gartin, and Michael E. Buerger, 'Hot spots of predatory crime: Routine activities and the criminology of place', *Criminology* 27, no. 1 (1989): 27–56.

14 Bartosz Hieronim Stanislawski, 'Global black spots: Threats from governance without governments', *National Strategy Forum Review* 20, no. 3 (2011): 1–5.

15 Anita Gossman, 'Tusks and trinkets: An overview of illicit ivory trafficking in Africa', *African Security Review* 18, no. 4 (2009): 50–69.

Patterns of the illegal ivory trade can be discovered through analysis of the data of cases of seized ivory. For wildlife law enforcement agencies, the most valuable method to improve the efficiency of enforcement is to acquire precise intelligence of how, when, and where wildlife offences have been committed or will be committed. Ivory seizure data from law enforcement agencies contains information on the date of confiscation, the weight or quantity of ivory or ivory products, transport methods, and the location of the seizure or confiscation. Analysis of those data not only reveals the frequency of the illegal ivory trade, but also shows those hotspots and main transportation methods. Fiona Underwood *et al.* disclosed general trends of the illegal ivory trade through an analysis of ivory seizure data from 2007 to 2011, and found that this data holds some information about the illegal ivory trade. They thus confirmed that seizure data can provide a reliable picture of illegal ivory trade activity, and they observed trends in the global illegal ivory trade.¹⁶ Tom Milliken demonstrated that large-scale ivory smuggling has been incrementally increasing since 2002, and that the average weight of large-scale ivory seizures has been steadily growing from 2008.¹⁷ This paper applies similar methods to analyse the data on confiscated ivory in China from 1999 to 2014. By doing so, it aims to disclose the hotspots of illegal ivory trade activities and routes in China.

The cases of confiscated ivory in this paper were collected from media reports and the internet. In China, these cases are usually published in the media, such as newspapers, magazines, and websites. There are 106 cases of confiscated ivory for the period between 1999 and September 2014 based on a search of the State Forest Administration’s website and other websites. The total weight of the ivory seized in these 106 events was nearly 38,245.4 kg, and was comprised of 4,224 elephant tusks and 3,990 pieces of ivory products.

AN ASSESSMENT OF THE CASES OF CONFISCATED IVORY

Frequency

The frequency of the illegal ivory trade is an index to demonstrate how much illegal ivory trade occurred annually. The trends of the illegal ivory trade can also be disclosed by analysis of the frequency of the trade over a long period.

This section describes the number of cases of ivory seized that were reported annually and then demonstrates the frequency of the illegal trade in ivory. From 1999 to 2003, the number of ivory seizures identified in news reports was one per year (1999, 2000, and 2002), with none reported in 2001 and 2003. A few years later, the annual numbers of seizures increased to five in 2006, ten in 2007, 16 in 2008, and 24 in 2009. After 2009, the number of ivory seizures declined year by year, and by 2013 only 11 cases were reported (see Table 1). Thus, we can see from the data on ivory seizures collected here that the number of ivory cases in China has been increasing annually over the past 15 years. It is evident that the demand for ivory products in China increased with the development of the Chinese economy.

Year	Cases	Year	Cases
1999	1	2007	10
2000	1	2008	16
2001	0	2009	24
2002	1	2010	0
2003	0	2011	15
2004	4	2012	14
2005	0	2013	11
2006	5	2014	4

Table 1: Cases of confiscated ivory (1999–2014)

In addition, the data also reveals that the peak in the number of ivory seizure cases did not synchronise with the peak of the amount of ivory actually seized (or what I call here ‘seizure ivory’). While the peak of the cases of ivory seizure occurred in 2009, seizure ivory reached its peak two years

¹⁶ Fiona M. Underwood, Robert W. Burn, and Tom Milliken, ‘Dissecting the illegal ivory trade: An analysis of ivory seizures data’, *PLOS one* 8, no. 10 (2013): e76539.

¹⁷ Tom Milliken, ‘Illegal trade in ivory and rhino horn: An assessment to improve law enforcement under the wildlife TRAPS project’, Cambridge: TRAFFIC International, 2014.

later. In 2011, 1.15 tonnes of ivory was confiscated in China, while 0.46 tonnes of illegal ivory was confiscated in 2009. Since 2011, the amount of ivory seized declined to 5.9 tonnes in 2012 and 3.6 tonnes in 2013. This indicates that although the number of cases of ivory seizure in 2012 (14) and 2013 (11) was less than 2008 (16), ‘seizure ivory’ was more than that of 2008 (0.91 tonnes).

Although the data collected from media reports may not reflect the whole truth of China’s efforts to combat the illegal ivory trade, it provides a method (an analysis of the frequency of seized ivory) by which we can understand the history and trend of the illegal ivory trade in China. According to this frequency analysis, the trend for the illegal ivory trade in the future is still severe, if the demand for ivory in China continues to increase with the development of the Chinese economy.

Three waves of illegal ivory trade

According to data about the confiscated ivory cases, three main waves of illegal ivory trade have occurred in China over the past 15 years, during which time the numbers of seizures increased and then decreased to zero. The first appeared between 2001 and 2005, while the second phase occurred from 2006 to 2010. The current wave started from 2011. Of the three, the second wave showed not only a long duration but also considerable fluctuation (see Figure 1). Although there are still difficulties in combating illegal ivory trade, this suggests that law enforcement efforts in China have made progress. The current illegal ivory trade wave seems to be shorter and weaker in fluctuation than the second.

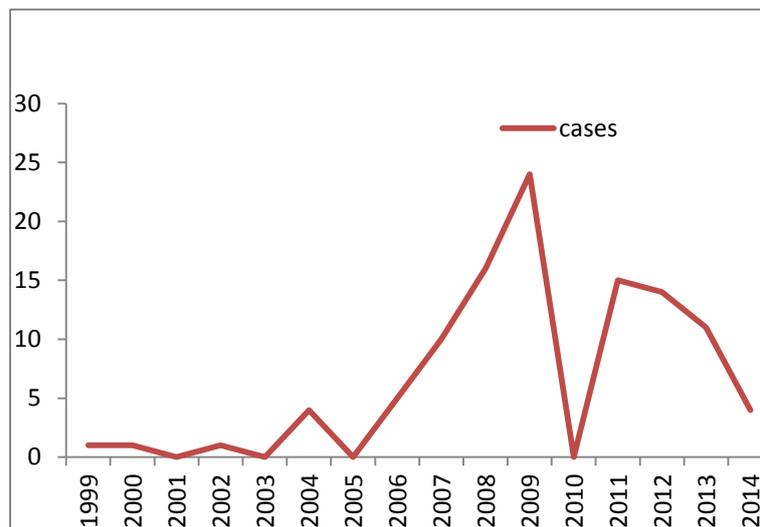


Figure 1: Confiscated cases (1999-2014)

These waves of illegal trade coincide with phases in China’s policy on combating illegal ivory. China’s Wildlife Protection Law took effect in March 1989, and both Asian and African elephants were listed on the endangered wildlife appendix. However, the ambiguous price of elephant tusks hindered the efficiency of law enforcement. In 2001, the State Forest Administration of China, which had been working to combat the illegal ivory trade, clarified the price of seized ivory as ¥41,667 per kg and ¥250,000 per tusk.¹⁸ It punished offenders harshly and the illegal ivory trade, measured by the number of seizures, decreased between 2001 and 2003. This also suggests that effective law enforcement is a key measure in preventing the illegal ivory trade.

Some experts have claimed that having a legal ivory trade would help to reduce the illegal ivory trade, while others have insisted that approving a legal trade would exacerbate it. The seizure of ivory data cases in China supports this latter argument. After implementing strict domestic ivory trade regulations¹⁹ and enhancing the management of the domestic ivory industry, China was approved to

¹⁸ State Forest Administration, ‘State Forest Administration clarified how to evaluate the price of ivory seizure’, 2001, gfxwj.forestry.gov.cn/search/showdetail.do?id=1059 (accessed 2 December 2014).

¹⁹ The new regulations in China demanded that all pieces weighing less than 50 gm must be accompanied by a paper CITES permit which should be displayed alongside the piece, and anything over 50 gm must have a photographic ID card (similar to a credit card) which must also be displayed alongside the piece. Environmental Investigation Agency,

trade 62 tonnes of ivory by the CITES Standing Committee in 2008.²⁰ The second phase in the illegal ivory trade occurred after this. The number of seizure cases in China rose from 16 in 2008 to 24 in 2009, a drastic increase of 30 per cent. This suggests that a large amount of *illegal* ivory flowed into China alongside the 62 tonnes of legal ivory approved by CITES. China was considered the largest importer by weight of illegal ivory in the world in 2009.²¹ This suggests some correlation between the jump in the illegal ivory trade and the legal import. It was this relationship between the illegal and CITES-approved legal trade that led the African Wildlife Foundation to demand in 2013 that all ivory stockpiles should be destroyed and a domestic moratorium on ivory trade should be established within each country without delay.²²

During 2012 and 2013, China launched a series of special operations to combat the illegal wildlife trade. Authorities burned 6.1 tonnes of seized ivory in January 2014. Under law enforcement pressure, the illegal ivory trade also dropped once again between 2012 and 2014.

Region of occurrence

The 106 cases of confiscated ivory occurred in 20 provinces or cities, which revealed that illegal ivory trade occurred in more than half of China (see Table 2).

Province	Number of cases	Province	Number of cases
Guangdong	22	Anhui	1
Zhejiang	20	Chongqing	1
Yunnan	11	Gansu	1
Beijing	10	Guizhou	1
Guangxi	9	Hubei	1
Shanghai	7	He Bei	1
Fujian	6	Henan	1
Liaoning	6	Ningxia	1
Jiangsu	3	Shandong	1
Sichuan	2	Tianjin	1

Table 2: Cases of confiscated ivory distribution

Guangdong, Zhejiang, Yunnan, and Beijing were the four main regions in which cases of confiscated ivory occurred. Guangdong had the highest number of ivory seizures with 22 confiscations in the province. Zhejiang had the second highest number, with 20 cases of confiscated ivory. Yunnan had 11 cases, and Beijing had ten cases. The number of cases of confiscated ivory in the four provinces totalled 63 of the 106 under scrutiny here. This equates to 59.4 per cent of all the cases of ivory seized over the period under investigation.

The data implies that Guangdong, Zhejiang, Yunnan, and Beijing are hotspots of the illegal ivory trade. Each has unique factors which contributed to the illegal ivory trade. Yunnan is located on the southwest border region, shares a long boundary with Burma, and is close to other main Asian elephant habitats. Some Chinese businesspeople, attracted by high profits from the illegal ivory trade, have smuggled Asian elephant ivory from Burma and other states surrounding Yunnan, which has fuelled the illegal ivory trade in Yunnan. Between 2002 and 2007, the Lincang Forest Police of Yunnan investigated six illegal ivory trade cases involving the seizure of 15 elephant tusks (63.9 kg).²³ Although far away

²⁰ 'Bloody ivory: Exposing the myth of a regulated market', www.eia-international.org/wp-content/uploads/EIA-Blood-Ivory.pdf (accessed 12 January 2015).

²⁰ Joseph Vandegrift, 'Elephant poaching: CITES failure to combat the growth in Chinese demand for ivory', *Virginia Environmental Law Journal* 31 (2013): 102–35.

²¹ Lucy Vigne and Esmond Martin, 'Consumption of elephant and mammoth ivory increases in southern China', *Pachyderm* 49 (January–June 2011): 79–89.

²² African Wildlife Foundation, 'AWF position statement: Elephant ivory stockpiles and the ivory trade', 13 November 2013, www.awf.org/sites/default/files/media/Resources/AWF%20Ivory%20Position%20Statement_FINAL11.pdf (accessed 15 December 2014).

²³ Lincang Forest Police confiscated 15 elephant tusks in the past 5 years. See www.forestry.gov.cn/portal/bhxxh/s/640/content-89467.html (accessed 16 December 2014).

from borders and elephant habitat, Zhejiang is famous for its citizens doing business overseas which includes Africa.²⁴ Consequently, Zhejiang ascribed the illegal ivory trade to those who travelled or conducted business in Africa. Half of the illegal ivory trade cases in Zhejiang were intercepted at Hangzhou and Wenzhou airports, and most of the offenders had bought ivory overseas during their travels or while working in Africa. In addition, some rich businesspeoples' habit of collecting ivory products also contributed to the illegal ivory trade in Zhejiang. For example, in July 2014, a female entrepreneur was convicted by the court in Zhejiang for illegal ivory trade: she was alleged to have bought 29 illegal elephant tusks.²⁵

There are many differences between Beijing and Guangdong. However, both are important markets for the legal ivory trade in China. There are 43 legal ivory sale enterprises and nine legal ivory processing enterprises in Beijing, and 25 legal ivory sale enterprises and seven legal ivory processing enterprises in Guangdong. Authorities have approved only 136 licences for legal ivory sale enterprises and 36 sites for legal ivory processing enterprises across the country.²⁶ This means that the total number of legal ivory processing enterprises in Beijing and Guangdong equates to 44 per cent of the number of such enterprises in China, and the legal ivory sale enterprises in those two provinces accounts for half that allowed in the country.

The authorities in China have also demanded that the total amount of ivory for processing and sale should be limited to no more than five tonnes annually. However, five tonnes of ivory per year cannot meet the demand even from authorised enterprises in China, let alone the expanding ivory market more generally. In the face of a lack of enough legal ivory to match this demand, the illegal ivory trade fills the gap. Some reports have even suggested that half of the legal ivory enterprises (including legal ivory processing enterprises and legal ivory sale enterprises) are also involved in the illegal ivory trade in China.²⁷

Categories of illegally trafficked ivory: Raw and worked

The illegal ivory trade involves a chain with many steps, such as illegal poaching, illegal processing, illegal transporting, and illegal distribution. In practice, raw ivory is mostly confiscated before illegal processing, while worked ivory is confiscated after illegal processing. Classification of ivory seizures in China into raw ivory and worked ivory would help clarify to which step of the illegal ivory chain and illegal ivory trade networks ivory crime in China belongs.

Among all confiscated ivory cases in the period under review, 17 were raw ivory, 67 were worked ivory, and both raw and worked ivory were confiscated in three cases (see Figure 2). Therefore, more than 63 per cent of the confiscated ivory was worked ivory. The worked ivory market in China has historical roots. With the continual development of the Chinese economy, art investment has become popular among the Chinese middle classes. These particular circumstances have sparked the illegal sale of worked ivory in China, especially in recent years. This demonstrates that the illegal ivory trade in China is not a simple law enforcement issue but rather a complicated social-cultural phenomenon. Since 2009 in particular, buying and collecting ivory has come to be considered by the Chinese middle classes as a valuable investment. This applies even to ivory sold without an official ID card.²⁸ For example, Taizhou police intercepted illegal ivory in March 2009 with a seizure of 377 pieces of illegal ivory carvings from the offender's home. The confiscated ivory in this case weighed 134 kg.²⁹

²⁴ Yuan Jingjing and Zang Guotu, 'Analysis of Chinese businessmen in Africa', qwgzyj.gqb.gov.cn/yjtt/159/1742.shtml (accessed 16 December 2014).

²⁵ 'Pre female provincial CPPCC members convicted illegal ivory trade', 26 July 2014, news.ifeng.com/a/20140726/41317968_0.shtml (accessed 16 December 2014).

²⁶ SFA No. 1 Notice of 2011, www.forestry.gov.cn/portal/main/govfile/13/govfile_1790.htm (accessed 16 December 2014).

²⁷ Feng Jie, 'Ivory destination: Chinese black market fuelled international illegal ivory trade', *Southern Daily*, 9 December 2011, www.infzm.com/content/65944 (accessed 16 December 2014).

²⁸ Yufang Gao and Susan G. Clark, 'Elephant ivory trade in China: Trends and drivers', *Biological Conservation* 180 (2014): 23–30.

²⁹ 'Jiaojiang Police uncovered the largest illegal ivory case', www.taizhou.com.cn/a/20090916/content_126118.html (accessed 16 December 2014).

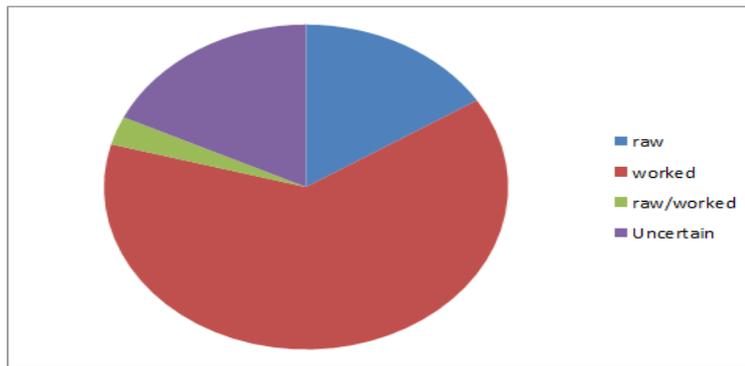


Figure 2: Categories of confiscated ivory

Methods of transportation

Among the 106 cases of confiscated ivory explored in this paper, 41 were transported by air, 20 involved transportation by truck, and six by ship. Fourteen cases were intercepted from post bags, and 17 were confiscated from a store or from the suspect's home (see Figure 3).

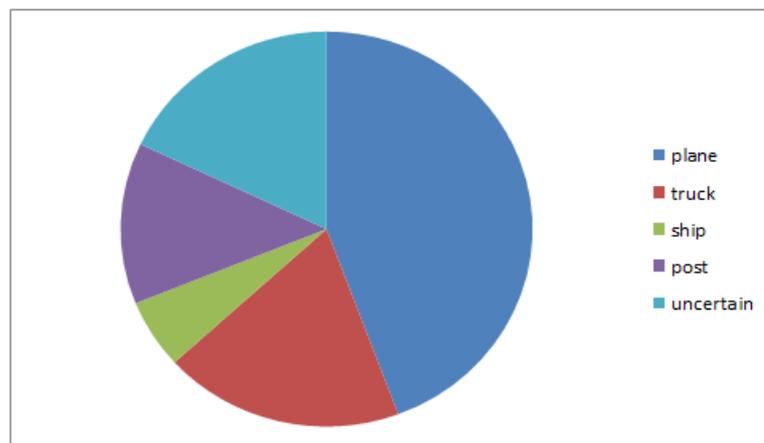


Figure 3: Methods of shipping

Although there were only six cases where ivory was confiscated from a ship, the weight of ivory in these cases dominated all confiscated cases – the total of ‘shipment ivory’ was nearly 13 tonnes. The largest amount of ivory was almost certainly trafficked by ship from Africa to China. Shipment of this kind not only decreases the cost of ivory transportation, but also reduces the chances of being intercepted by law enforcement officials. Transnational wildlife gangs trading African elephant tusks to the Chinese market by ship have hidden ivory in containers of dried fish, plastic wastes, and grains.³⁰ Because ivory can be hidden among other cargo in this way, transnational wildlife gangs prefer to traffic large ivory by ship, a fact that has been demonstrated in most of the large cases of ivory confiscation not just in China but also in Singapore, Malaysia, and other states.

The 41 cases of ivory transported by air involved 1,570 pieces of ivory products. The transport of illegal ivory by air is the main method used by individual offenders. Because individual passengers and their baggage must pass through security checks, the Customs service can intercept the illegal ivory

³⁰ Ana Swanson, ‘How China’s ivory addiction explains the new world economy’, *Washington Post*, 7 November 2014.

using modern technology. Among those 41 cases, 13 confiscations occurred in Guangdong and ten in Zhejiang. Beijing and Shanghai each reported five seizures of illegal ivory traded in this way.

In the border regions, trucks are also an important method used by transnational ivory gangs for transporting illegal ivory. Law enforcement agencies investigated a series of illegal ivory trades in the regional provinces of Guangxi, Guangdong, and Yunnan. Among the 20 cases of seized ivory involving transportation by truck, seven occurred in Guangxi, six occurred in Guangdong, and five in Yunnan. Because of its proximity to Vietnam, large amounts of illegal ivory are smuggled annually into Pingxiang and other border cities in Guangxi province. In March 2008, the Guangxi Forest Police intercepted a truck and confiscated 790 kg of illegal ivory; three years later, the Guangxi Border Police confiscated 707 elephant tusks after a truck was inspected in April 2011. That illegal ivory had already been smuggled across the border into China before it was seized by law enforcement agencies. Most of the illegal ivory trade transported by truck was intercepted at night, which suggests that transnational ivory gangs like to take advantage of the depth of night for ivory crime.

Who is involved in the illegal ivory trade in China?

The illegal wildlife trade is a lucrative business that involves a diverse range of actors, from rural harvesters, professional hunters, intermediate traders, wholesalers, and retailers to final consumers and users. The methods used to traffic large consignments of illegal ivory indicate that transnational wildlife gangs are likely to be involved in the trade and, by extension, in threatening elephant species conservation. Only gangs of this kind have the capacity to orchestrate large-scale transnational trade between Africa and China.

Of the cases examined in this paper, 27 involved individuals who were returning to China after travelling overseas, and most of those individual offenders were returning from Africa. According to Customs officers in China, the domestic ivory trade has not been banned in some African states, and many Chinese who travelled or worked in Africa bought ivory for the purpose of collecting or as gifts. When such travellers are inspected after leaving their flight, the ivory has been intercepted and confiscated because they are being carried without official permission under CITES. For example, Guangzhou is an important airport in the line between China and Africa, and Guangdong Customs service intercepted 60 illegal ivory cases with the seizure of 60 kg of ivory products from returned Chinese travellers between November 2008 and January 2009.³¹

Among all the cases identified in this paper, there were 35 in which at least two offenders were punished, 20 cases in which at least three offenders were punished, nine cases in which there were at least five offenders, and four cases involving more than ten offenders. This suggests that as well as individual smugglers, illegal wildlife gangs are also involved in the illegal ivory trade in China. Evidence also suggests that some of those illegal wildlife gangs were orchestrated by ivory businesspeople. For example, law enforcement agencies in Fujian province intercepted an illegal ivory gang when it seized 524 tusks in August 2011. The leader of the gang was a businessman who owns a legal ivory store in Fujian. In order to acquire low price and high quality ivory, he smuggled ivory from Africa to China directly.³² As noted above, China had established a strict ivory enterprise register system under which only registered ivory could be sold and only registered ivory enterprises have the privilege to sell ivory. However, in the pursuit of high profits, some ivory enterprises smuggle, process, and trade illegal ivory on the black market.

There are also offenders who come from abroad. Although most of the illegal ivory trade involved in the 106 cases explored in this paper was committed by Chinese nationals, foreign offenders were also identified, including two Burmese, one American, one Japanese, one Vietnamese, and one Guinean. Burma is a state with rich Asian elephant resources and it is also close to Yunnan province. Some Chinese offenders conspired with criminals in Burma and smuggled Asian ivory into Yunnan before re-selling it in other provinces in China. Japan and the US became an important source of the illegal ivory trade in China because of the lower prices of illegal ivory in those countries. The price gap created

³¹ 'Guangdong Customs intercepted illegal ivory', 22 January 2009, www.forestry.gov.cn/portal/bhxx/s/640/content-98996.html (accessed 22 December 2014).

³² 'Court case verdict reveals true scale of 2011's "Annus horribilis" for African elephants', TRAFFIC, 24 May 2013, www.traffic.org/home/2013/5/24/court-case-verdict-reveals-true-scale-of-2011s-annus-horribi.html (accessed 20 April 2015).

incentives for some Chinese, Japanese, and Americans to smuggle ivory to China. Vietnam is not a source of Asian elephant ivory, but it is an important transit point for illegal ivory smuggling between Africa and China. Some Vietnamese, especially furniture businesspeople, have smuggled ivory into Guangxi province. In fact, most of the ivory seized in Guangxi was smuggled into China from Vietnam. This indicates that the illegal ivory trade in China is only one part of the global illegal wildlife trade, and that it is necessary to enhance international law enforcement cooperation and coordination with those ivory-source states and transit states, an issue to which I return later.

Sources of illegal ivory in China

Among those confiscated ivory cases, most ivory was transported from range states in Africa. There were 44 cases (of the 106) with seized ivory weighing 28 tonnes and 3,215 pieces of tusks, accounting for 73 per cent of the total seizures. The illegal ivory was transported from Angola, Burundi, Congo, Ethiopia, Guinea, Morocco, Mozambique, South Africa, Sierra Leone, Togo, and Zimbabwe. Most of the offenders who smuggled ivory from Africa were travelling or working in Africa and had little knowledge about the legal ivory trade. The illegal ivory traded by individual offenders included raw and worked ivory, while large-scale illegal ivory smuggled by transnational gangs was in the form of raw African elephant tusks. Most of the confiscated ivory from Africa was smuggled by transnational gangs. For example, between 2011 and 2012, Xiamen Customs service cracked down on two transnational ivory gangs and seized nearly 12 tonnes of ivory which was smuggled from Africa. This suggests that African states are the main source of the illegal ivory trade in China, and it is impossible to prevent the illegal ivory trade in China completely without cooperation and coordination with the African states.

Besides ivory sourced from elephant range states in Africa, there were also other source states or transit states/regions for the illegal ivory trade. Among the confiscated cases, there were five in which ivory was transported from the US, five from Japan, three from Burma, three from Hong Kong, three from Vietnam, two from Thailand, and one from Yemen. According to the data of seizure ivory cases, almost all of the illegal ivory from the US and Japan was worked ivory, whilst that smuggled from Burma, Vietnam, and Hong Kong included raw and worked ivory.

The high price gap was the main factor which drove the illegal ivory trade in China. According to the Environmental Investigation Agency, the price of ivory in China in 2008 was US\$1,500 per kg,³³ while the price in Japan in 2009 was US\$333 per kg³⁴ and that in the US in 2007 ranged from US\$31 to US\$1,793 per kg.³⁵ The price of ivory in China is more expensive than that of source countries. Being attracted by these likely profits, wildlife criminal groups orchestrated ivory smuggling between China and other source states.

To prevent the illegal ivory trade and to enable a 'crack down' on illegal ivory trade networks, it is important to acquire cooperation and coordination from source states.

Analysing the large-scale illegal ivory trade

The large-scale illegal ivory trade refers to situations where the confiscated ivory weighs more than 100 kg.³⁶ It is usually linked to transnational ivory gang activity, which is proving to be most dangerous to the elephant species. Of the cases investigated for this paper, the amount of ivory seized in 18 cases (or 17 per cent) exceeded 100 kg. Of those seizures, two occurred between 1999 and 2006, and 16 occurred during 2007 and 2014. Two cases occurred per year between 2007 and 2009 while

³³ Ivory from the second, one-off legal stockpile sale (2008) was bought for an average of US\$157 per kg, while legal stockpiles from government-owned traders cost US\$1,500 per kg. See Environmental Investigation Agency, 'Bloody ivory'.

³⁴ According to JIA, the Japanese institution that investigates commodity prices, the price of 10kg of soft ivory was US\$333 per kg in 2009, while 5kg of soft ivory was US\$278 per kg. Vigne and Martin, 'Consumer demand for ivory in Japan declines'.

³⁵ The raw ivory price in the US varies considerably based on the size and quality of the tusk or tusk section. The price of tusks, tusk sections, and semi-worked raw ivory for sale on the internet in the US ranged from US\$31 to US\$1,760 per kg in 2006 to 2007. See Daniel Stiles and Esmond Martin, 'The USA's ivory markets – how much a threat to elephants?' *Pachyderm* 45 (July 2008–June 2009): 67–76.

³⁶ Underwood, Burn, and Milliken, 'Dissecting the illegal ivory trade'.

there was no record in 2010. However, the large-scale ivory seizures increased to three cases in 2011 and four cases in 2012, before declining to two cases in 2013 again (see Figure 4).

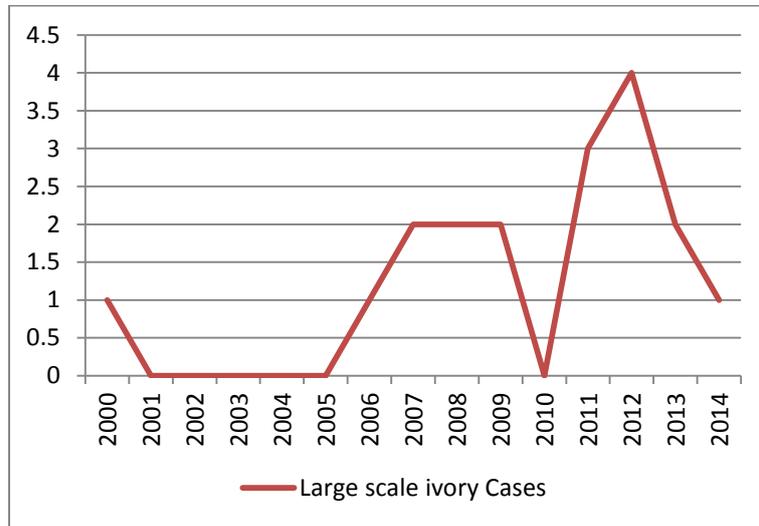
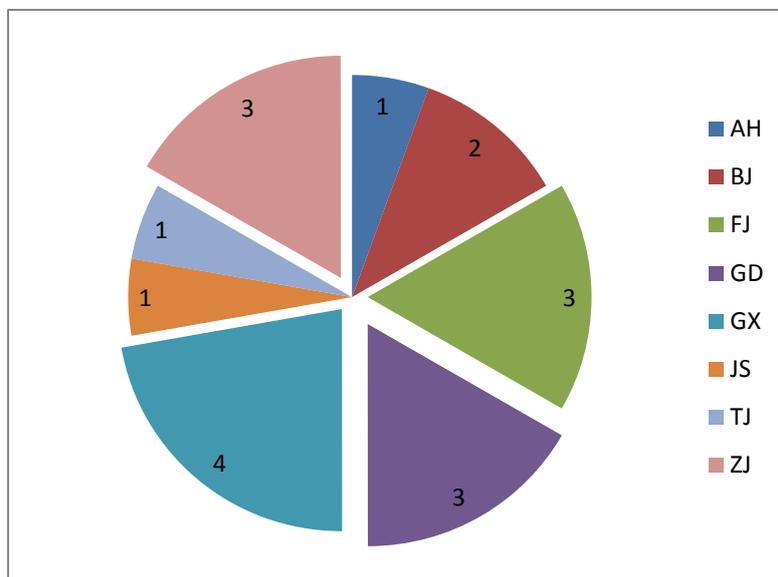


Figure 4: Large-scale illegal ivory cases

From a spatial distribution aspect, the cases of large-scale illegal ivory seizures were distributed in southern China (see Figure 5). Four cases occurred in Guangxi province, which suggests that Guangxi is a hotspot of large-scale illegal ivory trafficking. In Fujian, Guangdong, and Zhejiang three cases of large-scale illegal ivory trade were investigated between 1999 and 2014. In Beijing, two large-scale illegal ivory seizures were intercepted. In addition, in Anhui, Jiangsu, and Tianjin, one large-scale illegal ivory case was confiscated in each.



Key:
 AH = Anhui
 BJ = Beijing
 FJ = Fujian
 GD = Guangdong
 GX = Guangxi
 JS = Jiangsu
 TJ = Tianjin
 ZJ = Zhejiang

Figure 5: Large-scale illegal ivory seizures spatial distribution

Where did those large-scale illegal ivory seizures come from? According to the media reports, most large-scale illegal ivory seizures came from Africa directly or indirectly, with at least five reported as

being transported from Africa directly, one transported into China via Japan, and one transported from Vietnam. Explanations for the source of illegal ivory in China are clear. Guangxi province is close to Vietnam which is another illegal ivory market in Asia, and large illegal ivory is smuggled from Vietnam to China by trucks. Most illegal ivory was confiscated in Pingxiang or other border cities near Vietnam. Fujian and Tianjin Customs service had confiscated three large-scale illegal ivory cases weighing in at 12.8 tonnes between 2011 and 2012. Unlike Guangxi and Yunnan, Fujian is not close to ivory sources but it does have an ivory industry chain. There are many ivory processing enterprises in Fujian, and to meet those enterprises' demand for ivory material, large shipments of illegal ivory were smuggled from Africa. Fujian Customs service cracked down on two transnational ivory gangs between 2011 and 2012, with seizures of 3,188 tusks of illegal ivory (weighing 11.88 tonnes) smuggled from Africa by ship.

In conclusion, there are two main smuggling routes for large-scale illegal ivory consignments coming into China. The first route involves the smuggling of raw African elephant ivory from Africa directly. Transnational ivory gangs send their members to Africa to buy ivory on a large scale, and then orchestrate the illegal trafficking of that ivory to China by ship. Before buying the ivory, gangs also bribe clerks who work in airports so that ivory can be smuggled through staff exclusive channels in order to avoid being intercepted. For example, the Beijing and Guangzhou authorities each uncovered a transnational ivory gang. Before being intercepted, the gang in Beijing had smuggled nearly 14 tonnes of ivory from Africa between 1999 and 2002, while the gang in Guangzhou had smuggled nearly 0.66 tonnes of ivory from Africa during 2011 and 2013.

The second main route involves ivory trafficked from China's neighbouring countries, such as Vietnam. Some furniture businesspeople in Guangxi smuggled large-scale ivory from Vietnam while importing furniture by truck. Law enforcement officials in the Pingxiang city of Guangxi had confiscated three such large-scale ivory cases with a seizure of 4,510 kg between 2008 and 2011. There were also some ivory gangs who smuggled a large amount of ivory from Japan by express post service after buying ivory online. In March 2013, the Hefei Court of Anhui province sentenced an ivory gang who had smuggled 3.2 tonnes of ivory from Japan during October 2010 and February 2012.³⁷

CONCLUSION

Four key observations can be made about the nature of the illegal ivory trade in, and to, China.

Illegal ivory trade in China is a serious and growing problem

Ivory is attractive because of its inherent beauty, and ivory carvings or ornaments are popular in China. Being influenced by traditional culture and exacerbated by a burgeoning economy, more middle class people in China have the capacity to consume ivory products.³⁸ Since the commercial ivory trade was banned in 1989, a great amount of raw and worked ivory has been trafficked into China to match the appetite of China's middle class. The number of confiscated ivory cases increased from 2004 and peaked in 2009. After a short decline in 2010, the number of cases again ran at a high level between 2011 and 2013.

These figures, and the analysis in this paper, indicate that although China is a signatory to many international agreements (such as CITES), and although it has established a wildlife protection law system, the illegal ivory trade is still a serious issue that is likely to grow in the future.

This paper has also suggested that the reasons for the increasing illegal ivory trade in China are complicated. Besides traditional culture and an art collecting boom among the middle classes, a lack of knowledge about ivory trade law has also resulted in more travellers and workers smuggling ivory from Africa or other states overseas.

³⁷ TRAFFIC, 'Hefei Customs cuts down an ivory smuggling chain', *China's Wildlife Enforcement New Digest*, February 2013, www.trafficchina.org/sites/default/files/wildlife_enforcement_news_digestfeb_2013.pdf (accessed 20 April 2015).

³⁸ International Fund for Animal Welfare, 'Ivory trade market in China'.

Transnational wildlife gangs play an important role in the illegal ivory trade in China

Transnational wildlife gangs constitute a dangerous threat to wildlife species. Those gangs are attracted by high profits and have adopted a range of strategies to evade detection.³⁹ Large-scale ivory consignments were usually illegally trafficked by transnational wildlife crime networks with a global reach. The ability to transport huge volumes of ivory is indicative of the sophisticated criminalisation of the wildlife trade. It also reveals that transnational wildlife gangs have established syndicated illegal ivory trade networks.⁴⁰ Three further points can be made here.

First, transnational wildlife gangs have taken advantage of their comprehensive organised structure to orchestrate complicated and subtle processes of illegal ivory trade. For example, in July 2013, the Guangzhou Customs service intercepted a transnational wildlife gang which consisted of 16 members. Among those members, three worked in Baiyun Airport – two were Customs officers and one was a clerk in the duty-free shop. A key step in the illegal trade, then, involved gang members leaving their flights with illegal ivory but relying on airport workers who would traffic the illegal ivory through domestic goods channels without being inspected by Customs.⁴¹

Second, large-scale consignments of illegal ivory were mainly smuggled by transnational wildlife gangs. According to the illegal ivory trade cases collected here, almost all of the large-scale illegal ivory – with a seizure weight of more than 100 kg – was smuggled by transnational wildlife gangs in China rather than by individuals. The reason for that may be that only transnational wildlife gangs have the capacity to buy, traffic, and sell large-scale illegal ivory in China. For example, in 2011 Fujian Customs uncovered a three-member transnational ivory gang with a seizure of 2,154 whole elephant tusks or segments. The gang was able to orchestrate successive large-scale illegal ivory flows out of Kenya, Tanzania, and Nigeria.⁴²

Third, most transnational wildlife gangs will not cease their wildlife crime until they are ‘cracked down on’ by enforcement authorities. Once a transnational wildlife gang develops its crime pattern, it continues to commit illegal ivory trade activities for the purpose of maximising its profits.

Some provinces in southern China are hotspots of illegal ivory trade

Criminology theory insists that crime hotspots are areas or clusters of crime or disorder,⁴³ and that understanding hotspots can be utilised to predict future patterns of crime.⁴⁴ According to the confiscated ivory cases between 1999 and 2014, most cases of seized ivory were intercepted in Guangdong (23), Zhejiang (20), Yunnan (11), Beijing (10), and Guangxi (9). Except for Beijing, the other four provinces are located in southern China. The data of large-scale seizure ivory cases also supports this assessment – Guangxi (4), Fujian (3), Guangdong (3), Zhejiang (3), and Beijing (2) are hotspots of large-scale illegal ivory trade in China.

The reasons for those provinces becoming illegal ivory trade hotspots varies from being located in a boundary region close to Asian elephant habitat to having an active ivory industry and market. The domestic illegal ivory trade ties in with the international ivory trade, and is often a final step in the trade chain. It may indicate that Chinese authority in those hotspots of illegal ivory trade should enhance wildlife enforcement as a way to combat the trade.

³⁹ Katherine Miller, ‘The role of transnational advocacy networks in combating wildlife crime: The case of the illegal ivory trade’, unpublished thesis, Boston, MA: University of Massachusetts, 21 May 2014.

⁴⁰ United Nations Office on Drugs and Crime, *Transnational organized crime in East Asia and the Pacific*.

⁴¹ Liu Guannan, ‘16 gang members smuggled 659 kilograms illegal ivory with assistance of mole from Customs’, 21 October 2014, legal.china.com.cn/2014-10/21/content_33824762.htm (accessed 22 December 2014).

⁴² ‘Court case verdict reveals true scale of 2011’s “Annus horribilis”’.

⁴³ Wilpen Gorr and Andreas Olligschlaeger, ‘Crime hot spot forecasting: Modelling and comparative evaluation’, Washington, DC: National Institute of Justice, 2002.

⁴⁴ Spencer Chainey, Lisa Tompson, and Sebastian Uhlig, ‘The utility of hotspot mapping for predicting spatial patterns of crime’, *Security Journal* 21, no. 1 (2008): 4–28.

International wildlife enforcement cooperation and coordination is key to combatting the illegal ivory trade in China

A lack of international cooperation and coordination had an impact on the efforts of China to combat the illegal ivory trade. The illegal ivory trade is a type of transnational wildlife crime, which ties source states, transit states, and destination states into a syndicated network. Sometimes official corruption in the source state or low efficiency of law enforcement in transit states and destination states contributes further to undermining wildlife protection in the world. To combat the illegal ivory trade and protect elephant species, it is necessary for law enforcement agencies to crack down on transnational ivory gangs and destroy illegal ivory trade networks. It is important for law enforcement agencies to acquire and share ivory criminal intelligence with their counterparts in transit and source states. However, as a consequence of China's inexperience, many illegal ivory and transnational ivory gangs cannot be identified in time. To prevent the illegal ivory trade in China, it is vital to enhance law enforcement not only in China but also to enhance international wildlife enforcement cooperation and coordination between China and other states.

Sharing intelligence and training law enforcement officers should be a priority in international wildlife enforcement cooperation. China has launched and will continue to enhance international cooperation to combat the illegal ivory trade, including efforts to train foreign law officers, launch special international enforcement operations, and establish bilateral or multilateral agreements on wildlife enforcement cooperation. China has trained law officers from Africa and Southeast Asia in wildlife enforcement.⁴⁵ In June 2014, China held a training session in Hangzhou, and 25 officials and experts from Thailand, Timor-Leste, North Korea, Nepal, Bhutan, Pakistan and other countries attended.⁴⁶ China has led international special operations on combating illegal wildlife trade in recent years. Between 30 December 2013 and 26 January 2014, China led an international wildlife crime effort called 'Cobra II Operation'. During this international cooperation, China worked with the US, South Africa, the Lusaka Agreement Task Force, the Association of Southeast Asian Nations Wildlife Enforcement Network, and the South Asia Wildlife Enforcement Network, and confiscated more than 3 tonnes of illegal ivory and other endangered wildlife products.⁴⁷ Besides adhering to CITES and other international agreements, China has also signed a series of bilateral or multilateral agreements on combating illegal wildlife trade in recent years. In May 2014, for example, when visiting Nairobi National Park with Kenyan President Uhuru Kenyatta, Chinese Premier Li Keqiang stressed that China was strongly committed to protecting wildlife and would spare no effort to combat poaching and ivory smuggling.⁴⁸ Besides Kenya, China has also established bilateral agreements with the US, India, Russia, and other countries.

While Chinese authorities are devoted to international cooperation and coordination on preventing the illegal ivory trade, there are also many challenges in their way. First, a lack of international policy on combatting the illegal ivory trade may be a real hindrance to a Chinese proposal in such a field. Second, as a result of the legal cultural gap and different legal systems, it is difficult for law enforcement agencies in China to propose and enhance a set of practical cooperation mechanisms with its neighbouring states and source states in Africa. Finally, without proper and necessary academic communication on combatting the illegal ivory trade between China and those transit and source states, it is difficult for China to win the trust and respect from those states, which is a key factor in the practice of preventing the illegal ivory trade.

⁴⁵ Liu Yangyang, Wang Xi, *et al.*, 'Deputy administrator Zhang Jianlong pressed on burning confiscated ivory', news.xinhuanet.com/politics/2014-01/06/c_118851657.htm, 20 April 2015 (accessed 27 December 2014).

⁴⁶ 'Training session for Asian wild animal and plant protection officials held', State Forestry Administration of the People's Republic of China, 25 November 2014, english.forestry.gov.cn/index.php/int-l-cooperation/convention-implementation/222-training-session-for-asian-wild-animal-and-plant-protection-officials-held (accessed 27 December 2014).

⁴⁷ US Embassy, 'Global wildlife protection effort nets traffickers in Africa, Asia', 12 February 2014, iipdigital.usembassy.gov/st/english/article/2014/02/20140212292837.html#axzz3XpFhTpCF (accessed 20 April 2015)..

⁴⁸ Li Tao, 'Chinese premier vows to combat poaching, ivory smuggling', Xinhuanet, 11 May 2014, news.xinhuanet.com/english/china/2014-05/11/c_126484917.htm (accessed 27 December 2014).