

CORRUPTION **AND** **WILDLIFE** **CRIME**

A FOCUS ON CAVIAR TRADE

Louisa Musing,
Lindsey Harris,
Aled Williams,
Rob Parry-Jones,
Daan van Uhm,
Tanya Wyatt



TRAFFIC
the wildlife trade monitoring network

CMI | **U4** ANTI-CORRUPTION
RESOURCE CENTRE



COLLABORATIVE 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.

WWF is one of the world's largest independent conservation organisations, with over 5 million supporters and a global network active in more than 100 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

U4 Anti-Corruption Resource Centre (U4 ACRC) works to reduce the harmful impact of corruption on society, sharing research and evidence to help international development actors get sustainable results. U4 is a permanent centre at the Chr. Michelsen Institute (CMI) in Norway. CMI is a non-profit, multi-disciplinary research institute with social scientists specialising in development studies.

Utrecht University

Northumbria University

The designations 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 of 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 U4 ACRC.

Published by TRAFFIC, David Attenborough Building, Pembroke Street, Cambridge, CB2 3QZ, United Kingdom.

Suggested citation: Musing, L., Harris, L., Williams, A., Parry-Jones, R., van Uhm, D., Wyatt, T. (2019). *Corruption and wildlife crime: A focus on caviar trade*. A TRAFFIC, WWF, U4 ACRC, Utrecht University, and Northumbria University report.

© TRAFFIC 2019. Copyright of material published in this report is vested in TRAFFIC.

UK Registered Charity No. 1076722
ISBN: 978-1-911646-05-1

Design by Marcus Cornthwaite
marcus.cornthwaite@traffic.org

CORRUPTION AND WILDLIFE CRIME

A focus on caviar trade

Louisa Musing, Lindsey Harris, Aled Williams, Rob Parry-Jones, Daan van Uhm and Tanya Wyatt





CONTENTS

Overview and moving forward **iv**

Introduction **vi**

SECTION 1: CAVIAR TRADE AND CORRUPTION

Context and background **5**

Definitions **6**

Linkages between corruption and caviar trade **9**

Corruption typology **13**

Next steps for future research **14**

SECTION 2: CORRUPTION AND WILDLIFE CRIME

Summary of key points **17**

SECTION 3: MOVING FORWARD

Engagement on corruption in wildlife crime **24**

Questions for future research **26**

References and further reading **28**

Annex I: Agenda for discussion group **30**

OVERVIEW

This report summarises key themes of corruption and wildlife crime as drawn from the literature reviews and interviews, and salient points arising from a discussion group in April 2018.

SELECTION OF LINKAGES BETWEEN CORRUPTION AND CAVIAR TRADE



ILLEGAL PAYMENTS/EXTORTION
RELATED TO POACHING



BRIBERY/COLLUSION TO AVOID
PROSECUTION FOR ILLEGAL ACTS



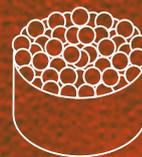
BRIBERY/COLLUSION TO LAUNDER
LEGAL/ILLEGAL CAVIAR FOR SALE



BRIBERY/COLLUSION TO SMUGGLE
ILLEGAL CAVIAR TO EXPORT MARKETS



CONFLICTS OF INTEREST BETWEEN
COMPANIES AND ENFORCEMENT



CONSUMER
PREFERENCE FOR
WILD CAVIAR
IS A KEY DRIVER OF ILLEGALITY

The report includes an original overview of the basic typology of corrupt practices identified in the illegal caviar trade, and disaggregates these by site, location in the trade chain, typical actors involved, type of corruption, and the types of relationships involved.

SUMMARY OF ACTIONS FOR MOVING FORWARD

ROBUST RESEARCH

Robust and reliable research on wildlife crimes should be conducted to understand how related social networks are constituted.

COMPLEMENTARY RESEARCH

Lessons from other crime areas and corruption research should be drawn upon with a focus on best practices.

COLLABORATION

Build relationships and further collaborate with anti-corruption experts to raise the profile of wildlife crime and corruption in international fora.

DISSEMINATION OF FINDINGS

Research findings on corruption in wildlife crime should also be published in development or governance-related journals.

MIXED METHODOLOGIES

There is a need for more robust research on corruption and wildlife crime using mixed methodologies and social science.

* CITES is the Convention on International Trade in Endangered Species of Wild Fauna and Flora

BACKGROUND TO THE GLOBAL CAVIAR MARKET

ALL
27 species

of sturgeon are listed on the IUCN Red List™

OF WHICH
16 species

are listed as Critically Endangered

FOLLOWING
21 years

of CITES* regulation, illegal trade continues to threaten the survival of sturgeon in the wild

THE SIX KEY
markets

of consumption and trade (based on legal trade reported under CITES) are China, France, Germany, Japan, Russia, and the USA

domestic markets

in China, the USA, Russia, and Japan lack implementation of a domestic caviar labelling system

CITES DATA SHOW

95%

of all legal caviar trade between 2000 and 2015 was from aquaculture sources

Harris, L. and Shiraishi, H. (2018). *Understanding the global caviar market. Results of a rapid assessment of trade in sturgeon caviar.* TRAFFIC and WWF joint report.



INTRODUCTION

Corruption is a severe threat to wildlife conservation globally. While conservation practitioner anecdotes and existing empirical research all point to corruption as a main facilitator enabling wildlife crime, there is still limited knowledge about what can change this situation and help reverse the pernicious impact of corruption on conservation outcomes in practice. Corruption has a negative impact on conservation by reducing the effectiveness of conservation programmes, reducing law enforcement and political support, as well as establishing incentives for the overexploitation of resources. It undermines the effectiveness and legitimacy of laws and regulations and can be an indicator of the presence of organised crime groups. Corruption needs to be addressed as a central part of the approach to tackling wildlife crime.

As part of a wider project by TRAFFIC in collaboration with WWF to understand global caviar markets and to identify hotspots for illegal trade (Harris and Shiraishi, 2018), funding was provided by WWF to incorporate an anti-corruption component, working in partnership with and under the guidance of the U4 Anti-Corruption Resource Centre. The objectives of this component were to deepen understanding of how corruption may be facilitating the flow of illegal caviar along the value chain, to identify possible intervention strategies, and to inform further studies concerning environmental / wildlife crime and corruption.

A typology of corruption for the illegal caviar trade was developed through the review of information gathered by TRAFFIC from academic literature and media reports, interviews with stakeholders who had some knowledge of illegal caviar trade, and the rapid market assessments in Beijing, Berlin, Chicago, Moscow, Paris and Tokyo that were conducted as part of the global caviar markets study (Harris and Shiraishi, 2018). Furthermore, a discussion group with anti-corruption, wildlife trade and sturgeon conservation experts (Table 1) was organised in April 2018 to discuss initial findings from TRAFFIC's rapid assessments, to refine the typology (Figure 3), to develop recommendations for policy and practice, and to build working relationships to support possible future studies (see Annex 1 for discussion group agenda).

This report summarises key themes of corruption and wildlife crime as drawn from the literature reviews and interviews, and salient points arising from the discussion group in April 2018.

This report is the output of a collaborative effort involving wildlife trade and conservation experts (TRAFFIC and WWF), anti-corruption experts / academics (U4 Anti-Corruption Resource Centre; Northumbria and Utrecht Universities).



SECTION 1 CAVIAR TRADE AND CORRUPTION

Outlines corruption risk along the caviar value chain and the relationships involved; identifies entry points for anti-corruption and anti-caviar crime interventions. These points draw on the knowledge and expertise from a discussion group, contextualised with findings from literature reviews and rapid assessments of key caviar markets (see Harris and Shiraishi, 2018).



SECTION 2 CORRUPTION AND WILDLIFE CRIME

Summarises key topics and salient points of discussion on themes of corruption within wildlife crime and other sectors.



SECTION 3 MOVING FORWARD

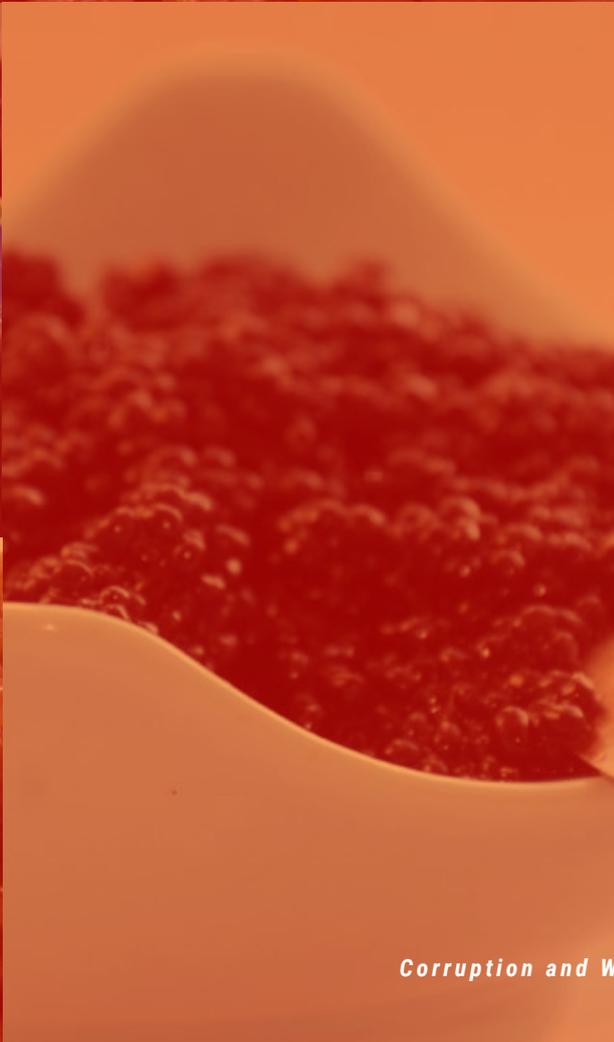
Formulates a set of recommendations for further understanding wildlife crime-related corruption, including in the caviar trade.

ORGANISATION / AFFILIATION	PARTICIPANT NAME AND ROLE
TRAFFIC	Stephanie Pendry, Wildlife Trade Information Co-ordinator
	Lindsey Harris, Programme Officer Europe
	Louisa Musing, Research Officer Europe
U4 Anti-Corruption Resource Centre (U4 ACRC)	Arne Strand, Director
	Aled Williams, Senior Program Advisor
	Saul Mullard, Senior Program Advisor
	Jessica Schultz, Senior Program Advisor
University of Northumbria	Tanya Wyatt, Associate Professor in Criminology
University of Utrecht	Daan van Uhm, Assistant Professor in Criminology
WWF	Rob Parry-Jones, Lead, Wildlife Crime Initiative, WWF International
	Jutta Jahrl, Life for Danube Sturgeons, WWF Austria
	Natalia Gozak, Senior Project Officer, Danube-Carpathian Program in Ukraine, WWF International

TABLE 1

List of participants, their roles and affiliations of those who attended the discussion group on corruption, caviar trade and wildlife crime in April 2018.





The background features a close-up of several Russian ruble banknotes, with a 5000 ruble note being the most prominent. The notes are slightly out of focus, showing details like the serial number 'XB 2726148' and the word 'ПЯТЬТЫСЯЧ' (Five Thousand). A silver caviar spoon is visible in the lower right corner, its handle extending towards the bottom. The entire scene is bathed in a warm, reddish-orange light, creating a dramatic and somewhat somber atmosphere.

SECTION 1

CAVIAR TRADE AND CORRUPTION



1.1 **CONTEXT AND BACKGROUND**

|| Corruption is defined as the abuse of entrusted power for private gain
(Transparency International, 2018)

CORRUPTION

While the above is the most common definition, others do exist and always include three common elements: abuse (misuse, violation) of entrusted power (duty, office etc.) and private benefit.

In everyday language, the term is also used more broadly to represent a wide variety of objectionable or immoral acts, and not only those associated with formal duty (U4 ACRC, 2018). There are several other terms that further explain key corrupt practices, including, but not limited to bribery, collusion and extortion (Figure 1).

Furthermore, corruption involves more than one party and there are various definitions that describe the different types of symbiotic and antithetical relationships involved (Figure 2).



DEFINITIONS

BRIBERY

The offer or exchange of money, services or other valuables, to influence the judgement of a person in a position of entrusted power or persuade them to do something in return, often in contravention of laws, rules and regulations.

COLLUSION

A secret or illegal co-operation or conspiracy to deceive others.

CONFLICT OF INTEREST

A conflict between an entrusted duty on the one hand, and the private interest of the duty-bearer on the other hand. For example, when an individual with a formal responsibility to serve the public participates in an activity that jeopardises his or her professional judgement, objectivity and independence.

EXTORTION

The unlawful demand or receipt of property or money using threat or force.

GRAND CORRUPTION

Grand corruption, also known as political corruption, is perpetrated at the highest levels of government and usually involves both substantial benefits for the officials involved and significant losses for the state and its citizens and can involve ministers taking multi-million dollar bribes to award lucrative government concessions, as well as illicit exchanges in the realm of policy formation. Large sums of money may be involved, but other benefits like high-level appointments and policy influence can be the currency of grand corruption.

ILLEGAL PAYMENTS

Payments for goods or services contrary to or forbidden by law.

PETTY CORRUPTION

Also known as "administrative" or "bureaucratic" corruption, the term refers to the everyday corruption that sometimes takes place when bureaucrats interact with the public. While the sums of money involved tend to be small, they are far from "petty" for the people concerned. Examples include paying bribes to get formal identification documents; enrollment of children in school; installation of a phone line, and so forth.

FIGURE 1

Definitions of corrupt practices from the U4 Glossary.

Source: <https://www.u4.no/terms>

SYMBIOTIC RELATIONSHIPS



COLLABORATION

involves a more sustained and direct association between legal and illegal parties.

RECIPROCAL

involves a common understanding as well as mutual benefits.

OUTSOURCING

occurs when a division of labour is agreed upon between legal and illegal actors, where one of the parties provides uniquely distinct services to the other.

EXTORTION

The unlawful demand or receipt of property or money using threat or force.

CO-OPTATION

is premised on unequal power relations resulting in a more coercive partnership for one of the parties.

FUNDING

is when a legitimate organisation may knowingly or unknowingly provide funding to criminals.

ANTITHETICAL RELATIONSHIPS



ANTAGONISTIC

is when illegal actors sell illegally obtained products in the context of competition with legal actors.

INJURIOUS

includes actors that undermine, attack or harm each other.

FIGURE 2

Passas' framework of symbiotic and antithetical relationships can be used to investigate the manifestation of corruption within the illegal wildlife market (Passas, 2002; van Uhm and Moreto, 2017)

CAVIAR TRADE

Organised crime groups are notoriously involved in the trafficking of caviar

High demand for wild-sourced caviar and restricted legal supplies provide opportunity for illegal entrepreneurs to reap enormous profits.

Several potential types of illegal trade of caviar and sturgeon products include:



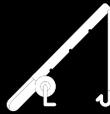
LAUNDERING

Mixing of illegal and legal products in one shipment.



EXCEEDING PERMIT

Amounts in shipment exceeding amount given on permit.



POACHING

Poaching of wild specimens for illegal sale of meat and caviar at open markets or through individual contacts.



CITES LABEL

Caviar sold without mandatory CITES labelling, or with labelling requirements not fully met.



PERMIT FRAUD

Falsified or forged CITES documents, or genuine CITES documents issued corruptly, to permit (re-)export.



MIS-LABELLING

Wild-sourced caviar from threatened sturgeon species deliberately mislabelled as aquaculture-derived specimens to allow laundering through legal trade avenues.



"BLACK-WASHING"

Aquaculture-derived products deliberately declared as wild-sourced or as a different species to sell at a higher price (known as "black-washing").

LINKAGES BETWEEN CORRUPTION AND CAVIAR TRADE

A review of available literature identified six areas of corruption believed to be associated with illegal trade of caviar and sturgeon products. The text below outlines each of these corrupt practices in more detail and provides examples from the literature, interviews and rapid market assessments.

■ **Illegal payments and extortion related to poaching**

In the illegal caviar trade this form of corruption is petty but could potentially be linked to grand corruption if large payments take place to buy political cover (includes funding relationships).

There was evidence in the literature that illegal caviar trade was conducted by organised crime groups who bribed officials (which demonstrates examples of **co-optive** and potentially **collaborative relationships**) and used violence (Sellar, 2014; van Uhm and Siegel, 2016). Many officials attempting to halt caviar smuggling have been killed—in the 1990s, two dozen members of a Russian anti-poaching unit were murdered, and in 1996, fifty-four Russian border guards assigned to disrupt the illegal caviar trade were killed in a bombing (Liddick, 2014).

Poachers are often protected by the police. For instance, in 1996, a fishing boat protected by private militia was intercepted by coast guards in Dagestan during transfer of poached sturgeon to trucks. While the coastguard tried to stop this activity, corrupt water police armed with sub-machine guns opened fire on the coast guards, and the trucks disappeared (van Uhm and Siegel, 2016). This is an example of a **collaborative relationship** where there is a direct association between legal and illegal parties.

Poaching of wild-sourced sturgeon was also reported to be attractive to local fishers due to socio-political changes after the collapse of the Soviet Union and high unemployment in fishing regions surrounding the Caspian Sea (an example of a **reciprocal relationship** where there is a common understanding by local fisherman and villagers as to the financial benefit of being involved in the caviar trade) (van Uhm and Siegel, 2016). For example, one illegally caught specimen can earn RUB170,000 in profit (USD5,000) which is an extremely high level of earnings in some rural regions (Nelleman *et al.*, 2014).

■ **Bribery and collusion to avoid prosecution for illegal caviar harvesting**

Within illegal caviar trade, this form of corruption is petty but could potentially be linked to grand corruption if large payments take place to buy political cover.

It was reported that in the Russian Federation poachers painted fishing boats with a specific mark to show police officials they had paid their bribes and could thus avoid inspection (van Uhm and Siegel, 2016). Poachers were reported to work in groups together with the police and inspectors (examples of collaborative and reciprocal relationships) bribing them to avoid prosecution for poaching (van Uhm and Siegel, 2016).

■ **Conflicts of interest and collusion between state-owned fishing companies and enforcement officials**

Collusion in this practice demonstrates a **collaborative or reciprocal relationship**. In the illegal caviar trade this form of corruption is petty.

During the Soviet era, the caviar trade in source countries such as the Russian Federation and Azerbaijan was state-controlled which provided high potential for conflicts of interest and collusion. In the Russian Federation, the state company regulated all sturgeon fishing by licensing or employing sturgeon fishermen, controlling all caviar processing facilities and acting as the country's CITES Management Authority, thus issuing permits for exports. It also employed enforcement officials who were authorised to enforce the country's fisheries legislation (Sellar, 2014). Today in the Russian Federation, aquaculture operations receive money from the government for efforts to restock rivers with sturgeon for conservation of the species. However, it is believed that collusion occurs as aquaculture operations work and share funding with illegal poachers informing them when the restocking takes place and when not to poach to be able to prove restocking has occurred.

Furthermore, in Azerbaijan, all aquaculture operations were state-run but are now privately owned and there are no standards for them to adhere to (FAO, 2013). At the discussion group, suspicions were raised about particular government funded aquaculture operations where guards were heavily armed for protection against potential criminal activity. The presence of these armed guards indicates the need to protect the resource against corruption and organised crime.

■ **Bribery and collusion to launder caviar for sale in legal and illegal markets including the use of falsified documents and mislabelling**

Criminal groups in the caviar trade are found to be regularly embedded in legal enterprises (upper world) that are used to hide their illegal activities (an example of outsourcing relationships).

It was found that legally registered companies involved in the aquaculture production of caviar use various methods to launder illegal wild-sourced caviar in the context of competition (an example of an antagonistic relationship). There was evidence of the use of legal documents as cover for illegal activities, for example: scientific fishing permits used as a cover to legalise catch of wild sturgeon in the Caspian Sea for commercial use; and, aquaculture facilities sourcing wild specimens for immediate caviar production when their own stocks were low (van Uhm and Siegel, 2016).

It was also found that some legally registered companies were laundering aquaculture-derived caviar as "wild-sourced" to supply demand for wild caviar and to earn higher profits. This "black-washing" of legal caviar is a unique corrupt practice for wildlife crimes, and possibly unique to the caviar industry. The more common ways of "laundering" involved the use of false or forged documents or providing incorrect information on container labels regarding the species or origin of caviar, and imitating well-known brands such as Russkaya Ikra. Other examples of mislabelling included: labels claiming the producer was Russia's Federal Agency for Fishery – a non-existent ministry (Sellar 2014); mislabelled caviar on sale in Dubai under the Caviar House brand name; and, the American firm Caviar & Caviar

printing counterfeit labels to use on caviar tins held in the United Arab Emirates, and then importing them into the USA as “legitimate Russian produce” (Liddick, 2014).

■ Bribery and collusion to facilitate transport of illegal caviar to domestic markets in source countries



“ I am famous for being a fascist, because I don't take bribes

Anonymous Russian Police Officer

Interviews conducted by D. van Uhm in 2014 revealed that coast guards, police and customs officials at airports in the Russian Federation all have a stake in the caviar trade, demonstrating reciprocal or collaborative relationships between criminals and enforcement officials.

One police officer interviewed was quoted as saying “I am famous for being a fascist, because I don't take bribes” (van Uhm and Siegel, 2016). Another source cited traders at markets in Moscow reporting that every morning between six and seven o'clock a truck with a convoy of four cars arrived at the back of the market with smuggled wild-sourced caviar. One of the smuggling methods is that there were four cars. The front car was the scout and would alert the other three cars to take an alternative route to Moscow if the police were not bribed or able to be bribed (van Uhm and Siegel, 2016).

■ Bribery and collusion to smuggle illegal caviar to export markets

According to the literature, routes for export of illegal caviar from range states included from the Caspian Sea overland to Moscow then through Belarus before entering the European Union (EU) through Poland.

Border officials were reportedly bribed at airports and borders to enable safe passage, including the bribery of Polish border guards to allow safe passage into the EU (van Uhm and Siegel, 2016). Another trade route to the EU was from Russia and Azerbaijan through Georgia and Turkey and into the EU. Furthermore, middlemen in Azerbaijan and Kazakhstan explained how they deploy airline employees to smuggle caviar, bribing customs officials to ensure safe export out of the country (van Uhm and Siegel, 2016).

Legal commercial fishing and trade in sturgeon species in Azerbaijan has not taken place since 2010. However, there was evidence that it is a country of origin for illegal (wild-sourced) caviar (van Uhm and Siegel, 2016) with possible involvement of Bulgaria, Iran and Armenia and smuggling routes overland to the EU via the Russian Federation or Turkey. Anecdotal information also noted caviar from other Caspian states (Azerbaijan, Russian Federation and Turkmenistan) was being repackaged as Iranian before export to Europe (van Uhm and Siegel, 2016). In 2001, the United Arab Emirates (UAE) was under a CITES trade suspension. This was because USD25 million worth of caviar, which originated from

the Russian Federation and Kazakhstan, was destined for illegal export using falsified CITES permits¹ to USA and Europe. Notably, the facilities involved were heavily guarded by armed Russian nationals (Sellar, 2014).

Individuals reportedly transport wild-sourced caviar into the EU via airplanes or refrigerated vehicles, risking arrest or paying bribes to officials if caught (van Uhm and Siegel, 2016); fines are reportedly not proportional to potential profit in the commodity chain nor to the damage done to wild populations (J. Geßner², *pers. comm.*, 2017). Anecdotal information also suggests airline employees have been deployed to smuggle wild-sourced caviar from Azerbaijan, Kazakhstan and Iran, bribing customs officials to allow passage (an example of funding relationships) (van Uhm and Siegel, 2016).

It was also reported that groups of people had been known to travel together with 125 g of caviar each (the legal limit exempt from CITES document requirements, under the personal effects exemption³) across borders and then caviar is combined at the destination for sale at markets (Parry-Jones⁴, *pers. comm.*, 2018). Russian businessmen or immigrants were mentioned by several interviewees as involved in the sale of illegal caviar in Europe and North America (van Uhm and Siegel, 2016).

The discussion group noted that more evidence is needed to determine if this part of the value chain is particularly prone to corruption risk, or whether problems arise due to other factors, such as capacity deficits among customs and other enforcement officials. Possibly, these officials are turning a blind eye to avoid additional work rather than acting corruptly.

1.2 OTHER KEY POINTS

- Caviar trafficking does not occur in isolation, and, in some cases, has been linked to weapons trafficking (van Uhm, 2018).
- Consumer preference for caviar originating from the wild rather than from aquaculture operations was identified as a key driver of illegality. Without such demand from retailers and consumers, or the perception that wild-sourced caviar is "better", there would be less need for illegal trade. Caviar consumers are high-end wealthy individuals, similar in some respects to consumers of ivory; thus, lessons may potentially be drawn from ivory demand reduction strategies.

Figure 3 offers an overview of the basic typology of corrupt practices identified in the illegal caviar trade, and disaggregates these by site, location in the trade chain, typical actors involved, type of corruption, and the types of relationships involved.

¹ The suspension was lifted in 2003.

² IGB Leibniz-Institute, Berlin

³ CITES Resolution Conf. 12.7 (Rev. CoP17) Conservation of and trade in sturgeons and paddlefish

<https://www.cites.org/sites/default/files/document/E-Res-12-07-R17.pdf>

⁴ Wildlife Crime Initiative, WWF International

stages along the caviar "VALUE CHAIN"

corresponding corrupt practice

actors typically involved in
CORRUPT PRACTICES



CORRUPT PRACTICE

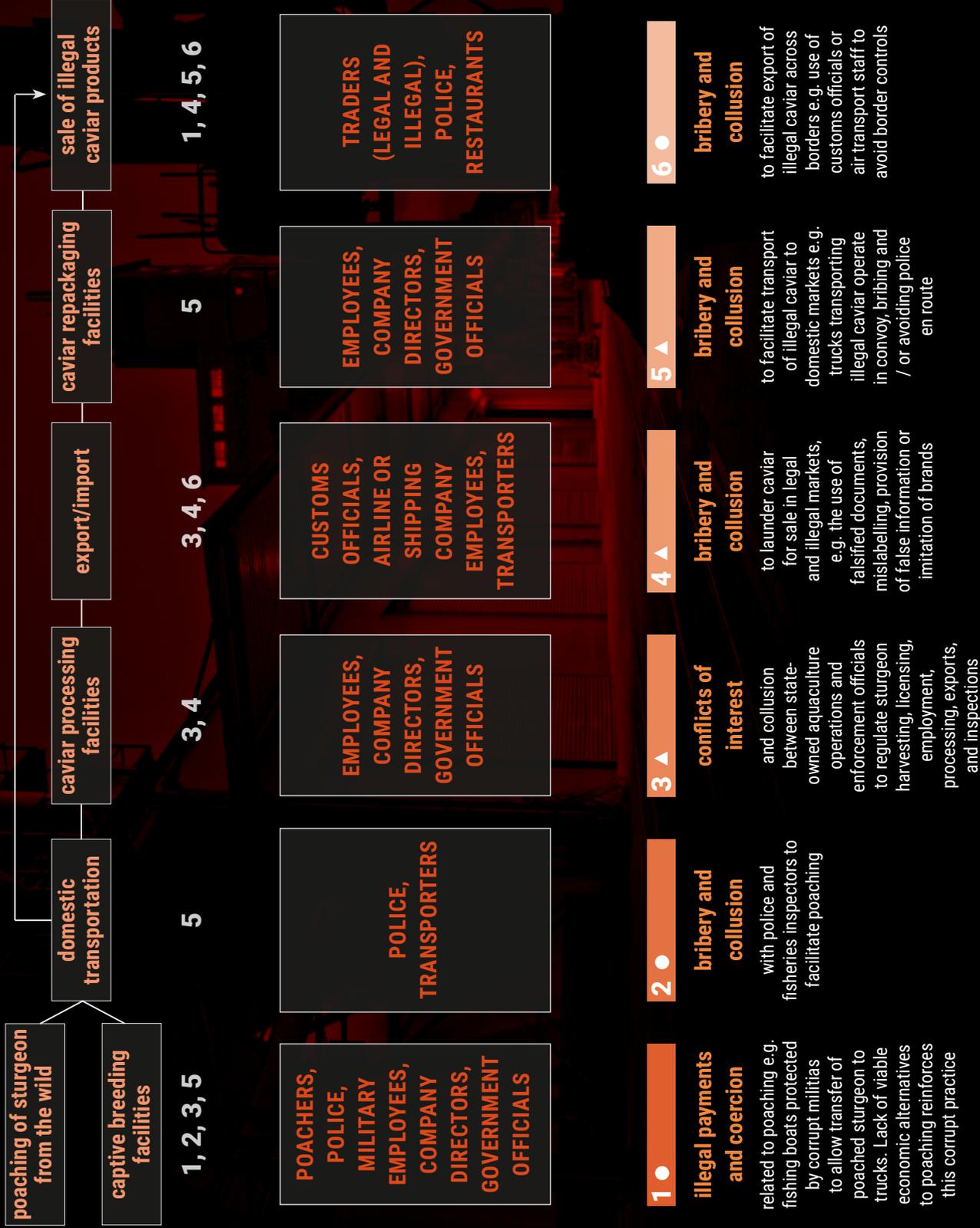


KEY

- ▲ petty corruption
- petty corruption but could potentially be linked to grand corruption if large payments are used to buy political cover

FIGURE 3

Caviar trade corruption typology based on literature review and refined during the discussion group with anti-corruption and wildlife conservation experts.



1.3 NEXT STEPS FOR FUTURE RESEARCH INTO CORRUPTION AND CAVIAR TRADE

This typology is a first step in understanding how corruption facilitates illegal caviar trade and how to develop interventions to address it. The purpose is to guide further research to gather more concrete evidence based on the theories and relationship types identified, to inform responses to illegality in the caviar trade, and potentially more widely in illicit wildlife trade.

Next steps for conservation and anti-corruption experts to move forward with this are:

- Compare the dynamics of the caviar trade against trafficking in other types of wildlife to identify any similarities or differences;
- Gather further data on corrupt practices, for example, by requesting CITES Secretariat mission reports that have been conducted in the Russian Federation focusing on caviar trade;
- Conduct further analysis to understand whether there are links between the different stages along the caviar value chain. Actions that could be taken include conducting a financial audit for the different stages of the value chain or using social network analysis to improve the understanding of the actors behind the different stages along the chain;
- Public financial management reform seems to be one of the most effective anti-corruption means. Strengthening auditing and budgeting processes have a general disciplining effect on other functions of government. For example, some measures that could be effective in ensuring legality along the caviar value chain include regular auditing of revenue and expenditures of aquaculture operations and fisheries operations. Regularly publishing full financial statements of government owned / funded aquaculture operations would also provide transparency and public scrutiny. While there could be a bias due to research focusing on this area, exploring whether this approach is also applicable in the wildlife crime context would be warranted; and
- Develop a corruption risk assessment for wildlife crime in general and specifically for caviar crime.





SECTION 2

CORRUPTION AND WILDLIFE CRIME

2 SUMMARY

A 2016 review of existing research into wildlife crime and corruption conducted by U4, WWF and IIED⁵ (Williams, Parry-Jones and Roe, 2016) was presented.

|| existing studies tend to discuss corruption associated with wildlife crime through a conservation lens

This report identified that existing studies tend to discuss corruption associated with wildlife crime through a conservation lens, with only a few examining corruption and wildlife crime through an explicit anti-corruption lens. Most research concerning corruption in wildlife crime was published in conservation journals rather than development or governance-related journals where anti-corruption research is usually found. Methods used in the existing studies included household surveys, participant observation, qualitative interviews, statistical analyses and case studies. The review concluded that there is a lack of research using mixed methodologies (combining quantitative data with qualitative information) and that evidence of the effectiveness of anti-corruption interventions is lacking.

Discussion among the group focused on the following themes and ways of moving forward:

■ Approaches to tackling corruption

Consideration of how social norms and networks affect corruption is essential when developing frameworks to deal with corrupt practices and to develop interventions:

- Corruption is often rooted in a country's traditions and political development and can flourish when institutions are weak and where the normal motivations for the public sector to work productively may be undermined. Some economic research argues that in these cases, corruption can be efficiency enhancing for the economy if it is merely a transfer of money from one party to another. Bribes can also, in theory, increase economic efficiency, if they allow parties to avoid overly restrictive regulations (The World Bank, 1997). However, these models assessing the possible positive effects of corruption consider static outcomes rather than the long-term effects of corruption (The World Bank, 1997);
- Social network analysis has been recommended to understand how corrupt networks in wildlife crime operate in practice. Individuals are embedded in webs of social relations and interactions, and if pro-corruption social norms exist in those social networks, individuals are likely shaped towards corruption rather than away from it. In some contexts, corruption may be the expected form of behaviour and simply "the way of doing things" that serves certain social functions such as

⁵ International Institute for Environment and Development

organisational structure (Williams and Dupuy, 2018). Thus, rather than corruption being a form of "rule breaking" it may actually be seen as "rule following" that depends on the behaviour of society (Berninghaus *et al.*, 2013). Understanding and considering how corruption can be tied to social and cultural norms, functions and relations will help those trying to tackle corruption in wildlife crime grasp why this phenomenon is so persistent in certain sectors, institutions and localities (Ayling, 2012). One potential approach suggested for wildlife crime was to interview retired wildlife crime officers who may be more willing to provide information as they are no longer directly involved;

- Crime and the risk of corruption in certain areas is influenced by factors including, inter alia, conflict, political unrest and instability, economic crises, oppression, supply shortages and differences in values and priorities among states (Passas, 1999). These factors are examined under the umbrella concept of "criminogenic asymmetries" which refers to the structural discrepancies, mismatches and inequalities in the areas of economy, law, politics and culture (Passas, 1999). These asymmetries can cause crime by fuelling demand for illegal goods and services, by generating incentives for people and organisations to engage in illicit activities, and thus reduce the ability of authorities to control crimes (Passas, 1999). In the context of the caviar trade, there are several criminogenic factors that make illegal caviar trade attractive; the high prices paid for caviar, social instability in countries of origin and loopholes in regulation, to name a few. The poor fishing villages around the Caspian, which are sometimes only accessible by boat, are vulnerable places for criminal activities and sometimes these forms of crime are a normal response to the need to sustain livelihoods and to cultural expectations (Passas, 1999; Bovenkerk, 2001; van Uhm and Siegel, 2016); and,
- Where the governance structure and governments themselves can be corrupt and be a barrier to move forward, understanding and changing the social norms could be more effective than an enforcement orientated approach.

|| there are considerable challenges in obtaining robust quantifiable data on corruption

No complete overview of the types, mechanisms and modalities of corruption in wildlife crime in all locations currently exists, highlighting the need for further research and more robust methodologies.

There are considerable challenges in obtaining robust quantifiable data on corruption, however, drawing on existing knowledge among conservation practitioners on the prevalence, scope and scale of corruption associated with wildlife crime is required which could then be systematically collated and shared. A recent Organisation for Economic Co-operation and Development (OECD) study, which provides a structured analysis of how corruption facilitates wildlife crime based on research conducted in four source and transit countries in East and Southern Africa, is one such example useful for conservation practitioners (OECD, 2018).

A top-down and bottom-up approach needs to be adopted, particularly for corruption and wildlife crime as there are large differences between commodity types. For example, smuggling caviar uses different mechanisms to smuggling timber due to the scale of the commodity and different shipment modus operandi used. Although the modalities for corruption may be the same, it is critical to understand the local nuances of corrupt practices at the source and destination for each specific wildlife crime.



|| the use of social science approaches to understand and tackle corruption is essential

The use of social science approaches to understand and tackle corruption is essential. However, asking the right questions and in a manner that ensures responses reflect the truth can be challenging. Nuno and St John (2015) provide a good overview of methods for asking sensitive questions. Social science approaches should take place in situ to be effective (for example, interviewing truck drivers at truck stops). A good example of using mixed methodologies can be found in Burgess *et al.*, (2012) where the authors combine quantitative data with qualitative interviews.

■ Collaboration

Collaboration between anti-corruption experts and wildlife experts should be continued and should draw on expertise from individual researchers on asset recovery and corruption.

- For example, a group of organisations convened by the Durrell Institute of Conservation and Ecology (DICE), Transparency International – UK Chapter and WWF International, formed the network Countering Conservation-related Corruption (3C Network) to identify, record, prevent and combat corruption which deleteriously affects populations of wild animals and plants. Some partners that could further collaborate to tackle corruption are listed in Table 2.
- Collaborations should focus on sharing lessons learnt across environments. Existing lessons from anti-corruption research should also be utilised by those working on corruption in wildlife crime to help raise the profile of wildlife crime within the field of anti-corruption research. For example, at a recent G20 anti-corruption event it was questioned why there should be focus specifically on corruption in wildlife crime and not corruption more broadly. Another issue is that wildlife crime is often seen as a victimless crime and less important than, for example, human rights abuses. Therefore, awareness needs to be raised regarding the links between wildlife crime and human rights, as well as the potentially mutually supportive agendas of human rights and anti-corruption. The work of John H. Knox, former Special Rapporteur on Human Rights and the Environment

provides a good starting point regarding the interdependencies of a healthy environment and human rights, and to inform approaches.

conservation practitioners	anti-corruption / governance-focused organisations
WWF	Transparency International
Durrell Institute of Conservation and Ecology (DICE) – University of Kent	Organisation for Economic Co-operation and Development (OECD)
TRAFFIC	World Resources Institute (WRI)
The Wildlife Conservation Society (WCS)	UK Royal United Services Institute (RUSI)
United for Wildlife	UK Department for International Development (DFID)
	UK School of Oriental and African Studies Anti-Corruption Evidence Programme (SOAS ACE)
	USAID and US Department of State
	The Terrorism, Transnational Crime and Corruption Centre (TraCCC)
	German Society for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ)
	United Nations Office on Drugs and Crime (UNODC)

TABLE 2

Potential organisations for collaboration.

|| as enforcement personnel are trained to detect certain methods of smuggling, criminals adapt their modus operandi

- Tackling corruption in wildlife crime requires a multi-disciplinary and multi-dimensional approach. As criminals adapt and change according to alterations in political, social and environmental situations, so anti-corruption interventions must be iteratively reviewed and adapted accordingly. For example, stricter border control may change smuggling routes, and bribes may increase to allow safe passage. However, increased controls and regulations can result in corruption networks infiltrating the formal trade system. As enforcement personnel are trained to detect certain methods of smuggling, criminals adapt their modus operandi e.g. customs officials may be trained to look for ivory tusks in X-ray images, so criminals will adapt and change the way they transport ivory tusks (i.e. cut it into smaller pieces) to make it harder for customs to detect. Some methods may be opportunistic rather than corrupt, for example, trade routes could be selected because there are no controls, or enforcement officials may turn a blind eye as they do not want to deal with the paperwork rather than corruption facilitating passage of goods.

■ Areas for further research

A recent study examining confiscations of wildlife in the EU found over 30% of perpetrators involved were legitimate business owners (Van Uhm, 2016).

- There is significant overlap between different crimes and the types of corruption involved, for example, the networks and individuals trafficking wildlife commodities are also used for human, drugs and weapons trafficking, therefore crimes should not be viewed in isolation.
- Identifying links between legal and illegal actors should also be studied. For example, people with knowledge of legal systems who know how to influence regulations and utilise loopholes.
- To help build an evidence base of how corruption works, researchers should follow money flows, including looking into the results of financial audits. It is also vital to carry out field visits to confirm how money is being spent on the ground and that what is being reported to donor agencies is legitimate. For example, when an external audit was conducted on private loans provided in Mozambique it was found that the loans provided for a range of physical assets (including a tuna fishing fleet) which, in fact, did not exist (Williams and Isaksen, 2016).

■ Measuring the effectiveness of interventions

Previous research has shown that not conducting field visits can lead to large implementation gaps (see Cavanagh, 2012 and Jansen, 2009).

Interventions should be refreshed and checked for effectiveness to adapt as the corrupt practices change

- Interventions should be refreshed and checked for effectiveness to adapt as the corrupt practices change. Understanding the potential corruption risks that interventions may encounter can help to determine how to mitigate and reduce corruption before implementation (see page 22 for more information on corruption risk assessments). For example, Indonesia's Corruption Eradication Commission (Komisi Pemberantasan Korupsi), abbreviated as the KPK) implemented a highly selective recruitment strategy with the applicants undergoing thorough background checks as well as technical and psychological tests to reduce the risk of employing corrupt individuals into the agency (Bolongaita, 2010). A good example of interventions developed from an understanding of the corruption typology is found in Milledge, Gelvas and Ahrends' 2007 study of corruption in Tanzania's timber trade which resulted in policy and multi-stakeholder dialogues, leading to development of action plans in collaboration with timber trade companies, and ultimately also engagement of broader civil society (Milledge, Gelvas and Ahrends, 2007).

THE THREE BASIC PHASES OF CORRUPTION RISK ASSESSMENT

1

RISK IDENTIFICATION

What are the specific types of corruption risks that are likely to affect the desired outcomes of the activity? This requires identifying specific corruption risks in an interventions theory of change (see above for examples);



2

RISK ASSESSMENT

This should use both a magnitude of probability and a measure of impact to understand how serious these risks are;



3

RISK MITIGATION

What can be done to reduce the potential frequency and / or effect of the behaviours identified? These could include strengthening internal processes, conducting activities to mitigate risky activities or mitigate risky conditions in the external environment or a combination of these approaches.



A close-up photograph of industrial machinery, possibly a conveyor belt system, with a strong blue and orange color palette. The image shows various metal components, including rollers and structural beams, with a focus on texture and mechanical detail.

SECTION 3

MOVING FORWARD

KEY GENERAL SUGGESTIONS FOR

ENGAGEMENT ON CORRUPTION IN WILDLIFE CRIME



ROBUST RESEARCH

Robust and reliable research on wildlife crimes should be conducted to understand how related social networks are constituted, and how social norms influence corruption. In that context, emphasis should be placed on the likely failure of attempting directly to transpose Western values to other regions. Therefore, efforts should be made to utilise a robust mixed-methodological approach that considers local / national / regional social norms, networks, traditions and politics.

DATA ANALYSIS

Data and information already available on corruption in wildlife crime should be collated and analysed to identify common practice modalities of corruption and mechanisms used for corrupt practices to understand better how corruption differs between wildlife commodities and inform future interventions.



COMPLEMENTARY PRACTICES

Lessons from other crime areas and corruption research should be drawn upon with a focus on best practices and whether those lessons are transferable to wildlife crime. It should be explored whether corruption in wildlife crime differs from corruption in other crimes

COLLABORATION WITH EXPERTS

Build relationships and further collaborate with anti-corruption experts to raise the profile of wildlife crime and corruption in international fora to ensure it is considered a priority. When considering possible partnerships, the possible outreach or multiplier effect of the partners should also be considered.



DISSEMINATION OF FINDINGS

Research findings on corruption in wildlife crime should also be published in development or governance-related journals and not exclusively in conservation journals to put the emphasis on the criminality elements and less on wildlife.

MIXED METHODOLOGIES



There is a need for more robust research on corruption and wildlife crime using mixed methodologies and social science, including the possibility of interviewing retired wildlife crime officers. In that context, training by relevant experts would be needed for relevant stakeholders relating to corruption methodologies, such as corruption risk assessments or social network analysis.

DEVELOPMENT AGENCIES

Involving development aid agencies as donors for anti-corruption projects could help increase funding sources for anti-corruption projects in wildlife crime (and more generally) and provide avenues for sharing findings.





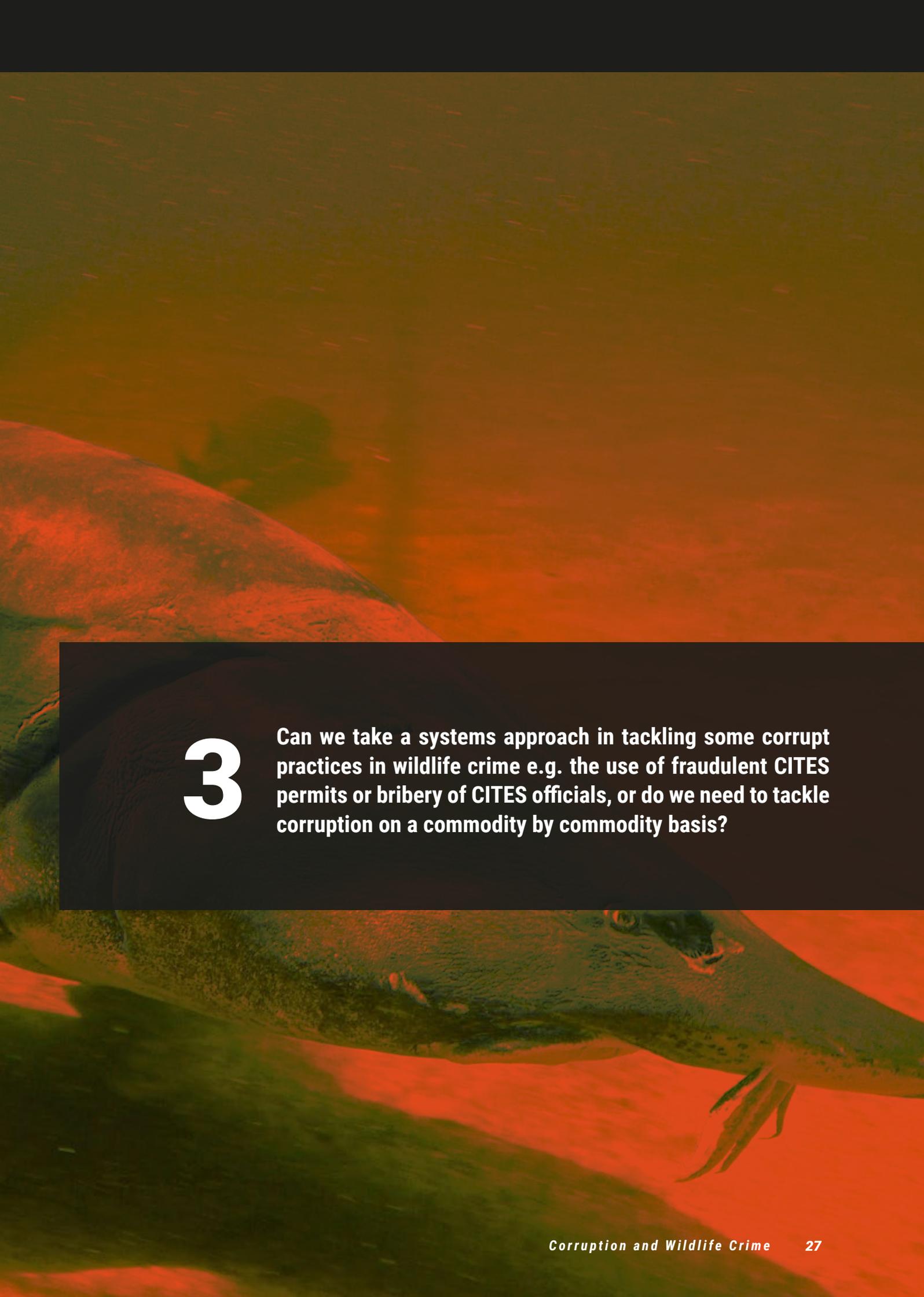
**QUESTIONS FOR FUTURE RESEARCH INTO
CORRUPTION AND
WILDLIFE CRIME**

1

How do we understand if corrupt practices in wildlife crimes work in isolation or are linked to the broader political economy? How do we assess sectorally-specific interventions in the context of broader reform?

2

How do we deepen understanding of financial elements linked to wildlife crime and corruption?



3

Can we take a systems approach in tackling some corrupt practices in wildlife crime e.g. the use of fraudulent CITES permits or bribery of CITES officials, or do we need to tackle corruption on a commodity by commodity basis?

REFERENCES

AND FURTHER READING

- Ayling, J. (2012). *What sustains wildlife crime? Rhino horn trading and the resilience of criminal networks*. Transnational Environmental Crime Project. Working Paper No. 2. Australia National University. Canberra.
- Berninghaus, S. K., Haller, S., Krüger, T., Neumann, T., Schosser, S., Vogt, B. (2013). Risk attitude, beliefs, and information in a corruption game: an experimental analysis. *Journal of Economic Psychology* 34: 46–60.
- Bolongaita, E. (2010). *An exception to the rule? Why Indonesia's anti-corruption commission succeeds where others don't – a comparison with the Philippines Ombudsman*. U4 Issue No. 4. Chr. Michelsen Institute. Bergen.
- Bovenkerk, F. (2001). *Misdaadprofielen*. Meulenhoff, Amsterdam.
- Burgess, R., Hansen, M., Olken, B.A., Potapov, P., and Sieber, S. (2012). The political economy of deforestation in the tropics. *The Quarterly Journal of Economics*. pp. 1707–1754.
- Cavanagh, C. (2012). *Unready for REDD+? Lessons from corruption in Ugandan conservation areas*. Available at: <https://www.cmi.no/publications/file/4478-unready-for-redd.pdf>.
- FAO. (2013). *Fisheries and aquaculture in the Republic of Azerbaijan: A review*. FAO Fisheries and Aquaculture Circular No. 1030/4.
- Harris, L. and Shiraishi, H. (2018). *Understanding the global caviar market: Results of a rapid assessment of trade in sturgeon caviar*. TRAFFIC and WWF joint report.
- Jansen, E. G. (2009). *Does aid work? Reflections on a natural resources programme in Tanzania*. U4 Issue No.2.
- Liddick, D. (2014). The dimensions of a transnational crime problem: the case of iuu fishing. *Trends in Organized Crime* 17(4): 290–312. doi: 10.1007/s12117-014-9228-6.
- Milledge, S. A., Gelas, I. and Ahrends, A. (2007). *Forestry, Governance and national development: lessons learned from a logging boom in Southern Tanzania*. TRAFFIC East/Southern Africa / Tanzania Development Partners Group / Ministry of Natural Resources of Tourism. Dar es Salaam, Tanzania.
- Nelleman, C., Henriksen, R., Raxter, P., Ash, N., Mrema, E. (2014). *The environmental crime crisis – threats to sustainable development from illegal exploitation and trade in wildlife and forest resources. A UNEP Rapid Response Assessment*. Nairobi and Arendal. Available at: www.grida.no.
- Nuno, A. and St John, F. A. V. (2015). *How to ask sensitive questions in conservation: A review of specialized questioning techniques*. *Biological Conservation*, 189, pp. 5–15. doi: 10.1016/j.biocon.2014.09.047.
- Organisation for Economic Co-operation and Development (OECD). (2018). *Strengthening governance and reducing corruption risks to tackle illegal wildlife trade: lessons learnt from East and Southern Africa*. Illicit Trade, OECD Publishing, Paris. <https://doi.org/10.1787/9789264306509-en>.
- Passas, N. (1999). Globalization, criminogenic asymmetries and economic crime. *European Journal of Law Reform*. Vol. 1. No. 4.

- Passas, N. (2002). *Cross-border crime and the interface between legal and illegal actors*. in van Duyne, P. ., von Lampe, K. and Passas, N. (eds). *Upperworld and Underworld in Cross- Border Crime*. Wolf Legal Publishers, Nijmegen.
- Sellar, J. (2014). *The UN's lone ranger: combatting international wildlife crime*. Whittles Publishing, Caithness.
- Spector, B., Winbourne, S., Dinimio, P. (2015). *Practitioner's guide for anticorruption programming*. USAID.
- Spector, B. (2015a). *What to avoid and what we don't know about fighting corruption*. MSI Global Anticorruption Impacts: Technical Notes on What Works. USAID, MSI.
- Spector, B. (2015b). *What works in fighting corruption: making sense of evidence-based findings*. MSI Global Anticorruption Impacts: Technical Notes on What Works. USAID, MSI.
- The World Bank. (1997). *Helping countries combat corruption: the role of the World Bank*. Poverty Reduction and Economic Management The World Bank.
- Transparency International. (2018). *What is corruption?* Available at: <https://www.transparency.org/what-is-corruption>
- U4 Anti-Corruption Resource Centre. (2018). *Glossary*. Available at: <https://www.u4.no/terms>
- Van Uhm, D. P. and Moreto, W. D. (2017). *Corruption within the illegal wildlife trade: a symbiotic and antithetical enterprise*. *The British Journal of Criminology*, (October), pp. 1–22. doi: 10.1093/bjc/azx032.
- Van Uhm, D. P. and Siegel, D. (2016). *The illegal trade in black caviar, trends in organized crime*, 19: 67–87. doi: 10.1007/s12117-016-9264-5.
- Van Uhm, D.P. (2016). *Illegal trade in wildlife and harms to the world*. in Spapens, A.C.M., White, R. and Huisman, W. (eds.), *Environmental Crime in Transnational Context*. Farnham: Ashgate Publishing, Ltd.
- Van Uhm, D.P. (2018). *The nested nature of corruption within the illegal caviar trade*. PowerPoint Presentation at Corruption, caviar trade and wildlife crime discussion group, 18th April 2018.
- Williams, A. and Isaksen, J. (2016). *Corruption and state-backed debts in Mozambique: What can external actors do?* U4 issue, No. 6.
- Williams, A., Parry-Jones, R. and Roe, D. (2016). *The resource bites back: entry-points for addressing corruption in wildlife crime*. U4 issue, No. 2.
- Williams, D. A. and Dupuy, K.E. (2018). Will REDD+ safeguards mitigate corruption? Qualitative evidence from Southeast Asia. *The Journal of Development Studies*. DOI: 10.1080/00220388.2018.1510118.
- WWF and TRAFFIC (2015). *Strategies for fighting corruption in wildlife conservation: A primer*. Gland, Switzerland. Available at: http://wwf.panda.org/wwf_news/?257350/Strategies-for-fighting-corruption-in-wildlife-conservation.
- Wyatt, T. (2014). *How corruption enables wildlife trafficking*. in Williams, A. and Le Billon, P. (eds). *Corruption, natural resources and development: from resource curse to political ecology*. Cheltenham and Northampton (MA): Edward Elgar Publishing.
- Wyatt, T. and Cao, A. N. (2015). *Corruption and wildlife trafficking*. U4 Issue, No. 11.

ANNEX I: AGENDA FOR

CORRUPTION, CAVIAR AND WILDLIFE CRIME DISCUSSION GROUP



TRAFFIC, U4 ACRC, WWF

Wednesday 18th April 2017 08.30 – 16.00.

3rd Floor Meeting Room, Chr. Michelsen Institute, Bergen, Norway

SUMMARY

Corruption is a severe threat to wildlife conservation globally. While conservation practitioner anecdotes and existing empirical research all point to corruption as a main facilitator enabling wildlife crime, there is still limited knowledge about what can change this situation and help reverse the pernicious impact of corruption on conservation outcomes in practice.

As part of a wider project by TRAFFIC in collaboration with WWF to understand global caviar markets and to identify hotspots for illegal trade, an anti-corruption component has been incorporated, working in partnership with and under the guidance of the U4 Anti-Corruption Resource Centre to understand how corruption may be facilitating and affecting illegal caviar trade along the value chain.

We invite you to attend a discussion group bringing together experts on (anti-)corruption, on wildlife trade and on sturgeon conservation to share initial findings and to develop the research agenda, methods and studies needed regarding the caviar trade, and concerning wildlife crime in general. The outputs of the group will be included within the wider report on global sturgeon trade being developed by TRAFFIC for WWF.

PARTICIPANTS

Colleagues from TRAFFIC and WWF working on wildlife trade, anti-corruption and WWF's global sturgeon strategy, as well as U4 advisors and experts from other institutions (e.g. Chr. Michelsen Institute (CMI), the Norwegian School of Economics (NHH)) working on anti-corruption topics will be invited to attend. The Discussion Group will be moderated by Aled Williams, U4 Senior Advisor working on anti-corruption in natural resource and energy sectors.

OBJECTIVES

Share initial findings from the TRAFFIC study on the global caviar trade including corruption evidence / aspects;

Present, discuss and further refine a corruption and caviar trade typology, reflecting on the initial TRAFFIC study findings;

Discuss and develop possible recommendations for policy and practice, including a corruption risk assessment and corruption risk management approach for caviar trade and wildlife trade interventions;

Discuss and develop ideas for further investigation of corruption in the caviar trade, and more generally in wildlife crime.

AGENDA

SESSION

Welcome and introductions

Session 1:

Taking the corruption and wildlife crime research agenda forwards

- Where are we today in terms of published research on corruption and wildlife crime?
- What are the major gaps in research on corruption and wildlife crime?
- How could these gaps be narrowed (including reflections on necessary collaborations and types of research)?

Presentation:

The nested nature of corruption within the illegal caviar trade (Daan van Uhm, Utrecht University)

This presentation focuses on the role of corruption in facilitating the illegal caviar trade. It attempts to contribute to the literature by disentangling the existence, influence and nested nature of corruption within the illegal caviar trade based on ethnographic fieldwork conducted in Russia and Europe. By utilizing theoretical concepts of symbiotic and antithetical relationships of corruption, this presentation examines the presence of corruption within illegal caviar trafficking influenced by different socio-political and cultural settings. The outcomes help to understand the broader picture of corruption in the context of illegal wildlife trafficking, and caviar trafficking in specific.

Session 2:

Corruption and caviar: Initial findings from the global TRAFFIC study

- What do initial findings from the TRAFFIC study tell us about the role of corruption in the global caviar trade?
- What were the limitations/benefits of the available data from a corruption research perspective?

Session 3:

Developing a typology of corruption and the caviar trade

- How can the draft typology on corruption and the caviar trade be further developed with reference to other corruption and illegal wildlife trade research?
- Can we develop any possible recommendations for mitigation or prevention?
- How can we evaluate success?

Session 4:

Corruption risk assessment and risk management approaches for wildlife conservation interventions

- What does corruption risk assessment and corruption risk management mean?
- What would a corruption risk assessment and corruption risk management approach look like to appropriately capture the nuances of corruption forms affecting wildlife crime and/or wildlife conservation interventions?
- How should information from corruption risk assessments and corruption risk management approaches be used to inform anti-wildlife crime/wildlife conservation interventions?

IMAGE CREDITS

Unless otherwise stated, all images are Creative Commons 2.0 Non-attribution.

PAGE

iv/v Lake sturgeon *Acipenser fulvescens* © Eric Engbretson Underwater Photography / WWF-Canada

2/3 All market survey photos © Louisa Musing / TRAFFIC

16 Atlantic Sturgeon *Acipenser sturio* from a breeding station at Paleostomi Lake Colkhети, Georgia © Hartmut Jungius / WWF

vectors Supplementary vector graphics courtesy of vecteezy.com

maps Map vectors courtesy of freevectormaps.com



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.

For further information contact:
TRAFFIC
Global Office
David Attenborough Building
Pembroke Street
Cambridge CB2 3QZ
UK

Telephone: +44 (0)1223 277427
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

