CONSERVATION IN HD

Special Issue

Taking a Holistic Approach to Combat Wildlife Crime

Photos: tiger by Frank Kohn, USFWS (top left); white rhinos by Karl Stromayer, USFWS (top right); ground pangolin by David Brassard for Creative Commons (bottom left); African elephant by Michelle Gladd, USFWS (bottom right)

June 2020 | Issue 10
A Note from Natalie Sexton, Human Dimensions Branch Chief .................................................................3

Crimes Against the Planet..................................................5

Current Interventions.......................................................5

HD in Action: Using Social Science to Enhance Community Partnerships for Combating Sea Cucumber Poaching and Trafficking in Yucatán, México .................................................................9

Framing Up Wildlife Crime: AZA Studies How Different Messages Resonate ..........................................9

Simple Ways to Save Wildlife ...........................................11

More on Social Science and Wildlife Crime: Watch and Listen ..............................................................11

COMBATING WILDLIFE CRIME: TOWARD AN INTEGRATED APPROACH

Featuring Dr. Meredith Gore, Michigan State University & Dr. Christine Browne, U.S. Fish & Wildlife Service
A Note from Natalie Sexton, Human Dimensions Branch Chief

When it comes to the complexities of wildlife crime, we know it’s harmful to people, wildlife, and the planet; it’s happening here in the U.S. and around the world; and a multi-disciplinary approach is necessary for the U.S. Fish & Wildlife Service and others to successfully understand and address this complex issue.

Biologists and law enforcement are critical to understanding, preventing, reducing, and solving wildlife crime. Biologists ask, “What species are being taken illegally from their natural habitats? What are the impacts on wildlife populations and ecosystems?” Law enforcement asks, “What species is it? Can it be legally traded within and across borders?” However, much like other types of crime, social science also plays a crucial role. As social scientists, we ask: “What are the motivations, values, beliefs, and intentions of the various actors involved?”

Every step along the wildlife trafficking chain – from source to transit to destination – involves people and their behaviors. In order to conserve species and get to the crux of the problem we must find ways to shift the behavior of individuals and groups. To enable change, first it is necessary to understand the people involved in wildlife crime and what motivates them to take certain actions. Social science offers methods and tools from the disciplines of criminology, psychology, economics, and more that can help us to monitor and measure illicit behavior, understand who is involved and why they participate, and inform and evaluate comprehensive interventions alongside policy and law enforcement.

In this special issue of Conservation in HD we dive deeper into wildlife crime and share how social science can be used to address this national and global conservation priority. In producing this special issue, we have reached out to the USFWS Office of Law Enforcement, USFWS International Affairs Program, and academic partners for their expertise and we acknowledge and thank all of our contributors and reviewers for their efforts.

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WILDLIFE CRIME

Wild flora and fauna can be exploited by individuals or groups along the entire supply chain, from poaching and transport to processing and selling.

- Over 7,000 species are affected
- From African elephants to North American turtles

SERIOUS IMPACTS

- Threatens wildlife populations and biodiversity
- Risks to local, national, and global security
- Endangers human health and well-being
- Economic losses between US $7-23 billion per year
Crimes Against the Planet

Wildlife crime, also referred to as wildlife trafficking, is the illegal take or trade of protected or managed species and their parts or products. It occurs at different levels, from illegal take at the local level to complex global trafficking rings operated by organized and advanced crime syndicates. Wildlife crime is difficult to monitor and track because it is often done secretly and also in part because of its linkages to other types of crime such as fraud, money laundering, and drugs, weapons, and human trafficking. Despite these linkages, wildlife crime does not get the same attention as other crimes and is often perceived as a “victimless” crime.

Impacts of wildlife crime are wide-ranging and far-reaching. The most obvious impact is on biodiversity, as the removal of animals and plants puts individual species at risk of extinction. Wildlife crime also threatens the livelihoods of local communities, weakens global security, and has negative economic implications as it robs countries of revenue from legal, sustainable trade or ecotourism. Experts believe that the illegal wildlife trade costs an estimated $7-23 billion USD per year. Furthermore, the capture and trade of wildlife is also known to spread disease and can be a major public health issue and potentially a bio-security issue. Diseases can be transmitted from animals to humans such as the bird flu, Ebola, SARS, and most recently, the novel coronavirus, COVID-19.

Current Interventions

Policy

The U.S. Fish & Wildlife Service (USFWS) is responsible for upholding over 40 national and international laws and treaties which protect animals and plants in the United States and worldwide. Two in particular, the Eliminate, Neutralize, and Disrupt (END) Wildlife Trafficking Act of 2016 and the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) work on national and international levels to monitor and minimize the impacts of the legal and illegal wildlife trade.

The END Wildlife Trafficking Act helps to ensure there is a unified approach by the U.S. government, working with countries abroad to combat wildlife trafficking and reduce the impacts that wildlife crime has on development, security, and conservation. The USFWS represents the Department of the Interior on the Task Force on Wildlife Trafficking, which brings together 17 federal departments and agencies to implement the National Strategy for Combating Wildlife Trafficking.

CITES is the only treaty intended to ensure that the international trade in animals and plants is legal, sustainable, and does not threaten their survival in the wild. The agreement covers numerous issues including stockpile management, wildlife crime and law enforcement, National Ivory and Rhino Action Plans, compliance issues leading to trade suspensions, demand reduction, and livelihoods. The USFWS is designated under the Endangered Species Act to carry out the provisions of CITES through two divisions. In the

The shy and scaly pangolin is thought to be the most trafficked mammal in the world, making up 20% of the illicit wildlife trade. They are hunted for their scales, which are believed to treat a variety of ailments in traditional Chinese medicine. Photo by Gregg Yan for Creative Commons.
International Affairs Program, the Division of Management Authority ensures that trade of CITES-listed species is legal through the issuance of permits, while the Division of Scientific Authority determines whether trade in a particular animal or plant species could be detrimental to its survival in the wild.

**Law Enforcement**

Law enforcement interventions are essential for stopping wildlife crime, both domestically and internationally. Law enforcement officers within the National Wildlife Refuge System provide front-line defense against issues like ginseng harvest, black bear poaching, and amphibian and reptile collection. USFWS Office of Law Enforcement (OLE) special agents and wildlife inspectors work with federal, state, tribal, and international conservation partners to investigate wildlife crimes. One recent example of OLE’s investigations that required international collaboration resulted in a significant seizure of European eels. In addition to domestic work, OLE has placed experienced criminal investigators specializing in wildlife crime abroad to regions strategic to the illegal wildlife trade, starting with Thailand. OLE Special Agents are now deployed as attachés and liaison officers in Africa, Asia, Latin and South America, and Europe.

The USFWS International Affairs Program has also supported projects to increase the capacity of countries to combat wildlife trafficking. Once such example is the Wildlife Rapid Rescue Team (WRRT) in Cambodia. Through USFWS support, Wildlife Alliance has been able to train officers involved in wildlife law enforcement for the WRRT on surveillance, wildlife identification, investigation techniques, preparation of prosecution documents, and wildlife care and handling.

**Demand Reduction**

Stemming the supply of illegal wildlife products through policy and enforcement is only part of the solution; wildlife crime will exist in perpetuity until demand is reduced or redirected. Changing consumer behavior in key markets is critical for decreasing demand for wildlife and their parts. Demand reduction initiatives often target social motivations, like fashion trends and status symbols, or functional motivations, like beliefs about health benefits from certain products.

Demand reduction strategies can range from awareness-raising to more strategic attempts at behavior change such as social marketing. Social marketing campaigns for demand reduction may aim to spread knowledge through social networks, shift entrenched social norms, or offer alternatives or make it inconvenient to purchase illegal wildlife products. Demand reduction programs are most effective when they start with a comprehensive understanding of the situation. Developing this understanding involves collecting and summarizing new and existing information on who purchases wildlife products, the drivers of consumption, and the commonalities of drivers across species or geographies.

*Cultivated orchids are common houseplants that are widely available in nurseries, but all wild orchids are protected under CITES. Photo by Nicolas Emmanel Emile for Creative Commons.*
How Social Science Helps Keep Wildlife Wild

Social scientists can contribute to understanding and solving wildlife crime by helping to define the issue and inform interventions.

Defining the Issue

Various methods are available to help researchers understand the scope of the wildlife crime including law enforcement records, indirect observation, direct questioning, and indirect questioning. Law enforcement records and indirect observation (for example, using satellite imagery to record evidence of illegal logging or wildlife population surveys to monitor illegal take) are useful for identifying who is involved and how much illegal activity is taking place. Direct questioning approaches, like interviews, can help uncover additional information about the “who”, “what”, “when”, “why”, and “how” of wildlife crime, but the utility of these methods can be limited in some contexts due to the sensitivity around asking questions about illegal activities. Indirect questioning approaches can provide a more detailed and nuanced picture of wildlife crime because respondents may have less fear of self-incrimination and retribution. These indirect methods can provide confidentiality or anonymity, ensure that incriminating evidence can’t be linked to an

Case Study: Reducing Demand for Bear Bile in Cambodia

The sun bear and Asiatic black bear in Southeast Asia are rapidly declining due illegal take for trade in bear parts and bear bile, with the latter being used in traditional medicine for thousands of years. With financial support from USFWS, researchers at the San Diego Zoo Institute for Conservation Research examined consumer motivations in Cambodia for purchasing bear parts and using bear bile over synthetic drugs. The resulting social science information is being used to develop a culturally appropriate behavior change campaign and build capacity among Cambodian partners to reduce demand. Following pilot testing, the campaign will be launched and monitored for effectiveness.
individual, and increase the likelihood of honest responses. Using a mixed-methods approach, social scientists can triangulate quantitative and qualitative data to leverage the strengths of different methods and develop a more comprehensive understanding of complex human behaviors and the contexts in which they occur.

**Informing Interventions**

Individuals or groups participating in wildlife crime may participate along any part of the trafficking chain: at the source by poaching, in transit by moving wildlife from one location to others, or by consuming wildlife through purchasing live animals, plants, their parts, or products made from them. Motivations for behaviors along the trade chain are diverse and context-specific. Understanding these variables is imperative for creating successful interventions before poaching, selling, or buying occurs. Some motivating factors include obtaining food for subsistence, the desire or need to make money, the desire to have a wild animal as a pet, having a certain animal or product as a status symbol, or simply liking wild animals. Other reasons for non-compliance with wildlife policies include lack of awareness of the law or regulation, lack of clarity or understanding of what is legal versus illegal, disagreement with regulations, and the perception that the risk of being detected is not high or the consequences of breaking the law are outweighed by the benefits. In some cases, the demand for wildlife products is deeply entrenched in cultural norms. Understanding the contexts within which wildlife crimes occur makes it possible to target human behaviors along the entire trade chain and keep wildlife in the wild.

**Case Study: Understanding Why People Poach in Nepal**

Nepal is known for its charismatic megafauna, including tigers, elephants, rhinos, red pandas, and snow leopards. Wildlife officials take poaching very seriously and, thanks to the nearly 7,000 rangers patrolling Nepal’s protected areas, the country celebrated its first year without losing a rhino to poaching this decade. To learn more about who poaches and why in Nepal, researchers interviewed over 100 inmates who were imprisoned for wildlife-related offenses. Their findings indicated that 90% of offenders resorted to poaching to make extra money—not to meet basic economic and nutritional needs. Another surprising finding was that only 30% knew the penalties associated with their crimes, and few imagined the true social cost of their decisions. In this case, an intervention that includes raising awareness of the steep penalties associated with wildlife crime could benefit both wildlife and people in Nepal.

Read more: [To Stop Wildlife Crime, Conservationists Ask Why People Poach](https://creativecommons.org/licenses/by/4.0/)

![Rhino in Chitwan National Park, Nepal by Knut-Erik Helle for Creative Commons](https://creativecommons.org/licenses/by/4.0/)
Using Social Science to Enhance Community Partnerships for Combating Sea Cucumber Poaching and Trafficking in Yucatán, México

By Abigail E. Bennett and Meredith L. Gore, Michigan State University

On the second day of our workshop, we’re energized as we hurriedly finish our morning coffee and head over to the local fishing federation’s office in Yucatán, Mexico. This is the day the 25 participants from five fishing cooperatives are going to present their projects on community-based surveillance responses to sea cucumber poaching and trafficking. They’d been intensely working on these projects for about a month, combining their extensive knowledge of the sea cucumber fishery with feedback from their respective cooperative members and concepts introduced in two previous workshops.

Many people have not heard about sea cucumber poaching and trafficking, but local...
communities in Mexico are progressively affected by the problem. The majority of sea cucumber species are threatened or endangered and stocks are increasingly over-exploited at a global scale as a result of high market demand; they are considered a culinary delicacy in Chinese cuisine and command approximately $1,100 per lb when dried. Their value drives a thriving black market that often uses the United States as a transit location between Mexico and Asian markets. In 2018, a father-son team of importers was ordered to pay nearly $1M USD in fines after being charged with 26 counts related to the illegal trafficking, conspiracy, false labeling, and criminal forfeiture and importation of $17 million worth of sea cucumbers! Since sea cucumbers are slow-moving, slow-maturing marine animals living on the ocean floor, fishing pressure can rapidly degrade populations and thus their illicit trade negatively impacts community livelihoods and security. There are very few examples of successful sea cucumber management in the world, indicating a need for innovative conservation solutions.

The current state of sea cucumber poaching and trafficking does not reflect Mexico’s long history of local-level collective action in sustainable fisheries management and the potential for well-organized fishing cooperatives to lead anti-poaching efforts. Innovative community-based surveillance holds promise for reducing conservation crimes. In January 2020, we started a new a project designed to empower local communities in the Yucatan to more effectively address the issue. With support from USFWS’ Division of International Conservation and Office of Law Enforcement, Michigan State University’s Center for Latin America and Caribbean Studies has been working with fishers in the Yucatan to combine their existing contextual knowledge with new integrated approaches for anti-poaching efforts. This project provides fishers with social science-based tools and methodologies like participatory risk mapping from decision research, linked action sequences from governance research, and crime-place network policing from environmental criminology. With these tools in-hand, fishers mapped key locations for fishing, processing, and transporting sea cucumbers, discussed the range of stakeholders involved in fishing, and the conditions enabling participation. The fishers now plan to use these maps and information to guide their surveillance efforts.

It has been exciting to see the cooperatives work together to solve a problem they identified as being important and working to support their decision-making with social science-based tools and theories. Over the coming months, we will hold additional workshops, support fishing cooperative members in their efforts to launch and evaluate their projects, and potentially share our insights at a trilateral environmental meeting with high-level policy makers. The process of using collaborative social science to help communities address risks to their natural resources is an important product that has already emerged from this work.

Local fishers in the Yucatán display a participatory risk map developed during their training workshops.
Simple Ways to Save Wildlife

Wildlife crime is a big problem, but that doesn’t mean that individuals can’t make a difference. As conservation practitioners and USFWS employees, you are likely aware of many actions people can take to support wildlife. Consider these reminders for yourself and share with others in your sphere of influence who may be less aware.

1) Be informed, buy informed

When traveling abroad

If you’re traveling abroad, make sure you are protecting imperiled species when you pull out your wallet. Remember, just because something is for sale doesn’t mean it’s legal. This brochure, produced by the Service’s International Affairs Program, makes it easy to know what to avoid when you’re globetrotting.

When choosing a furry or feathered friend…

Many exotic animals are plucked from the wild and sold into the pet trade. After an animal is taken from the wild, it can be used in a breeding operation, sold locally, smuggled out of the country, or intentionally mislabeled as captive-bred and exported. Think twice before owning exotics, or do some digging before purchasing to make sure that the animal is truly captive-bred.

When you’re not into labels…

We know of some that might change your mind. Purchasing certified products is an easy way to ensure that the products you buy don’t exploit animals, plants, or people. A couple of our favorites:

Timber or paper products with a Forest Stewardship Council seal ensure that all trees cut down are replaced or allowed to re-grow naturally, parts of the forest of origin are left untouched, the rights of indigenous people in the area are respected, and local workers receive a living wage.

Wild-caught seafood with the Marine Stewardship Council’s blue MSC label comes from sustainably-managed fisheries that ensure fish are caught at sustainable levels and minimize incidental take of juvenile fish and non-target species.

2) Report illegal activity

When you see something…

Say something. Concerned citizens are vital to helping USFWS protect everything from native turtles and pallid sturgeon to bald eagles and white-tailed deer. If you have information about a wildlife crime, you can call or email the USFWS 24-hour wildlife hotline: 1-844-FWS-TIPS (397-8477) or fws_tips@fws.gov (you may remain anonymous if you so choose). Here are the steps for reporting a wildlife crime.

3) Donate to the Multinational Species Conservation Funds

The USFWS Multinational Species Conservation Funds support wildlife monitoring, awareness and outreach campaigns, community-based conservation, protected areas management, coordination and information exchange, and applied research. The grant dollars that USFWS administers to these funds help leverage funds from other partners. Projects benefit wildlife in their natural habitats and are often carried out by local conservation organizations.

More on Social Science and Wildlife Crime

Human Dimensions Broadcast Series - Wildlife Crime: Toward an Integrated Approach

In this broadcast, Meredith Gore, PhD (Associate Professor, Department of Fisheries & Wildlife, Michigan State University), Daphne Carlson-Bremer, DVM, MPVM, PhD (Branch Chief, Combating Wildlife Trafficking Strategy and Partnerships, USFWS, International Affairs), and Craig Tabor (Special Agent in Charge, Intelligence Unit, USFWS, Office of Law Enforcement) bring together diverse perspectives in the fight against wildlife crime.


In this podcast, USFWS Social Scientist Dr. Christine Browne and conservation criminology expert Dr. Meredith Gore delve deeper into social science considerations for addressing wildlife crime, including the needs, methods, and benefits for addressing this national and global conservation priority. You can also listen on iTunes.