

December 2021

SITUATION ANALYSIS

**SOCIAL AND BEHAVIOUR CHANGE
MESSAGING ON WILDLIFE TRADE AND
ZOOBOTIC DISEASE RISKS**



TRAFFIC



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DESIGN

Marcus Cornthwaite



Bush pigs, duikers, and monkeys for sale at a stall in Makokou market, Gabon

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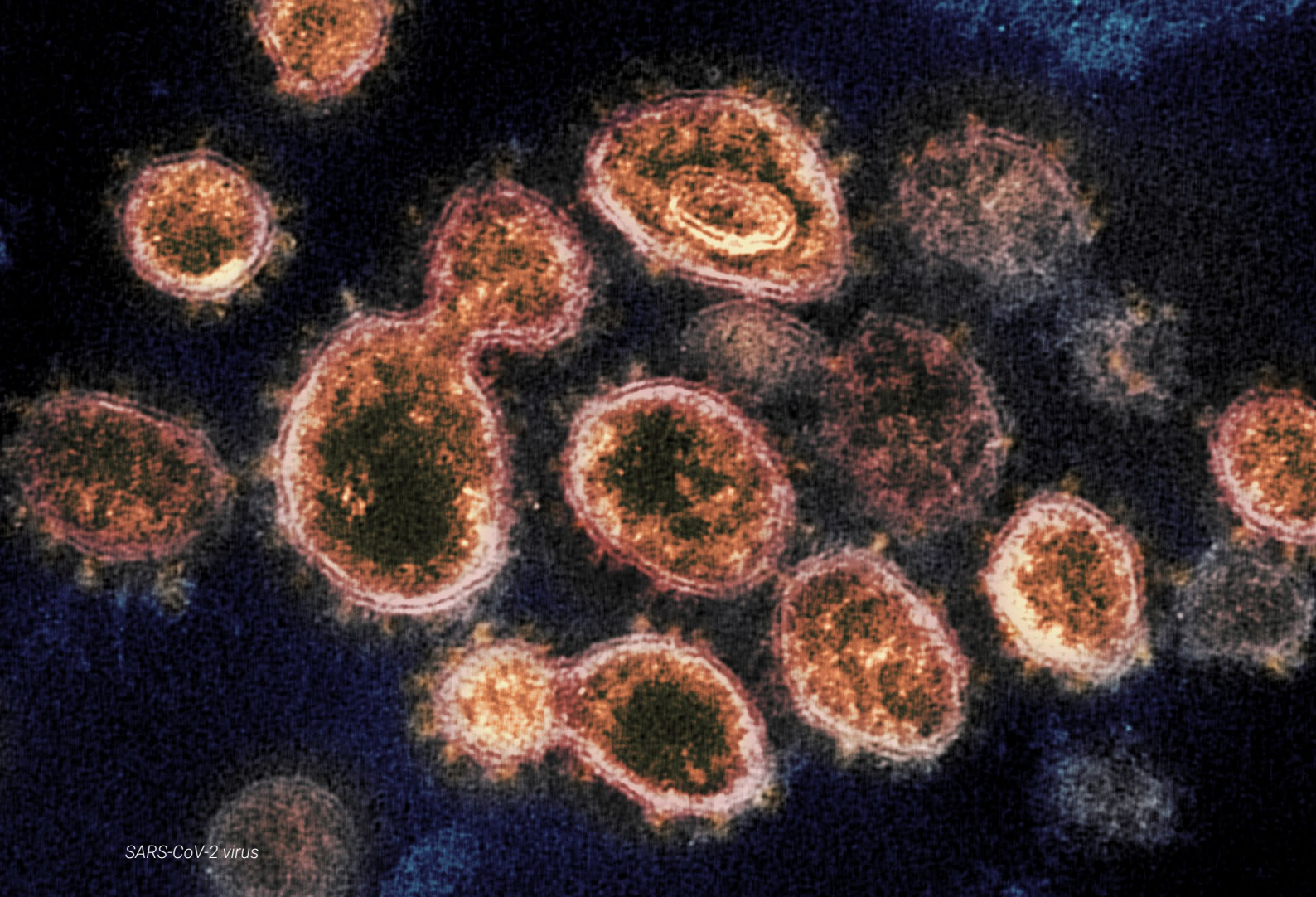
NOMENCLATURE

For this Situation Analysis, terms used are taken to have the following meanings:

DOMESTICATED SPECIES	Species bred in captivity and modified from their wild ancestors to make them more 'useful' to humans, who control their reproduction (breeding), care (shelter, protection against predators) and food supply.
FARMED, CAPTIVE-BRED AND CULTIVATED	In the context of wild animal and plant trade, such terms designate management and production modes distinct from "wild-sourcing", with breeding and raising taking place in controlled conditions.
ILLEGAL WILDLIFE TRADE	Wildlife commerce in contravention of a relevant legal provision. These could include legislation and/or regulations related to one or more policy concerns: e.g., resource ownership or access rights; nature conservation; human or animal health protection; animal welfare; taxation or other fiscal provisions.
WET MARKET	A marketplace selling fresh meat, fish, produce, and/or other perishable goods (including vegetables) as distinct from "dry markets" that sell durable goods such as fabrics and electronics.
WILD MEAT	Meat from wild animals (see "Wildlife" below). In some countries the term bushmeat is used to indicate illegally acquired wild (or wildlife-) meat, whereas wild meat can also be game meat from licensed butcheries.
WILD SPECIES	Non-domesticated wildlife species.
WILD SOURCED	Wild animals, plants or products collected or harvested from free-living (non-captive) populations.
WILDLIFE	In line with the IUCN definition: "Living things that are neither human nor domesticated". Variously understood to mean "wild animals and plants".
WILDLIFE MARKET	A venue (physical or online) where wildlife commerce is active.
WILDLIFE PET / EXOTIC PET	A companion animal living with people that is generally thought of as a wild species rather than a domesticated one.
WILDLIFE TRADE	The local or domestic and international commerce in wild animals, plants, and fungi, inclusive of parts and products derived from them.
ZOOBOTIC DISEASE / ZOONOSIS	As defined by the World Health Organisation (WHO): An infectious disease that has jumped from a non-human animals to humans.

ABBREVIATIONS

CBD	Convention on Biological Diversity
CIFOR	Centre for International Forestry Research
COMIFAC	Central African Forest Commission
CWCA	China Wildlife Conservation Association
CITES	Convention on International Trade in Endangered Species
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CBFP	Congo Basin Forest Partnership
CPW	Collaborative Partnership on Sustainable Wildlife Management
CSO	Civil Society Organisation
ENV	Education for Nature – Viet Nam
EID	Emerging Infectious Disease
EPT2	Emerging Pandemic Threats 2 program
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FFI	Fauna & Flora International
HACCP	Hazard Analysis and Critical Control Points
HPAI H5N1	Highly Pathogenic Avian Influenza, or HPAI H5N1
IDI	In-Depth Interview
IGO	Intergovernmental Organisation
ILRI	International Livestock Research Institute
IPBES	Intergovernmental Panel on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
IUCN SSC	IUCN Species Survival Commission
IWT	Illegal Wildlife Trade
MARA	Ministry of Agriculture and Rural Affairs, China
MOH	Ministry of Health, Viet Nam
NFGA	National Forestry and Grassland Administration, China
NGO	Non-Governmental Organisation
OHCEA	One Health Central and Eastern Africa network
OHW	One Health Workforce
OIE	World Organisation for Animal Health
PPTF	Pandemic Prevention Task Force
SBC	Social and Behaviour Change
SEAOHUN	Southeast Asia One Health University Network
T5G	MOH's National Centre for Health Communication and Education, Viet Nam
TCM	Traditional Chinese Medicine
TM	Traditional Medicine
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
VCA	Value Chain Analysis
VOTMA	Viet Nam Oriental Traditional Medicine Association
WHO	World Health Organisation
WCS	Wildlife Conservation Society
Wildlife TRAPS	Wildlife Trafficking, Response, Assessment and Priority Setting
WWF	World Wide Fund for Nature



SARS-CoV-2 virus

EXECUTIVE SUMMARY

ON 7 FEBRUARY 2020, A RESEARCH TEAM IN GUANGZHOU, SOUTHERN CHINA, IDENTIFIED PANGOLINS AS A POTENTIAL INTERMEDIATE HOST FOR THE SARS-COV-2 VIRUS AT THE ROOT OF THE COVID-19 PANDEMIC¹

Leading figures from UN agencies, governments, civil society, academia

and the general public, called for urgent changes in how humanity consumes and uses wildlife

Despite their evidence being subsequently called into question², with closer relatives to the SARS-CoV-2 virus since found in horseshoe (*Rhinolophus*) bats³, people's relationship with, and consumption of, wildlife had been irreversibly cast into the sharpest of relief.

In the year before the Guangzhou team's announcement, the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) had identified direct overexploitation as the second most significant driver of

biodiversity loss, contributing to one million species at risk of extinction⁴.

Within this context leading figures from UN agencies, governments, civil society, academia, and the general public, called for urgent changes in how humanity consumes and uses wildlife. As part of a response to this call, TRAFFIC developed with USAID a comprehensive new phase of the Wildlife TRAPS Project, implemented in partnership with IUCN, to focus on the zoonotic disease risks associated with wildlife trade.

A fundamental workstream of the three-year extension phase explores how Social and Behaviour Change (SBC) could play a part in persuading people towards safer and more sustainable patterns of wildlife product consumption. This exploration could also consider whether work with consumers represents the most urgent need, as campaigns to persuade wildlife buyers to reject unsafe and unsustainable meat, medicine or pet products should have a viable alternative wildlife product to recommend instead. In the absence of suitable quality assurance around such a safe, sustainable alternative, communications and activities may need to prioritise addressing this with other wildlife value chain actors first.

This Situation Analysis has been produced as the first output associated with the Wildlife TRAPS SBC workstream.

THE AIMS OF THIS DOCUMENT ARE TO:

1. Capture what has happened with consumer engagement in wildlife product purchasing worldwide from early 2020 to mid-2021, in light of the COVID-19 pandemic and perceived zoonotic disease origins;
2. Explore potential SBC pilot project ideas that build on what has happened to date, and according to where the greatest areas of need and opportunity are;
3. Share learning and mapping for SBC Community members to support and inform their efforts to persuade consumers towards a safe, traceable, sustainable and legal wildlife supply.

RESEARCH METHODS INCLUDED:

- An online survey of SBC Community members to map what has already happened in which geographies, with what ambition and achieving which results (where known);
- 1:1 interviews with stakeholders, to expand on themes and interests arising from survey responses, and to fill gaps in knowledge;
- A comprehensive literature review and desk-based study; and
- Follow-up discussions to clarify points, as necessary.

The results are presented in the following pages. A Briefing Paper summarizing the key elements is also available⁵. Webinar discussion⁶ has helped to inform document finalisation, as well as the broader next steps for the SBC Workstream.

THESE NEXT STEPS INCLUDE:

- Engage current stakeholders in the SBC Community who bring expertise in health-focused behaviour change initiatives, and encourage and enable them to share their experience with others;
- Engage new stakeholders in the SBC Community around the issues of zoonoses and wildlife trade, and consider developing a recruitment strategy;
- Engage higher-level stakeholders in relevant IGOs, including through contacts at donor agencies and embassies;
- Engage government stakeholders not normally involved in wildlife trade management, particularly in human and animal health, through contacts at IGOs, donor agencies, and embassies;
- To guide policy development and law enforcement efforts, establish:
 - a. Which species/trade chains and trade practices are too high risk to continue;
 - b. Which ones require reform; and
 - c. Which ones are low risk and thus safe to continue;
- Invite a broad range of partners, especially health sector, to review SBC materials to be developed by Wildlife TRAPS;
- Test approaches to change risky behaviours of actors along wildlife value chains, beyond the consumer level;
- Map out what small steps are most urgently needed to create sustainable momentum for change, and craft a Theory of Change for how these steps can build towards a longer-term goal of reducing risks from wildlife trade that may contribute to zoonotic disease spillover from animals to humans.



INTRODUCTION

**THE EMERGENCE OF A NEW VIRUS
CAPABLE OF CAUSING A PANDEMIC
WAS NOT UNEXPECTED.**

Though COVID-19 may have caught most people, governments, and healthcare systems off-guard, those who study emerging infectious diseases (EIDs), and particularly those who study zoonotic diseases, had been warning of the next major virus for years⁷.

Even if COVID-19 proves not to have originated from wild animals in illegal or unregulated trade, the COVID-19 pandemic has brought global attention to the growing number of wildlife-sourced diseases emerging as major human health concerns - ranging from HIV to SARS, MERS, H5N1 (bird flu) and Ebola. For many of these, there are strong indications of disease transmission links to wild animal trade and consumption⁸, among other contextual factors.

It is tempting to focus efforts on the search for the species from which a zoonotic disease emerged, but the fundamental principle that risks of zoonotic transfer are significantly exacerbated by human behaviour remains germane. Examples of primary problem behaviours include habitat destruction and unsustainable use, leading to ecosystem destabilisation and biodiversity loss. As humans use more land and extract more natural resources, this diminishes the goods and services that healthy, intact ecosystems provide, including disease resilience⁸. Natural ecosystems are home not only to wild plants and animals but also to pathogens. When humans alter these ecosystems for other uses, such as conversion to agricultural production and settlement, they enter the pathogens' natural habitat, remove the safe distance between humans and wild animals, and increase the risk of disease spillover.

Most zoonotic diseases spillover to humans from domesticated livestock and poultry, as the global quantity of domesticated livestock and poultry and the frequency with which humans consume these animals far outstrip wildlife numbers and consumption¹⁰.

Wildlife, or more precisely wild fauna, are a smaller piece of the zoonotic spillover

puzzle. Compared with domestic livestock management, there is less potential to control risk factors associated with wild animal husbandry, greater mixing of species along a supply chain, and deficiencies in sanitation and welfare. Priorities emerge for risk reduction and avoidance activities, such as efforts to increase supply chain traceability, the safety of product sourcing and engaging consumers in behaviour change.

When poorly managed and monitored, wildlife trade can carry risks for disease transmission that health authorities and informed consumers alike would find concerning if viewed through the lens of domestic animal supply chains: poor animal husbandry that mixes sick and healthy animals from different species and unknown origins; poor sanitation and welfare standards that increase animals' stress, weaken their immune response and allow pathogens to thrive; poor hygiene across processing points, transport routes and markets; and a mix of illegal and legal activity that discourages actors along trade chains from reporting emerging problems¹¹. These factors are compounded by a general lack of human awareness on, or consideration around, zoonotic disease risks.

Wildlife trade presents unique risks because it involves the movement of animals away from their natural range, where historical human exposure might have led to some build-up of immunity. It then brings live animals and animal products into proximity with traders and consumers/buyers, whether as food, pets, medicinal ingredients or for other purposes. Animal to animal, species to species and wildlife to human transmission can therefore be greatly facilitated by such trade¹², whether involving wildlife from free-ranging or captive sources.

FIGURE 1

Visualisation of the massive shift in biomass proportions - humans and their domestic animals versus wildlife - that has taken place during the past 10,000 years on planet Earth. Source: populationmatters.org

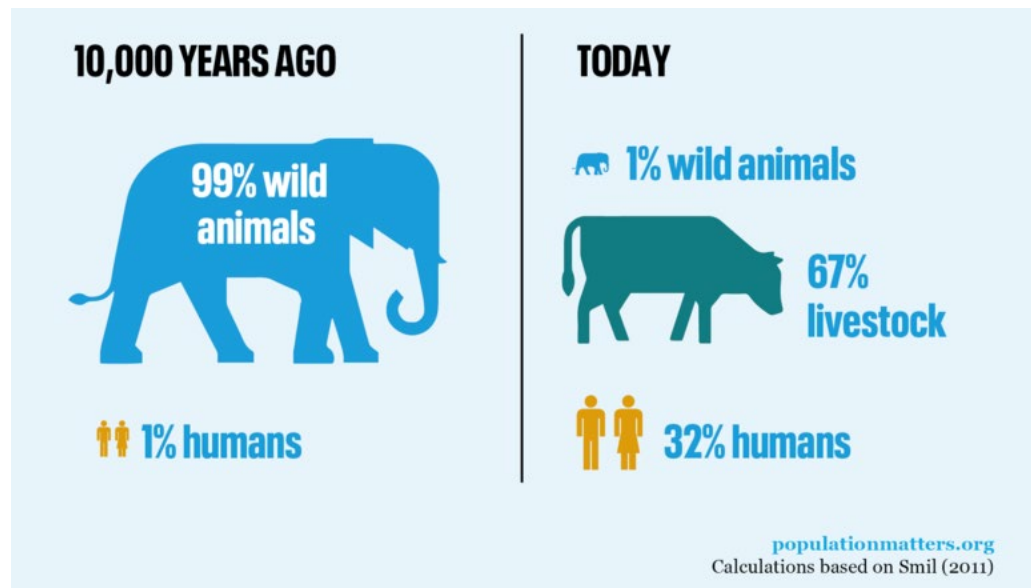
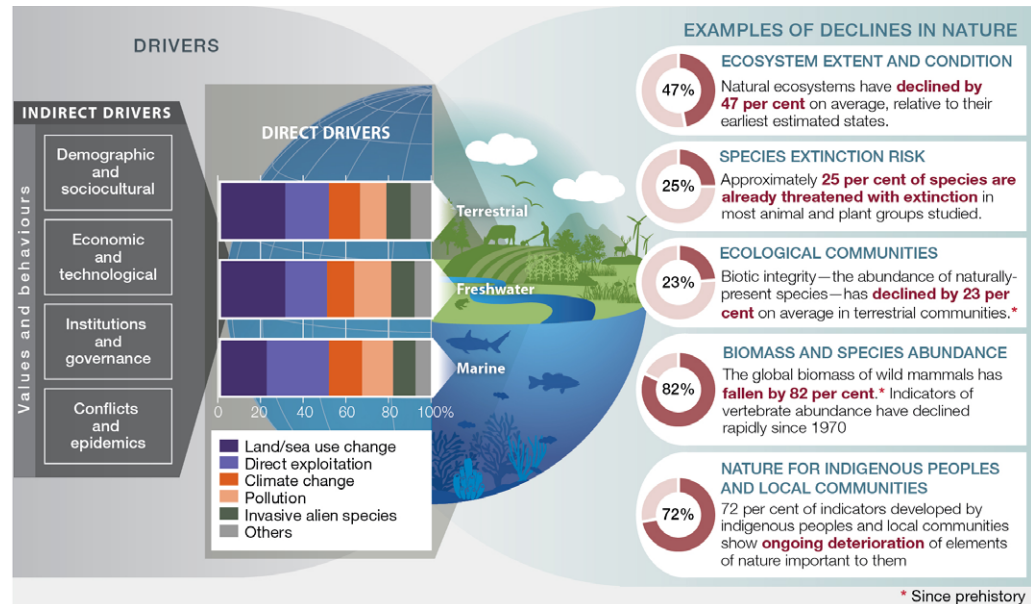


FIGURE 2

The impact of direct exploitation on ecosystems and biodiversity. Source: IPBES Summary for Policymakers (2019). Source: https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf.



The likelihood and risk of disease emergence vary by taxa and use type, and so an effective response must account for these variations in risk. Research has shown mammals¹³ and birds¹⁴ carry high risks for spreading viral and other communicable diseases to humans. There is less risk of these types of zoonotic diseases and EIDs coming from

reptiles, amphibians, and fish (which can still transmit the bacteria and other microbes that cause food poisoning and gastrointestinal infections – such as Campylobacter, E. coli, and Salmonella)¹⁵.

For this Situation Analysis, TRAFFIC chose to assess trade and consumption of mammals

and birds through three main use types: wild animal meat, referred to herein as wild meat (see Nomenclature section for different regional definitions); wild animal-based medicines and ingredients, including those both formally prescribed by traditional medicine practitioners, as well as informal consumption of tonics, tinctures, topical ointments, etc.; and live wild animals kept as pets or used for scientific research.

Another prominent wildlife use type is for fashion and ornamentation, such as furs, skins, jewellery/personal and household adornments, and display. The research team chose not to focus on this use type because these comparatively more processed products should carry a lower risk of disease transmission at the consumer level than other use types. This is due to less raw material/source product present in the final product (disease risks of the fur industry at the production level are considered separately, see Netherlands example in Section 5 of this document).

The confluence of these considerations suggests that to help prevent future pandemics, SBC approaches can be applied. The focus should remain on persuading consumers and other actors in the supply

chain to firstly avoid illicit and unsafe practices, and shift towards safe, sustainable and legal behaviours, while calling on governments and private sector actors to increase their management and monitoring - including compliance and enforcement - of wildlife in trade. The key to successful SBC campaigns is to identify messaging that resonates with the audience's pre-existing values and motivations. Although these may not include animal protection and wildlife conservation goals, messages more directly related to personal concerns such as health and food safety may have better resonance. COVID-19 has brought global attention to the need to change the status quo to 'build back better' across several sectors, including where wildlife trade intersects with health, the economy and livelihoods; SBC practitioners have a responsibility to help guide and persuade these changes.

This Situation Analysis will begin by outlining the purpose and methodology of its research, followed by an assessment of SBC activities to date and an overview of the success factors and lessons learned from these activities. It will then note relevant planned activities of partner organisations, gaps and opportunities for the Wildlife TRAPS project, and suggested next steps.

FIGURE 3

A raccoon in a raccoon café in South Korea. Exotic pet cafes have grown in popularity in the region in recent years.



PURPOSE AND OBJECTIVES

THE PRIMARY OBJECTIVES OF THE SITUATION ANALYSIS ARE TO:

1. IDENTIFY AND MAP WHAT HAS HAPPENED SO FAR:

- a. What SBC materials and campaigns have been released on the zoonotic disease risks associated with wildlife trade, with a focus on consumption?
- b. Who has led the production and implementation of these campaigns? Actors may include governments, NGOs, IGOs, and One Health partnerships
- c. How have messages been communicated, where have they been communicated, and who have been the target audiences?
- d. What evidence has been used?
- e. What have been the outcomes of these efforts, and what impacts have they achieved thus far?

2. ENGAGE THE GLOBAL SOCIAL AND BEHAVIOUR CHANGE COMMUNITY, SHARE EVIDENCE AND INSIGHT, AND INCREASE UNDERSTANDING AND EXPLORE COLLABORATION AMONGST MEMBERS.

3. IDENTIFY AND DEVELOP STRATEGIES FOR WHAT SHOULD AND WILL HAPPEN IN COLLABORATION WITH OTHERS ACROSS THE SECTOR:

- a. Determine gaps and opportunities;
- b. Outline priorities for pilot projects:
 - i. The SBC pilot projects planned under the Wildlife TRAPS project will target potential sites in four countries: Cameroon, Tanzania, Viet Nam, and China. Their regions of Central Africa, East Africa, Southeast Asia, and East Asia are places of high biodiversity, widespread wildlife consumption, and where unsanitary practices and conditions at various human-animal interfaces exacerbate the potential for zoonotic disease spillover;
- c. Conduct a stakeholder analysis to identify areas for collaboration;
- d. Analyse challenges that the sector needs to overcome. This will be developed through a separate report on how to identify a 'safe, traceable, and sustainable supply' in legal trade chains for wildlife meat, medicine, and pets.

METHODOLOGY AND LIMITATIONS

This Situation Analysis was conducted through a mix of primary and secondary research using multiple methods. Primary components included an online survey with Social and Behaviour Change Community members and 1:1 interviews with a select group of stakeholders in follow-up. It was not possible to gain a representative sample of Community members despite several attempts to encourage survey participation (although it was circulated to over 1,000 people only 12 responses were received). The Situation Analysis authors worked on the basis that those not motivated to respond did not have relevant information to share.

Secondary elements focused on a desk-based literature review of online reports and publications from NGOs, IGOs, scientific journals, and media outlets. The literature list is included in Annex I, and the interview questions

in Annex II. Elements of the first draft of this Situation Analysis were shared with members of the SBC Community through a Webinar¹⁶ to inform finalisation and next steps regarding the pilot projects. This outreach also presented a final opportunity for additional perspectives and contributions from Community members, and helped to rationalise and ground-truth insights arising from the authors' synthesis of the research findings.

Limitations included the volume of responses received to the online survey and the timing of the process, which ran several months after the first suggestion that wildlife trade was the source of the COVID-19 pandemic. Efforts to address these limitations included the in-depth interviews, which were established proactively and led to ongoing conversations, in some instances, between TRAFFIC and critical stakeholders across One Health sectors.



A customer holds wild meat purchased in Dodoma, Tanzania



SBC ACTIVITIES

ON WILDLIFE TRADE AND ZOO NOTIC THREAT



養生

麻辣
臭豆腐

低熱量
海菜
清涼

RESEARCH

IN MARCH 2020, THE SAME MONTH WHEN THE WORLD HEALTH ORGANISATION DECLARED COVID-19 A PANDEMIC, GLOBESCAN AND WWF CONDUCTED AN ONLINE SURVEY OF 5,000 PARTICIPANTS

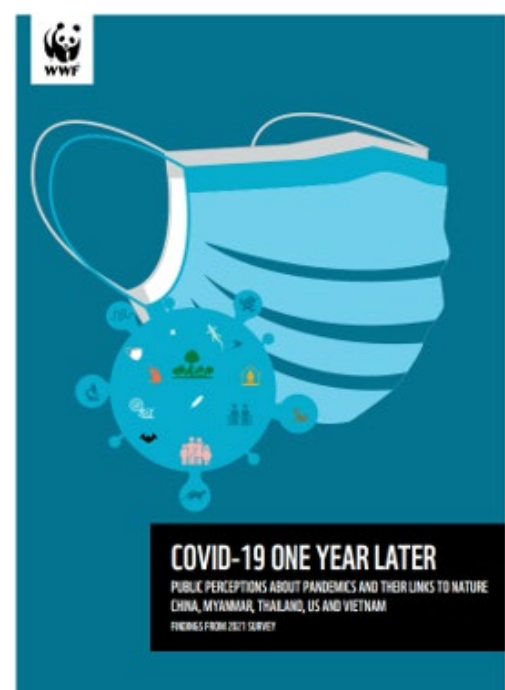
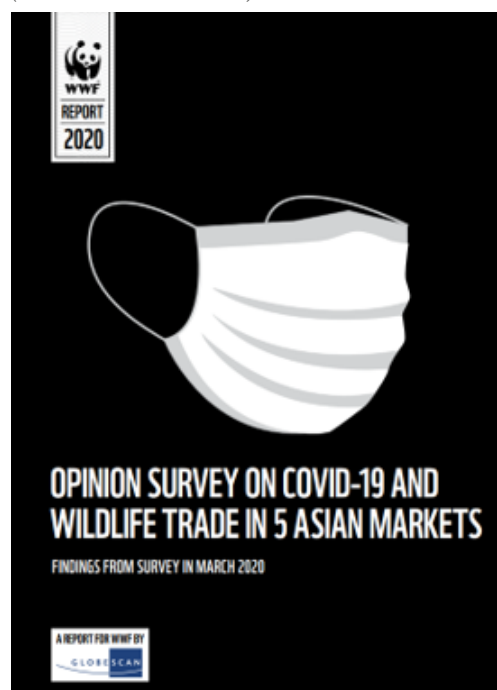
The survey took place across Hong Kong SAR, Japan, Myanmar, Thailand, and Viet Nam to assess beliefs and behaviours around wildlife markets in light of COVID-19's suspected wildlife origin¹⁷. Overexploitation of wild animals and plants via activities such as harvesting, logging, hunting, and fishing has had the second-largest negative impact on nature since 1970, after land-use change¹⁸. In February and March 2021, GlobeScan and WWF again surveyed people in Myanmar, Thailand, and Viet Nam, as well as China and the US¹⁹.

The 2020 survey asked respondents about closing "illegal and unregulated wildlife markets." 'Wild animals' were defined as non-domesticated, non-livestock terrestrial animals (non-insect and non-aquatic), and wildlife markets as those selling animals coming from the wild (not farmed). 93% of 2020 survey respondents claimed to support government action to eliminate illegal and unregulated

wildlife markets, which would seem self-evident considering the emphasis on illegality. Furthermore, 79% perceived closing illegal and unregulated markets where wildlife is sold as an effective measure in preventing future zoonotic disease outbreaks. Within the context of the survey being focused on zoonotic risk and illegal and unregulated 'wildlife markets' (with the need for a better definition of this noted), again perhaps this percentage is unsurprising. Of specific interest was that 9% of overall respondents claimed either they or someone they knew had purchased wildlife products in the past 12 months, whilst 8% said they would be either 'very likely or likely' to do so again in the future. This suggests that despite respondents' purported concerns about the role of markets selling wildlife products in driving pandemic threat, peoples' actual behaviour and purchase intention might ultimately be scarcely influenced. The need for further investigation was noted.

FIGURE 4

GlobeScan research for WWF: Opinion Surveys on COVID-19 and Wildlife Trade. Source: WWF/GlobeScan (links in endnotes ¹⁷ and ¹⁹).



The 2021 survey asked respondents about closing “high-risk markets,” defined as markets selling mammals and birds that carry diseases that can be transmitted to humans, which includes most birds (due to the potential risk of avian flu) and mammals of particularly high risk like bats, primates, rodents, and carnivores. Compared to the 2020 survey, in 2021 support for government closure of wildlife markets fell in Thailand, but rose in Viet Nam. The 2021 survey also asked participants about other approaches to preventing future pandemics and the root causes of pandemic emergence. Eighty-eight percent supported increased efforts to end deforestation for pandemic prevention, though awareness of this root cause of pandemics was low at 15%²⁰. Filling public knowledge gaps like this is one important step in treating the root causes of zoonotic disease emergence.

A deeper look at the survey responses reveals a need to supplement government action and greater public awareness with changes in consumers’ behaviour. Seven percent of all 2021 respondents said that they or someone they knew had purchased wildlife in the previous 12 months at an open wildlife market, and an equal 7% had purchased a wildlife product online, only a marginal decrease from the 2020 survey after one year of living through the pandemic²¹.

A look at the animals purchased in open wildlife markets also highlights the need for consumer behaviour change. The most common purchases were live birds, followed by snakes, bats, civets, pangolins, and turtles²². Birds (note purchases of live birds) and mammals (note purchases of bats, civets, and pangolins) are both high-risk taxa for zoonotic disease transmission from animals to humans. Live birds were presumably purchased as pets, whereas bats and civets were more likely bought to be eaten, and pangolins bought either for food or medicinal purposes. Bat and pangolin species can carry coronaviruses with high genetic similarity to the coronavirus that causes COVID-19 in humans²³. Bat species have a unique ability to host diverse viruses without being harmed by those viruses²⁴, with the horseshoe bat a possible source of

SARS-CoV-2²⁵ and the intermediate host still undetermined.

Ten percent of all 2021 respondents were likely to buy wildlife in open markets again (note: an increase on the 2020 equivalent figure), and the majority of these planned to buy from other channels if markets were shut down. Two of the most popular alternative channels if markets were shut down were buying online and overseas. This demonstrates the importance of monitoring online trade, and closing national gaps in legislation and enforcement that can allow unsafe and unsustainable wildlife trade to thrive on foreign tourism²⁶.

The 2021 survey also asked participants about exotic pets, defined as “a pet that is not native to the area in which the owner lives or is usually considered wild”; 8% had purchased an exotic pet in the last 12 months or knew someone who had, with the highest percentage of these in Viet Nam at 13%. In China and the US, most exotic pet buyers bought the pet in a physical store, whereas most buyers in Viet Nam and Thailand used social media to buy their pet. The researchers found a strong correlation between greater wealth of respondents and increased purchasing of exotic pets, as well as wild meat²⁷.

Among 2021 respondents (members of the general public rather than zoonotic disease experts) who believe wild animals to be a primary source of COVID-19, wild meat consumption was perceived as the most likely channel for disease transmission, followed by exotic pets, followed by wild animal-based medicines²⁸.

Viet Nam was unique among the five countries surveyed in 2021: respondents expressed high support for market closure and a strong belief in wildlife trade’s role in pandemics, but still expressed a high desire to buy wildlife in the future. Such contrasting responses reflect a common trend that stated intentions related to illicit behaviour are often not consistent with actions in practice: in social and behavioural science terms, an illustration of the ‘Attitude-Action Gap’²⁹.

FIGURE 5A

GlobeScan research for WWF: Covid-19 One Year Later: Public Perceptions about Pandemics and their Links to Nature. Past 12-month purchase of wildlife in an open market from early 2020 to early 2021. Source: https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Highlights_Report-May2021.pdf

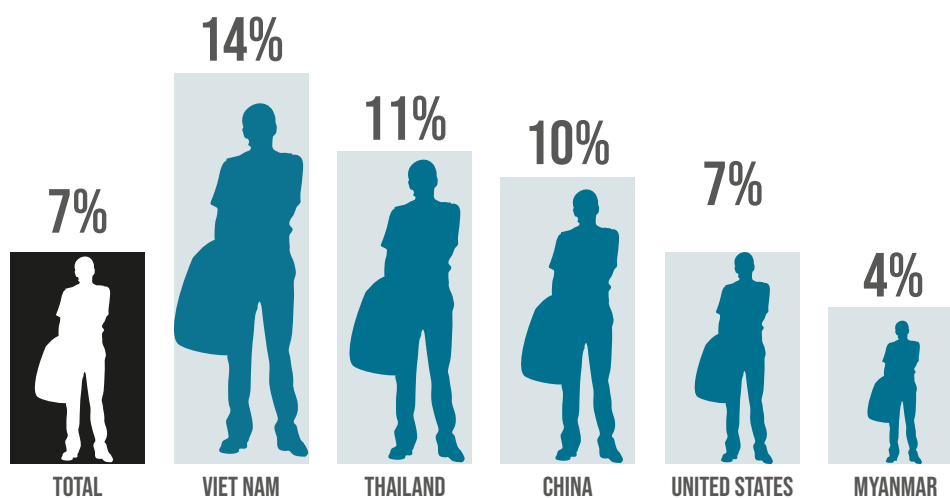
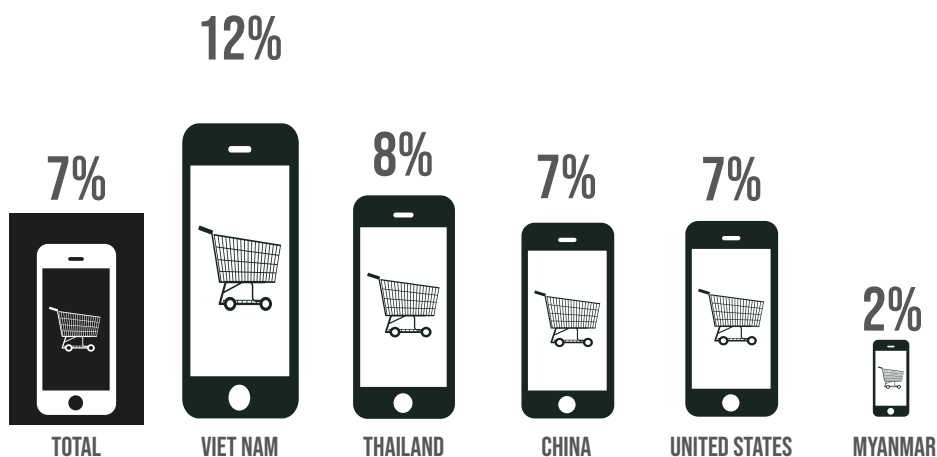


FIGURE 5B

Past 12-month purchase of wildlife online from early 2020 to early 2021. Source: https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Highlights_Report-May2021.pdf



In April 2021 in Thailand, GlobeScan conducted a survey on wild meat consumption (from both legally farmed and illegally hunted sources) of urban populations on behalf of TRAFFIC and the Zoological Society of London. 32% of the 1,300 participants had eaten wild meat in the previous 12 months, and an equal 32% intend to eat wild meat in the future. The typical wild meat consumer was identified as 18-30 years old, travelling frequently (or did so before COVID-19), and with a relatively high income of more than 1,500 USD per month. There was no significant male/female

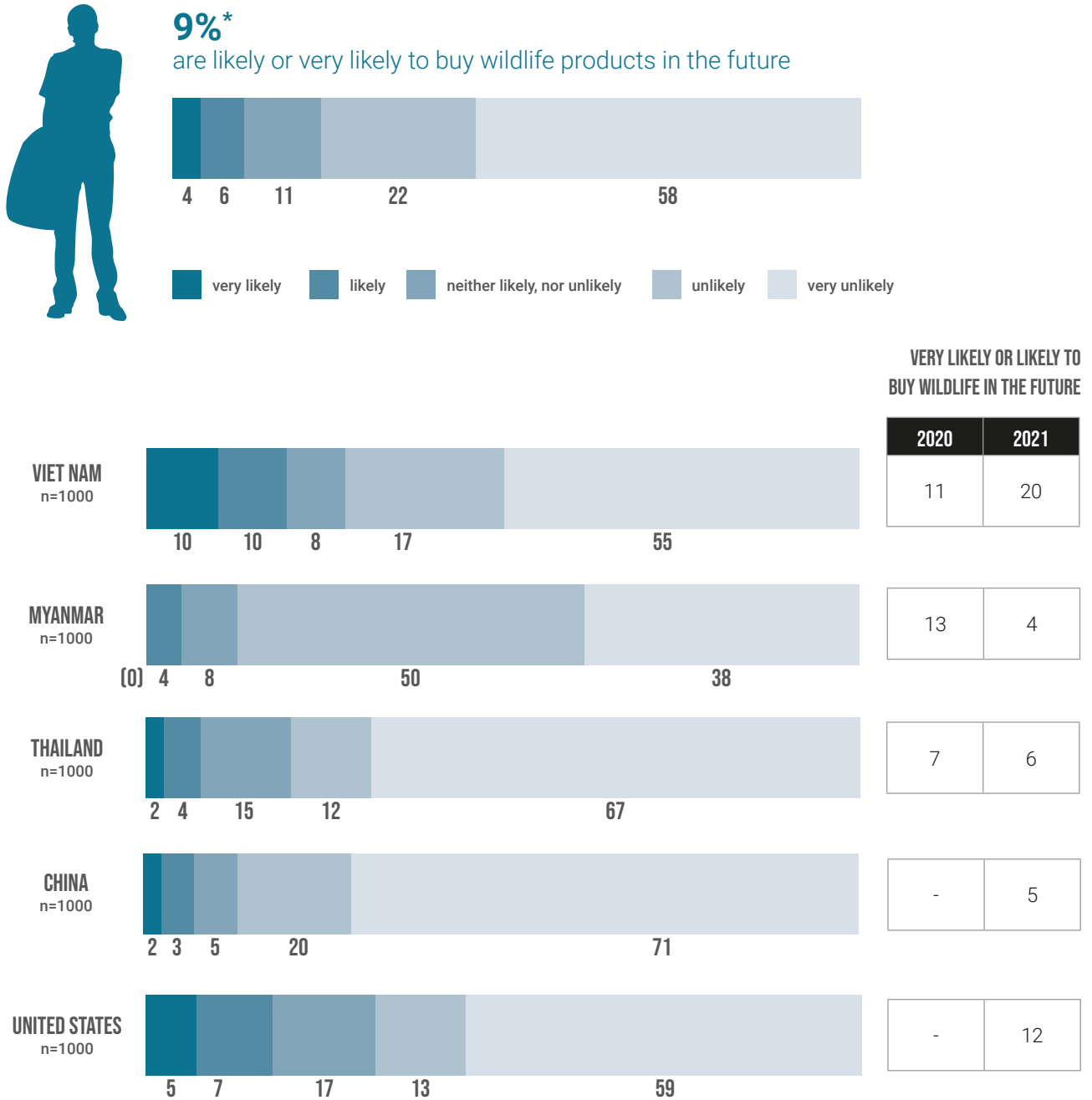
difference among these 'typical' consumers. Much wild meat consumption occurred not in urban areas, but when urbanites travelled to rural areas. The wild species most commonly consumed were reportedly wild boar and red junglefowl³⁰ (note that wild pigs and wild birds are medium and high-risk taxa for zoonotic disease transmission respectively³¹). More than half of consumers believe the wild meat they eat passes through farms, and they perceive these farms as having a lower disease risk compared to wild-captured animals. Fifty-one percent of wild meat consumers were worried

FIGURE 5C

Future intention to buy wildlife products in wildlife markets

https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Highlights_Report-May2021.pdf

* This figure is a result of rounding from the individual categories of "very likely" and "likely".



about disease risks from wild animals, but only 18% worried about the disease risks of wildlife from farms³². Here, greater awareness may help change behaviours, as wildlife farms often lack proper disease surveillance³² and many farms source a portion of their animals from the wild³⁴.

COVID-19 caused 18% of Thailand survey participants to stop eating wild meat, but it was not the dominant reason for ceasing consumption: more cited stopping animal cruelty, preserving nature, and the illegality of eating wild-harvested wild meat³⁵. SBC interventions could consider these other reasons in determining which messages best resonate with the target audience.

In October 2020 in Nigeria, WildAid and GlobeScan conducted research on urban wild meat consumption to assess how this had been affected by the COVID-19 pandemic. Seventy-one percent of survey respondents had consumed wild meat at some point in their lives, and 45% in the last year. Despite COVID-19's suspected zoonotic origin, 75% of wild meat consumers surveyed planned to eat wild meat again in the future. Only 27% of consumers who had stopped buying wild meat cited COVID-19 as their reason³⁶.

In the same Nigeria survey, 98% reported suitable and accessible alternatives to wild meat. The preferred alternative was fish (whether freshwater or marine, farmed or caught was not disaggregated, so care should be taken to ensure any wild-caught species

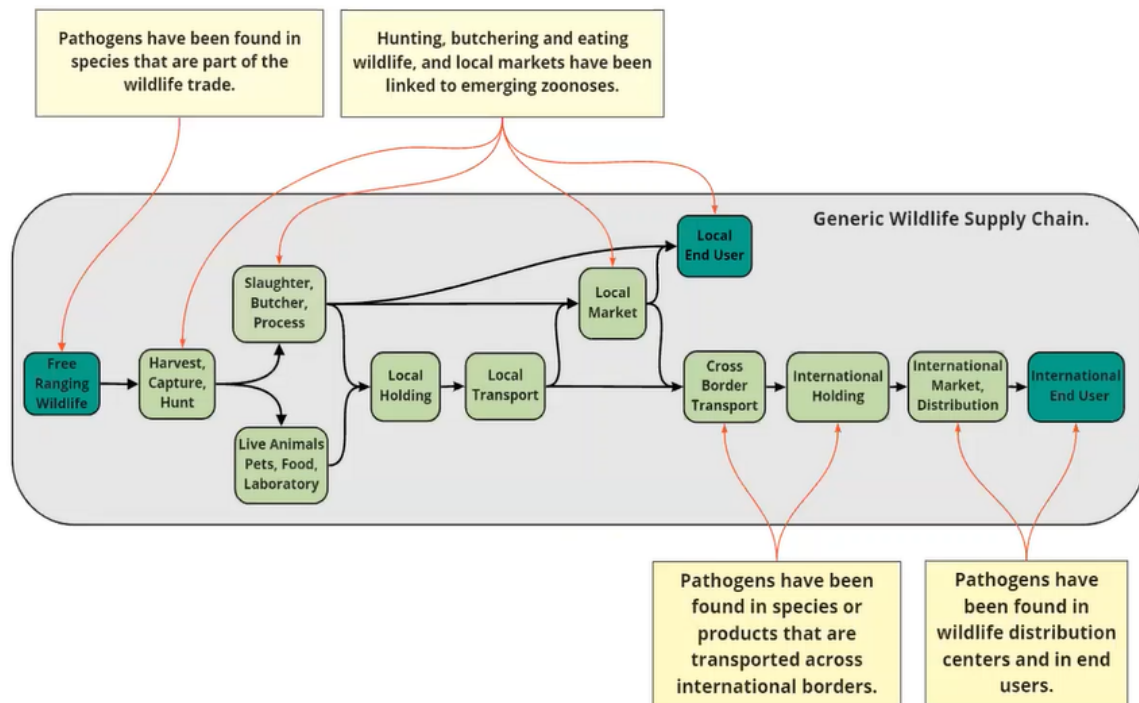
were sustainably harvested), followed by chicken. When fish and domestic meat were more readily available and cheaper than wild meat, urban consumers reported avoiding wild meat³⁷.

In March 2021, the World Organisation for Animal Health (OIE) released its "Rapid Review of Evidence on Managing the Risk of Disease Emergence in the Wildlife Trade." This literature review provides insight into the different points for disease risks in wildlife supply chains, from the point of origin to the end-user. Because these disease risks can develop and emerge at different stages along the supply chain, SBC interventions can achieve more significant impact if targeting unsafe behaviours beyond the level of the end consumer³⁸.

FIGURE 6

Generic wildlife supply chain showing interfaces at which pathogens have been documented. Source: Dr John Berezowski, in Stephen (2021).

*NB: Captive production systems are also an important source point needing to be managed for potential disease risk; plus, local holding (in possibly unsanitary conditions) and slaughtering of wild specimens can occur at any point up until the end-user. Source: Dr. John Berezowski, in Stephen C, Berezowski J et al. (2021). (Link in endnote ³⁸)



PERSPECTIVES AND STRATEGIES

THERE IS CONSENSUS THAT, IN THE AFTERMATH OF COVID-19, WILDLIFE TRADE AND WILDLIFE CONSUMPTION PATTERNS CANNOT CONTINUE UNCHANGED

However, perspectives vary as to the form and degree of change expected to be most effective in preventing future outbreaks. The two main categories of change under consideration are trade restrictions and trade reforms.

RESTRICTIONS

To reduce any immediate risks of zoonotic disease emergence within wildlife trade, one strategy has been to advocate for trade restrictions. In April 2020³⁹ more than 250 Civil Society/Non-Government Organisations, led by Global Wildlife Conservation, the Wildlife Conservation Society, and WildAid, jointly called for a permanent end to commercial trade in terrestrial wild animals, especially birds and mammals⁴⁰. It is argued that the potential emergence of zoonotic diseases within commercial trade in wild mammals and birds poses too significant a risk to public health and the economy, as quantified by COVID-19 losses, to justify the comparatively small economic benefits of continued trade. Some forms of wildlife trade exploit species whose populations have fallen too low to be sustainably harvested, so even low levels of trade pose a threat to these species' conservation.

All of the organisations and individuals contacted for this Situation Analysis reported separating commercial trade in wildlife from hunting and consumption of wildlife for subsistence where no financial transaction takes place. The latter is seen as necessary for rural food security in areas without access to alternative protein sources, and presents less risk of a large-scale disease outbreak because there are no lengthy trade chains to facilitate disease amplification, no mixing with other individual animals and species via farms and markets, and limited human-to-human contact compared to urban areas. Subsistence hunting and consumption come without the risk point of wildlife 'farms' or processing centres that are key to commercial trade. In wildlife farms, semi-captive, ranched or captive-bred wildlife

may be mixed with wild-caught specimens without sufficient disease monitoring, sometimes in conjunction with illegal and unsustainable supply of wild stock.

At the government level, China took restrictive measures in February 2020⁴¹ by banning terrestrial wild animal meat consumption, as governed by the National Forestry and Grassland Administration (NFGA). NFGA manages terrestrial wildlife, including captive-breeding of these animals, and the Ministry of Agriculture and Rural Affairs (MARA) is responsible for aquatic wildlife. This ban extended to closing terrestrial wildlife farms raising animals for meat and banning sales of live terrestrial wild animals in markets, which in turn affects the wild animal supply for other use types, including the wild pet trade. According to GlobeScan and WWF's 2021 research, 96% of respondents in China support this ban⁴². However, some forms of wildlife use are still allowed, such as terrestrial wildlife for medicinal use, which is under the jurisdiction of NFGA and the National Administration of Traditional Chinese Medicine, and meat and fur from specific wild species under the jurisdiction of MARA.

After the wild meat for human consumption ban, MARA took over the supervision and management of captive breeding of certain terrestrial wildlife species from NFGA, now listed in the "National Catalogue of Livestock and Poultry Genetic Resources". These species are mainly for meat and fur. MARA has the capacity to manage animal quarantine and hygiene, so the species under its mandate have similar risk management to livestock; 16 species are categorised as "special livestock

restrictions must consider

if the local population is dependent on wild meat as a protein source, in which case viable alternatives need to be provided

and poultry” and remain legal, from sika deer and mallards for consumption to mink for fur production⁴³.

Viet Nam’s Prime Minister released Directive 29 in July 2020, stating the importance of strictly enforcing pre-existing laws banning illegal wildlife trade and banning imports of live wild animals and wildlife products⁴⁴.

In April 2021, Italy’s parliament approved an act⁴⁵ recommending restrictions to wildlife trade as a means of reducing the risk of zoonotic disease outbreaks. This act is a first step towards drafting new legislation according to the European Regulation (EU) 2016/429⁴⁶ on transmissible animal diseases and animal health (commonly referred to as the EU’s ‘Animal Health Law’). Italy’s Ministry of Health will take the lead in drafting the new law as part of a broader effort to adapt Italy’s national legislation to the EU’s provisions on animal health.

In the Netherlands, a law against breeding and farming mink was passed in 2013, with a 10-year transition period for farms to phase out until 1 January 2024. When COVID-19 began to spread through the mink populations of several dozen farms within the country, with possible zoonotic transmission to farm workers, the national government accelerated the ban to take effect on 21 March 2021 for the country’s nearly 120 operating mink farms. As with China’s closure of wildlife farms, the Dutch government set aside funds to buy out the farms before closure⁴⁷.

In July 2020, the United Nations Environment Programme (UNEP) and the International Livestock Research Institute (ILRI) released their report “Preventing the Next Pandemic” through UNEP’s Frontiers report series, recommending that governments should consider adding restrictions on which species can be legally sold. For the highest risk markets, bans can be considered if there is

evidence that these measures would effectively prevent future outbreaks. Restrictions or bans on wild meat and live animal markets must consider if the local population is dependent on wild meat as a protein source, in which case viable alternatives need to be provided. The provision of alternative livelihoods is essential to improve economic resilience and incentivise wildlife conservation⁴⁸.

Wildlife is an essential source of food, income, and cultural identity for rural and indigenous people, especially in tropical and subtropical regions. According to June 2020 guidance released by the Food and Agriculture Organisation of the United Nations’ (FAO) Forestry Department and its Sustainable Wildlife Management Programme, urban consumption of wild meat as a luxury item drives unsustainable hunting and increases zoonotic disease spillover risks. Demand reduction for wild meat as a luxury good among urban consumers in both source and consumer countries is recommended by FAO as a critical intervention⁴⁹.

Because banning wildlife hunting and consumption could threaten the food security of rural and indigenous peoples, the Centre for International Forestry Research (CIFOR) recommends stopping wildlife trade in urban areas where other protein sources are available but allowing wild meat consumption in forested areas to continue⁵⁰. Research published in February 2021 on the impacts of removing wild meat from global food systems found that replacing wild meat protein with livestock would require approximately 124,000 square kilometres of extra agricultural land. This magnitude of land-use change could in turn drive more than 260 species toward extinction globally⁵¹. In Africa alone, wild meat provides protein to 30-70 million people. Domestic meat alternatives such as chicken could create another risk for zoonotic disease spread within large uniform populations of intensively-raised poultry⁵².



A man in Moyen-Ogooue Province, Lambaréné, Gabon, displays a wild-caught palm civet

ACTIONS & PUBLICATIONS REVIEWED FROM EARLY 2020 TO MID-2021

FEBRUARY 2020

China restricts consumption of terrestrial wild meat

01

MARCH 2020

WWF/GlobeScan "Opinion Survey on COVID-19 and Wildlife Trade in 5 Asian Markets"

APRIL 2020

End the Trade petition, led by Global Wildlife Conservation, the Wildlife Conservation Society, and WildAid

03

JUNE 2020

FAO's report on "Global emergence of infectious diseases: links with wild meat consumption, ecosystem disruption, habitat degradation and biodiversity loss"

JULY 2020

Tanzania releases its "Game Meat Selling Regulations" for legalised wild meat trade

05

JULY 2020

Viet Nam's Prime Minister's Directive 29

JULY 2020

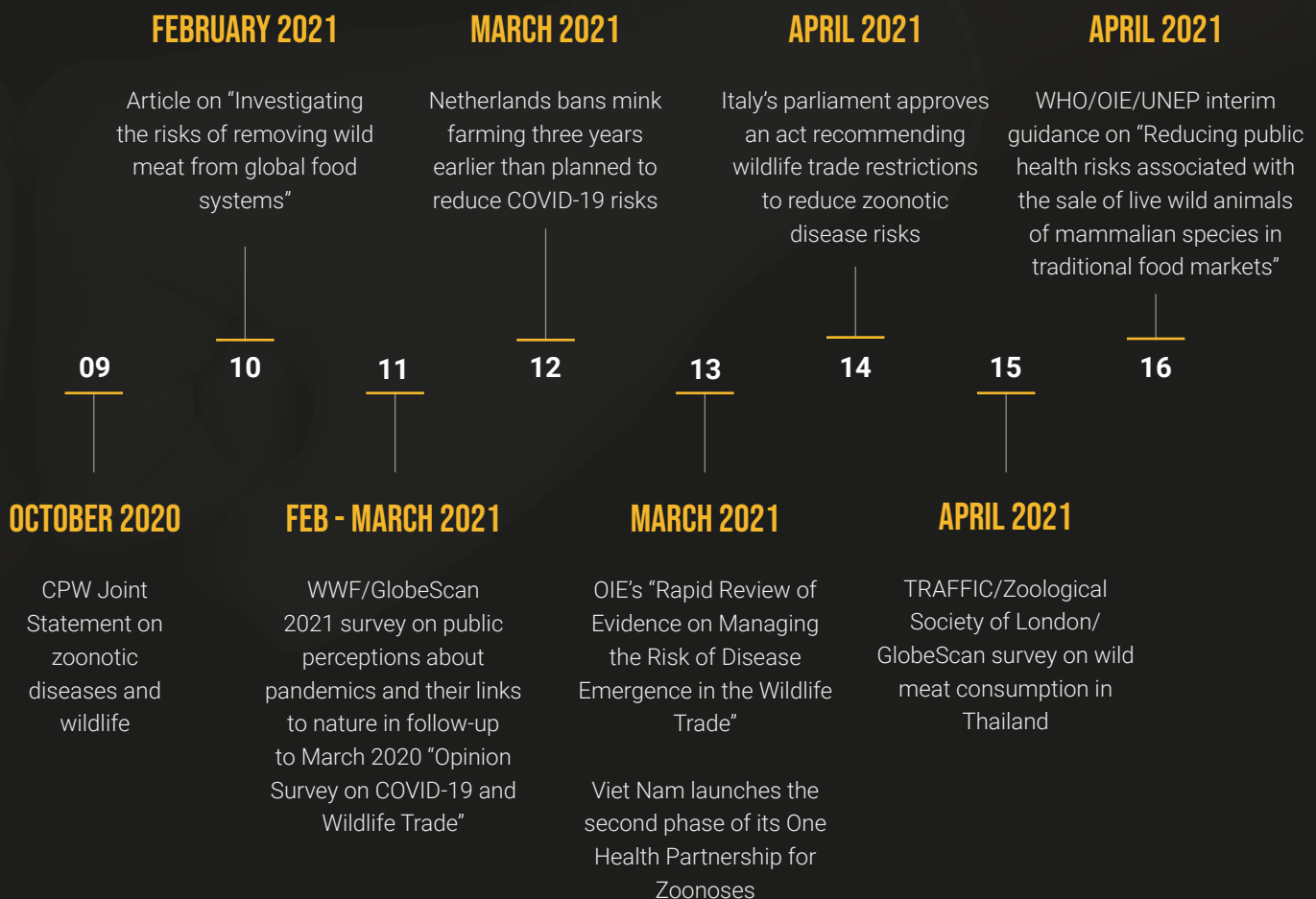
UNEP/ILRI report on "Preventing the Next Pandemic"

07

OCTOBER 2020

WildAid/GlobeScan research on urban wild meat consumption in Nigeria

08



Like CIFOR, several organisations have outlined pathways to partially restrict wildlife consumption in response to the zoonotic disease risk attention brought by COVID-19:



- **In June 2021, the Wildlife Conservation Society (WCS) recommended “stopping the trade and sale of live or freshly killed wild birds and mammals for human consumption**, in particular to urban venues, whether supplied from wildlife farms or wild-caught⁵³.



- **In April 2020, the World Wide Fund for Nature (WWF) advocated shutting down high-risk wildlife markets**, focusing on markets in high-density urban areas, increasing efforts to combat wildlife trafficking and trade in high-risk taxa, and reducing consumer demand for high-risk wildlife products⁵⁴.



- **In April 2020, Fauna & Flora International (FFI) called for immediately halting commercial trade in wild mammals and birds from and within high-risk areas** (e.g., tropical areas high in biodiversity, densely populated and fast-growing urban areas, and complex animal value chains), but allowing exceptions for legal harvest for household consumption and limited local trade (directly from harvest to local marketplace) for those without alternative protein sources. FFI recommended this immediate action be followed by review and reform of legal commercial wildlife trade to minimise zoonotic disease risks, and sustained protection and restoration of ecosystems⁵⁵.

Urban demand reduction campaigns for wild meat can guide consumers to voluntarily restrict their wild meat consumption and shift to safe and sustainable alternative products to support the restriction of wildlife consumption in urban areas. UNEP and ILRI suggest demand reduction for wild meat consumption as an appropriate measure to reduce zoonotic risk. The most successful demand reduction initiatives consider the whole supply chain, from producer or hunter to consumer⁵⁶. Behaviour change activities should target populations that have alternatives to relying on wildlife, such as urban wild meat

consumers with ready access to domestic meat. Meanwhile, it is acceptable to maintain wildlife use for indigenous people and local communities reliant on it. This local level of wildlife harvest and trade must still be regulated and monitored to ensure it is safe, sustainable, and legal⁵⁷.

REFORMS

To gradually reduce the potential risks of zoonotic disease emergence within wildlife trade, another strategy has been to recommend reforms to the generic trade chain, acknowledging the context-specific nature of interventions based on species and trade dynamics, but also socio-economic, political and cultural elements.

The Collaborative Partnership on Sustainable Wildlife Management (CPW) argues in its October 2020 statement that new blanket bans on wildlife trade would fail to target the underlying causes of zoonotic disease emergence, which include habitat destruction and biodiversity loss. These underlying causes diminish the goods and services healthy ecosystems provide, such as disease resilience.

In their statement, the CPW partners recommend four guiding principles to reduce zoonotic disease risks while supporting conservation and livelihoods:

1. **Recognise the importance of the use of wildlife for many communities**, including Indigenous Peoples and Local Communities (IPLCs), in policy responses;
2. **Maintain and restore healthy and resilient ecosystems** to reduce risks of zoonotic spillovers and future pandemics;
3. **Persecution including the killing of wild animals suspected of transmitting diseases** will not address the causes of the emergence or spread of zoonotic diseases; and
4. **Regulate, manage and monitor harvesting, trade and use of wildlife** to ensure it is safe, sustainable and legal.

The CPW statement also notes that bans could harm the livelihoods and food security of millions of people who rely on wildlife⁵⁸. Bans without sufficient capacity and political will to support effective law enforcement can also have the opposite effect, as when hunting for wild meat increased in West African countries that instituted bans after the 2013-2016 Ebola outbreak⁵⁹.

The OIE recommends developing sound regulatory standards for wildlife trade that reduce health risks, improve animal welfare, and support biodiversity conservation to enable sustainable and responsible legal trade. The OIE advises supporting these regulations with wildlife disease surveillance and risk assessment to prevent spillover events, as well as informing at-risk human populations of the risks and reduction strategies to drive positive behaviour change⁶⁰.

Zoonotic disease risks associated with wildlife trade can also be reduced by implementing biosecurity checks for safe and traceable legal wildlife supply chains, and improving the hygiene of market locations that sell wildlife. Many of these reforms are simply adaptations of best practices developed in the more formalised domestic animal trade sector. In livestock trade and the domestic animal pet trade, the importance of good animal husbandry, housing, sanitation, and welfare standards is widely recognised. By directly fostering the wellbeing of the animals able to be legally traded, such practices indirectly serve to protect the health of the people involved at each step in the trade chain, while ensuring compliance with existing criteria of legality and sustainability.

In July 2020, Tanzania legalised sales of wild meat (classified as game meat) from four sources: (i) resident hunting; (ii) tourist hunting; (iii) wildlife farms, ranches and zoos; and (iv) culling, cropping and problem animal control⁶¹. Planning for Tanzania's new wild meat legislation was initiated

before COVID-19 with the idea of reducing illegal hunting in the country and allowing the government and citizens to benefit from access to wild meat and the trade's proceeds. The approach to creating this new legislation missed consultation with relevant government agencies and stakeholders, which has caused concern among some conservationists. The Tanzanian government is taking precautions to avoid zoonotic disease transfer by requiring that captive-bred animals be slaughtered at a licensed meat abattoir, where the meat will be inspected and issued an inspection certificate and a registry will record sources of meat, as well as customers and their purchases⁶².

Zoonotic diseases can emerge from both wildlife and livestock, so meat markets must apply universally strict sanitary standards to reduce the risks of future zoonotic disease outbreaks. As described in UNEP and ILRI's July 2020 report, these sanitary standards must go beyond public food markets to the entire supply chain for domesticated meat and wild meat, both for farmed and captured wildlife⁶³. Biosecurity checks at critical control points within these supply chains will allow consumers to know that a product is safe and allow health authorities to better trace and more effectively respond to outbreaks⁶⁴. Sanitary measures at an international level were already introduced in the World Trade Organisation's Agreement on the Application of Sanitary and Phytosanitary Measures (WTO SPS Agreement) dating back to 1995⁶⁵. A more recent example is the chapter on Sanitary and Phytosanitary Measures under the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), a free trade agreement signed in 2018 by 11 countries⁶⁶. However, significant differences in the capacity of developed and developing nations have led to gaps in the implementation of these measures⁶⁷. Further support from the international community is needed to mitigate the global health risks of these implementation gaps.

zoonotic disease risks

can be reduced with biosecurity checks for traceable, legal wildlife supply chains

OPTIONS FOR COMPROMISE

A third and smaller category is a hybrid approach, advocating for a combination of restrictions and reforms. The Situation Analysis authors found three IGO and NGO-led initiatives advocating this hybrid approach.

The CPW recommends that governments better enforce existing regulations on wildlife harvesting and use while targeting the deeper issues affecting the health of global ecosystems⁶⁸, thus pushing for wildlife trade compliance with legality, sustainability and safety.

TRAFFIC recommends that emergency restrictions can be a valuable tool in the immediate aftermath of a zoonotic disease outbreak and that longer-term solutions should focus on wildlife trade policy and law reforms. Governments are encouraged to strengthen legislation and regulations to control the import, export, sale, and consumption of wild meat and other wild animal products for human consumption, as well as strengthening veterinary and animal health rules for the production, processing, distribution, and introduction of products of animal origin for human consumption. The need for governments to improve the management of

wildlife trade by developing tools to enhance traceability, certification, and monitoring of the trade in these products, is also recognised. Finally, TRAFFIC recommends governments consult with experts from a range of disciplines (e.g., virologists, epidemiologists, trade experts, law enforcement agencies, agricultural experts) for input in forming policy. International agencies such as the CBD, CITES, FAO and WHO are emphasised as particularly important to consult with in developing new wildlife trade policies that can mitigate zoonotic disease risks at a global level⁶⁹.

In April 2021, the WHO, the OIE, and UNEP jointly issued their interim guidance on “Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets.” This interim guidance calls on national governments to temporarily restrict trade in live caught wild mammals when trade regulations and risk assessment are inadequate, to impose strict biosecurity standards for trade in farmed wild mammals, and to implement campaigns to raise awareness on food safety and zoonotic disease risks associated with wildlife trade⁷⁰.

SBC CAMPAIGNS

The potential connections between wildlife trade/consumption and COVID-19 featured in the WHO mission to investigate the origins of the COVID-19 outbreak in Wuhan⁷¹, and these connections have been reviewed extensively by international media, but national governments have issued only limited messaging on these potential zoonotic disease connections. This holds true in the areas where the Wildlife TRAPS project is considering SBC pilot projects.

In China, despite the national government’s February 2020 ban on wild meat consumption and trade in live wild animals, as of November 2021 the government has not formally acknowledged any link between COVID-19 and wildlife trade. In Viet Nam, government messaging around COVID-19 and disease risk has mainly focused on human-to-human transmission, as with the Ministry of Health’s

‘5K’ campaign (in Vietnamese: Khẩu trang (facemask); Khử khuẩn (disinfect); Khoảng cách (distance); Không tụ tập (no gathering); Khai báo y tế (health declaration)⁷². Some messaging has, however, included references to disease transmission via wild animals; see ‘General Campaigns’ subsection. In March 2021, Viet Nam’s government launched the second phase (2021-2025) of its national One Health Partnership for Zoonoses, a multi-ministry effort that aims to reduce the risks of zoonotic disease transmission and has the potential to develop future zoonotic disease risk communications.⁷³

In African countries, the potential links between consuming unsafe wildlife products and COVID-19 are not so widely known or believed. COVID-19 is seen to have originated outside of Africa, and so it is disconnected from localised wildlife consumption.

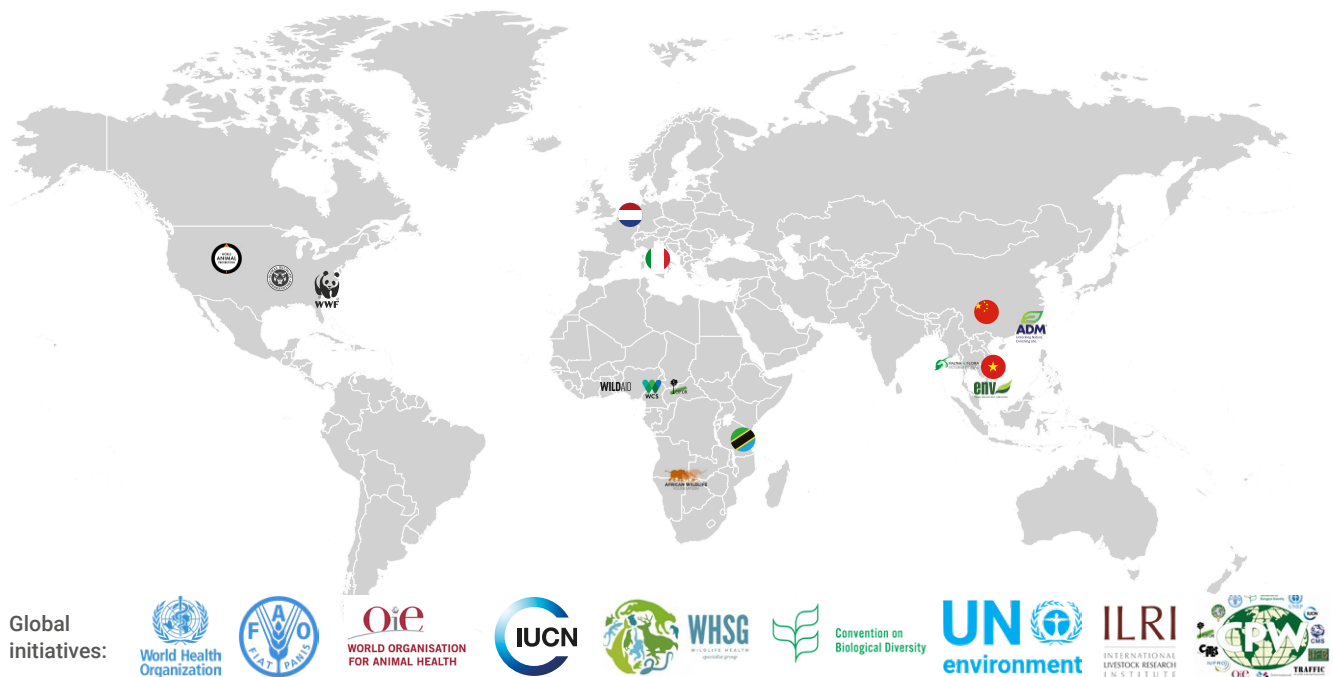
In Cameroon, the Minister of Scientific Research and Innovation said at a March 2020 press conference that, given COVID-19's potential emergence from bats and Yaoundé's substantial bat population, the country's fight against COVID-19 needed to account for the possibility of inter-species transmission from bats to humans⁷⁴. After public mockery of this idea, the Minister clarified these comments in a follow-up interview to urge her fellow Cameroonians to avoid eating bats based on their connections to many past zoonotic diseases, and to instead rely on the many other available food sources⁷⁵. In Tanzania, there has been no government messaging about the zoonotic risks from wildlife. In July 2020, the Tanzanian government legalised the sale and consumption of wild meat through government-regulated channels, thereby increasing access to consumption.

Relative to national governments, NGOs and IGOs have produced more messaging over the past year focused on mitigating the potential disease risks of wildlife trade. The growing understanding of the "One Health" approach; that the health of humans, ecosystems/wildlife and domestic animals is interdependent, has brought together organisations across these spheres to change societal behaviours for multiple reasons, from public health to biodiversity conservation.

This Situation Analysis will note the past year's relevant SBC efforts by all stakeholders across three different wildlife use types: meat, medicine, and pets.

FIGURE 7

Map of initiatives researched that aimed to reduce zoonotic disease risks associated with wildlife trade, as implemented from early 2020 to present.



MEAT

In China, WWF and TRAFFIC produced an online and offline campaign in February 2020 to reduce demand for pangolins, identified as a potential intermediate host of COVID-19, as part of the Champions of Change project⁷⁷. More than 54 million people viewed the campaign messages on Weibo from 7-9 February 2020, of which 6.82 million viewed the campaign video. Posters with the message

of the illegality of consuming pangolins were distributed in high profile locations in priority cities, which were the major transit/consumption locations for pangolin products according to TRAFFIC's 2018 market survey. The materials were posted at the airports in Kunming, Nanning, and Guangzhou and in the underground stations in Shenzhen from 13-26 February 2020.

FIGURE 8

SBC initiatives researched and implemented to date with a focus on wild meat.
Source: TRAFFIC



China. Feb. 2020.



CHAMPIONS OF CHANGE PANGOLIN CAMPAIGN

Key message: Consuming pangolins is illegal
Outcomes: 54 million viewed campaign messages and 6.82 million viewed campaign video on Weibo



Viet Nam. Aug. 2020.



THE HOST & BUSINESS LEADERS PLEDGE FOR WILDLIFE

Key message: Stop bushmeat, Prevent the risk
Outcomes: 1,500 video likes on Facebook and 93 signatures from business leaders



Africa, multiple countries. Dec. 2020.



DON'T EAT, BUY, OR TRADE IN RISKY BUSHMEAT

Key message: Don't eat, buy, or trade in risky bushmeat
Outcomes: 112,000 views on YouTube; will lead to 2021 campaign in Cameroon, Gabon, Nigeria, and Uganda



China. Mar. 2021



SBC TRAINING TO CHINESE GOVERNMENT AND INDUSTRY ASSOCIATIONS

Key message: Build SBC capacity for post-COVID-19, when travel and IWT may grow
Outcomes: ~40 in-person participants and 369 online participants



DRC. Mar. 2021



#NYAMACONGO

Key message: No wildmeat in cities
Outcomes: TBD, campaign is ongoing



DRC. Apr. 2021.



YOKA PIMBO

Key message: Celebrating Congolese cuisine without bushmeat
Outcomes: TBD, campaign is ongoing

In the months following the Champions of Change campaign's conclusion, government authorities instated a ban on the consumption of terrestrial wild animals as food, stricter enforcement of China's Wild Animal Protection Law, and other relevant legislation prohibiting hunting, catching, trading, transporting and eating wild animals. In June 2020, all pangolin species were upgraded from Class II to Class I level protection in China. Corresponding protection measures included strengthening the crackdown on illegal trade in pangolins and recovering the wild population. Still, addressing the inventory of scales that ensures the limitation of the medicinal use of pangolin scales is not yet listed as a priority for the NFGA. There remain eight TCM prescriptions containing pangolin scales in the 2020 Chinese Pharmacopeia, although pangolin scales have been deleted from permitted raw materials for medicine.

In Viet Nam, CHANGE and WildAid launched a campaign in August 2020 in response to the Prime Minister's July 2020 Directive 29 that addressed wildlife hunting, trafficking, and consumption⁷⁸. Their campaign video, "The Host," showed an example of the disease outbreak that could emerge from one man's

choice to eat pangolin, and urged viewers to not consume wild meat with the Vietnamese celebrity-endorsed message "Stop bushmeat, Prevent the risk." Since being posted on Facebook in August 2020, the video has received 1,500 likes and 196 shares⁷⁹. CHANGE and WildAid created a pledge for Vietnamese business leaders to sign, saying they would change their behaviours not to trade, breed, or consume wildlife to help prevent the next pandemic. As of June 2021, 93 business leaders were listed as having signed, and six have posted video endorsements on the pledge website⁸⁰. CHANGE and WildAid are also targeting restaurants to stop using wild meat⁷¹.

In December 2020, WildAid launched a multi-country, multi-language campaign in Africa with the message "Don't eat, buy, or trade in risky bushmeat." A two-minute campaign video was released in six different languages, showing how the actions of an ordinary person in cutting down trees or killing and consuming wildlife can contribute to the emergence of a pandemic, which can harm economies and take away jobs and family members⁸². As of July 2021, the English version of the video had 112,000 views on YouTube⁸³. This will be part of a larger campaign in 2021 in

Cameroon, Gabon, Nigeria, and Uganda that aims to reduce the consumption of wild meat in urban areas to relieve pressure on wild animal populations and reduce risks of a future pandemic⁸⁴.

In March 2021, TRAFFIC delivered SBC training⁸⁵ to Chinese government authorities and relevant industry associations in collaboration with the China Wildlife Conservation Association (CWCA) to improve the ability of the participants to design and deliver messages to potential consumers of wild meat, and support the effective implementation of China's Ban on Consuming Wild Terrestrial Animals as Food⁸⁶. There were more than 40 in-person participants from government authorities, industry associations, institutions, research centres, NGOs, social media platforms, media, and the UK Embassy in Beijing, and an additional 369 participants from branches of the CWCA joined the training online. Government authorities and industry associations were urged to build their behaviour change communications capacity in advance of the post-COVID-19 era when travel is expected to rebound and the consumption of illegal wildlife products may grow again.

CIFOR launched a campaign in Kisangani, a city of one million in north-eastern DRC, in March 2021 with the message "No wildmeat in cities." The campaign uses the hashtag #nyamacongo ("nyama" meaning "meat" or "animal" in the region's Bantu languages) and promotes the consumption of locally produced poultry and pork as an alternative to wild meat for urban consumers. Instead of emphasising the potential zoonotic disease risks from consuming wildlife, which consumers in the region do not strongly believe, it focuses on the food safety risks of consuming poorly processed wild meat that is transported over long distances to urban areas (factors that can make wild meat less fresh and healthy

than locally raised domestic alternatives). The campaign targets working-class young people more open to changing their habits compared with elders who grew up on wild meat. Messaging is through videos, posters, and theatrical plays⁸⁷.

In April 2021, WCS helped launch the Yoka Pimbo ("delicious" in Lingala) campaign in Kinshasa, DRC, to reduce urban bushmeat consumption. Though WCS designed the campaign, the campaign itself is led by the government, with WCS in the background as a technical partner. As such, the campaign has no NGO branding, a contrast to CIFOR's campaign that is worth monitoring for any differences in the target audience's level of engagement. The campaign focuses on positive messaging under the theme of celebrating Congolese cuisine; instead of saying "no" to wild meat, it proposes alternatives by partnering with influential local chefs to redesign popular recipes for wild meat with substitute ingredients. Previous WCS research in the region found that urban wild meat consumers were not just motivated by status, but also by their perceptions of wild meat's natural and healthy qualities. These are characteristics that frozen imported meat lacks, but which products like organic local chicken and freshly caught fish can readily substitute⁸⁶. In subsequent waves, this campaign will engage the private sector to increase the availability of alternative products, such as chicken, pork, palm grubs, caterpillars, and local fish. Although the campaigns designed by CIFOR and WCS target overexploitation of wildlife, rather than targeting zoonotic disease risks, their foundational research and design offer valuable lessons as to the type of messaging that may best resonate with Central African audiences and are worth continuing to monitor for their effectiveness in changing behaviours.

MEDICINE

Although early media communications highlighted the risks of pangolin consumption for meat or medicinal purposes due to the potential for zoonotic or COVID-19 threats, hardly any subsequent campaigns targeted the zoonotic risks of medicinal wildlife consumption. The research team for this Situation Analysis attributed this in part due to the opaque and sometimes conflicting evidence around the source of the SARS-CoV-2 virus, even after the World Health Organisation mission to Wuhan, and due to the risk of zoonotic transfer from wildlife products used for medicine, rather than meat, being much lower. This is associated with both the treatment and processing of e.g., traditional medicine ingredients (which, for example,

may be dehydrated, ground into powders or vacuum-sealed for some duration before use), as well as the relatively small proportion of animal parts and derivatives typically used in such treatments. Tonics and tinctures, as well as topical creams, may provide some exceptions to medicines that contain animal proteins and are ingested, but the risk of catching an EID from these highly processed variants would logically remain quite low. These considerations also relate to whether piloting communications for products used for these purposes should be considered as high a priority as others, which is explored further in the section on Gaps and Opportunities for Wildlife TRAPS pilot projects.

FIGURE 6

Pangolin TCM products, branded as Armadillo Pills in English translation.

Source: TRAFFIC



There is sometimes overlap in the motivations for consuming wildlife medicine and wild meat. Certain wild meats or body parts may be consumed as food in the belief that they carry health or medicinal benefits. Wild animal body parts may be stored in alcohol and the alcohol consumed as an informal, unprescribed tonic

for its perceived health benefits. In the case of such an alcohol-based tonic, the risk of catching an EID would likewise remain low. In the case of wild meat consumption for its perceived health benefits, focusing on meat rather than medicinal use would be more relevant.

PETS

A substantial body of material focused on mitigating disease transfer through good practice in animal welfare, husbandry, and handling, has been published by pet industry bodies and trade associations^{89,90}. However, the research did not reveal a significant number of recent SBC campaigns targeting wildlife pet buyers with messages of zoonotic disease risk. Only one campaign was found to have an underlying goal of reducing zoonotic risk, with one other mentioning this as a secondary element⁹¹. Two pieces of consumer research were also illuminating and could provide a starting point for follow-up SBC campaigns.

In May 2020, the USAID BIJAK project in Indonesia launched an SBC campaign called #BijakBerkicau to reduce demand for wild-caught songbirds by shifting consumer preferences to captive-bred birds and promoting improved husbandry practices⁹². In promoting better welfare for kept songbirds, the campaign highlighted that these daily practices could increase the birds' longevity and save their owners from needing to frequently purchase new birds, which are popularly kept for singing competitions. Contained within this messaging was a goal to indirectly reduce the risks of potential zoonotic disease emergence from the birds by keeping them in healthier, less stressed, more hygienic conditions.

The campaign did not use direct messaging on zoonotic risk for several reasons:

- The audience was already aware of these risks through experience with avian influenza in Indonesia, and this experience did not deter them from keeping birds,
- Campaigners wanted to avoid the possibility that the audience might respond to zoonotic risk messaging by killing their birds, and
- The campaign sought to avoid audience resistance over a negative portrayal of songbird keeping by instead focusing on shifting preferences from wild-caught to captive-bred songbirds.

Campaign messages were disseminated through weekly social media posts targeted at songbird keepers and hobbyists in West Java through Facebook groups (the COVID-19 pandemic having shifted much of the campaign online). The messages used infographics, videos, comics, and webinars featuring influencers from the songbird keeping community and key opinion leaders, such as songbird breeder associations⁹³. An early assessment of the campaign's impacts showed improved songbird husbandry and a preference for purchasing captive-bred songbirds, as self-reported by target audience members⁹⁴.

FIGURE 10

Cover illustration of the #BijakBerkicau campaign's Facebook page, aimed at shifting demand from wild-caught to captive-bred songbirds and improving husbandry practices <https://web.facebook.com/BijakBerkicau>



From April to June 2020, TRAFFIC partnered with the Viet Nam Central Buddhist Association to reduce unsustainable demand for wild-caught songbirds in Hanoi and Ho Chi Minh City, Viet Nam. The SBC initiative emphasised the Buddhist virtue of compassion towards all sentient beings to motivate songbird keepers to protect vulnerable species by not caging wild-caught songbirds, but allowing these birds to remain in the wild. The Venerable Thich Thanh Huan, Abbot of Hanoi's Phap Van Pagoda, wrote a blog about songbird collection which the VCBA shared on the websites of several pagodas and songbird clubs⁹⁵. The Abbot's message notes that the emergence of zoonotic diseases is a karmic result of humans not living in harmony with nature, and that we must learn to respect all living things to avoid such painful lessons in the future⁹⁶.

Although 2020 saw an overall global decrease in IWT seizures, in terms of wildlife availability, there were increases in online advertisements for exotic pets⁹⁷. Online wildlife pet traders and buyers did not comment on links to COVID-19 except for a few mentions when the WHO declared the global pandemic. Otherwise, sales grew pre-lockdown with traders marketing exotic pets for companionship and offering special price reductions. Wildlife pet buyers and traders did not readily perceive risks of zoonotic disease transmission from wildlife pets, unless, in rare cases, they had some direct experience of this⁹⁸.

This lack of pandemic-triggered behaviour change among exotic pet buyers does not necessarily imply that they would not respond to targeted SBC messaging. Research from WWF Japan and Oxford University, described in the next two paragraphs, helps to illustrate how people respond to more targeted messaging on the zoonotic disease risks associated with exotic pets.

In February 2021, WWF Japan conducted a survey of Japanese citizens' opinions towards exotic pets. One in three were interested in petting exotic animals, which can be done in Japan's animal cafes, and one in six were interested in keeping exotic animals as pets. Most of these interested people were motivated by cuteness ("kawaii") and healing/soothing ("iyashi"), the same motivations given for keeping cats and dogs, but 16%

expressed the importance of rarity⁹⁷. "Healing" in this context is more closely related to stress relief and relaxation rather than the medicinal motivations for consuming wildlife-based medicines⁹⁸. Sixty-eight percent of respondents had little to no knowledge about the zoonotic disease risks posed by certain species kept as exotic pets, as well as issues of illegal trade, animal welfare, and wildlife conservation. Once informed, 60% considered zoonotic disease as the most important risk, while 95% supported stronger regulation given the information on the risks. However, 25% were still interested in exotic pets and 14% still wanted to own one even after knowing the risks. Younger age groups in particular were largely inflexible in their desire for an exotic pet. These findings show that awareness of zoonotic disease risks and other underlying issues of exotic pet ownership is not enough to change outcomes; behaviour change interventions are needed to effectively change consumers' actions¹⁰¹.

Oxford University researchers surveyed consumers in Brazil, China, the USA, and Viet Nam on their desire to own wild mammals, birds, and reptiles. When given information on zoonotic disease, animal welfare, legal or species conservation consequences, all respondents showed decreased desire to own an exotic pet, with disease information leading to the greatest decrease. Respondents who rated their desire to purchase an exotic pet the highest believed that shops were well-regulated and that they could distinguish between captive-bred and wild-caught animals, both of which are points of misinformation that SBC messaging could seek to remedy¹⁰². This initial research was conducted in 2018, but the researchers then repeated the survey in July 2020. When surveyed during the pandemic, respondents in Brazil, China, and the USA had a 40-60% reduction in their desire to own an exotic pet. Respondents in Viet Nam, however, had a higher purchasing desire during the pandemic than in 2018. The Oxford University researchers speculated that this was due to Viet Nam's long history in combating epidemics and its absence of COVID-19 deaths at the time of the survey. Their evidence suggests that, across the four countries surveyed and more broadly, COVID-19 is unlikely to permanently reduce demand for wildlife products¹⁰³.



global seizures decreased in 2020

but there were increases in online adverts for exotic pets

pet buyers and traders

did not perceive risk of zoonotic disease transmission

GENERAL CAMPAIGNS

Some campaigns over 2020-21 targeted wildlife trade, health, and consumption as a whole, without focusing in on one particular use type.

Viet Nam's Ministry of Health (MOH) and its T5G communication agency, while mainly focused on human-to-human disease transmission in their COVID-19 messaging, included a message to avoid buying, selling, and coming into contact with all types of wild animals. Viet Nam's MOH has made this messaging material publicly available for use nationwide over the past year and has disseminated it through all of the MOH's messaging channels, with postings in all national and provincial hospitals and clinics. It was developed with donor support from USAID, Save the Children, and Breakthrough ACTION¹⁰⁴.

WildAid, WCS, and Global Wildlife Conservation launched the Coalition to End the Trade¹⁰⁵ which, in April 2020, created the Declaration to End the Trade, a global petition to engage consumers in calling on the world's governments to prevent the next pandemic by ending commercial trade in wild terrestrial animals (particularly mammals and birds) for consumption. To date, more than 250 organisations have signed this petition¹⁰⁶.

From June to September 2020, WildAid partnered with Thairath TV, Thailand's top TV news channel, to produce four online episodes of "Talks for Change." This show brought together celebrities and experts on wildlife and public health to highlight the zoonotic disease risks of wildlife trade and consumption. The show promoted the message that humans need to stop destroying wildlife habitats and stop hunting, buying, consuming, and owning wildlife as pets to prevent a future pandemic. The first episode had more than 51,000 viewers and reached over 15 million followers on Thairath TV's Facebook and Thairath Online's YouTube channels¹⁰⁷.

In April¹⁰⁸, July¹⁰⁹, and December¹¹⁰ 2020, Education for Nature – Viet Nam (ENV) released three PSAs under its "Never Again" campaign, calling on the Vietnamese government and people to eliminate illegal wildlife trade and reduce demand for wildlife to prevent a future pandemic. The PSAs highlighted the spread of COVID-19 cases worldwide, the economic losses and social isolation, and interviewed everyday Vietnamese citizens to highlight their views on the pandemic, its connections to wildlife trade, and the resulting importance of ending illegal wildlife trade and eliminating forms of legal wildlife trade with high risks of zoonotic disease transmission. From April to December 2020, ENV broadcast its "Never Again" campaign messages on more than 60 news channels in Viet Nam, in residential and commercial building elevators, on trains and buses, and social media¹¹¹.

While delivering significant outreach, these generalised campaigns did not focus on specific changes to consumer behaviour, thus may not deliver these targeted behaviour change impacts. Their wide focus on wildlife trade and consumption as a whole is most likely to resonate with an audience that views wildlife trade as a holistic issue, which is to say, an audience that does not consume wildlife and is already pro-wildlife conservation. As such, their messaging may be effective in bringing about high-level shifts in reducing societal acceptance of wildlife consumption and increasing political will to restrict wildlife trade, but it is unlikely to resonate with and change the behaviours of individual wildlife consumers, whose motivations for and modes of using wildlife are more differentiated. Generalised campaigns also tend not to highlight the differences in relative risk across wildlife taxa and wildlife use types, an important consideration for potential consumers as well as for the public and policymakers in assessing the safety of different forms of wildlife trade.



Damnoen Saduak Floating Market, Thailand. A woman holds a Slow Loris for tips from tourists taking photos

A close-up photograph of a pine cone, showing the intricate, overlapping scales. The scales are a mix of light tan and dark brown, with a textured, ribbed appearance. The lighting is warm and directional, creating strong shadows and highlights that emphasize the three-dimensional structure of the cone. The background is a soft, out-of-focus yellowish-brown.

SUCCESS FACTORS AND LESSONS LEARNED



Pangolin being offered for sale



SUCCESS FACTORS

CONSIDERING THE EXPERIENCE REVIEWED TO DATE, A SYNTHESIS OF SUCCESS FACTORS THAT SEEM REASONABLY CONSISTENT ACROSS TERRITORIES, USE-TYPES AND TAXA, INCLUDE:

A. BASE MESSAGING ON CONSUMERS' PRE-EXISTING VALUES

In general, target audiences respond better to positive social messages than to negative environmental messages. This is in line with the experience from communications targeting climate change deniers, which have proved more effective when focusing on the social welfare improvements of mitigating climate change, rather than the risks and realities of climate change. This also speaks to the importance of focusing on issues that consumers feel their actions have the power to change.

Wildlife consumers tend to place high importance on nature and the wild sourcing

of their products – for example, this has been especially true in Central African wild meat consumers. Positive messaging could emphasise the benefits that the nation's wild places, like Congolese forests, provide to people, and thus build pride in the nation's natural resources and heritage¹¹⁰. A result is that people in poverty have real incentives to protect nature and ensure sustainable trade. This must therefore be appropriately considered and balanced before decisions are taken to promote a safe, sustainable, traceable supply of wild meat to consumers, i.e., to ensure the approaches are feasible, realistic and will endure beyond the intervention. The

CIFOR publication 'Towards a Sustainable, Participatory and Inclusive Wild Meat Sector'¹¹³ (CIFOR, 2019) provides useful reference material and perspectives on such matters.

Consumers of wild meat and wildlife-based medicines consume these products for nutrition but also because they believe them to be healthy, as in Thailand¹¹⁴. Campaigners could point to the negative health effects of consuming too much wild meat, the most frequently cited reason for the cessation

of consumption in Yaoundé, Cameroon. Campaigns could likewise highlight the poor, unreliable quality of certain wild meat¹¹⁵ and wildlife-based medicines sourced from animals in poor condition, like bear bile¹¹⁶, while guiding consumers towards safer and more sustainable alternative products or forms of consumption (as in the case of bear bile where synthetic treatments are also available). Again, alternatives should be confirmed as available before effort is made to persuade purchasers.

B. PRESENT THE RIGHT MESSENGERS, AT THE RIGHT TIME, SUPPORTED BY THE RIGHT ENABLING ENVIRONMENT

The perceived credibility and pick-up of behaviour change messaging are influenced by who presents the message. Locally influential actors and institutions should be engaged as messengers to change perceptions and bring about effective behaviour change. These messengers can have a strong voice in promoting alternative products or forms of consumption. In the Republic of the Congo, for example, Protestant Christian groups are growing in influence, and have significant social and political influence to connect with target audiences¹¹⁷. In Thailand, survey respondents noted experts as the most trusted messenger for information on wild meat, followed by government and celebrities¹¹⁸. In this context, government messages could be amplified by relevant experts and celebrity influencers, with different influencers for different target groups.

Messengers' actions should also be transparent; there should always be a way for those interested to learn more about the underlying motives and organisations involved in the behaviour change messaging. Restrictions on wild meat without this might fuel fears and rumours about the ulterior motives of governments, NGOs and outbreak response teams¹¹⁹.

Certain wildlife products are customary to consume at specific times, like shark fin soup at weddings in some parts of East Asia. In the Republic of the Congo, consuming wild meat is customary on weekends. Based on this,

messages could be delivered at more relevant times, such as during Sunday worship with the help of influential faith leaders¹²⁰. In the case of weddings in Asia, messages have targeted wedding planners, restaurants, the couples themselves, and the couples' parents who may pressure them to serve shark fin soup to adhere to tradition, ensure an auspicious dish for the happy couple and show wealth and status¹²¹. Messages delivered during wedding planning could help shift this social norm.

Regarding the timing of any campaign, including its duration after an outbreak has passed, consumers and stakeholders must continue to be engaged to enable permanent change. Behaviour change efforts during an outbreak will be associated with the outbreak, and the situation may return to normal after the outbreak when people no longer see the relevance (or urgency) of changing their behaviours¹²².

Changing behaviours is also easier when the enabling environment facilitates the desired behaviour, and 'frictions' are brought in to disrupt and make the current behaviour more difficult, as with the "Wild Meat-Free City" campaign led by WWF and the Forest Protection Department in Hue, Viet Nam in 2017¹²³. Restaurants that sell wild meat, for example, should be scrutinised to ensure what they offer is legal and responsibly/sustainably sourced and could be assisted to identify and secure such options if this proves challenging. Retailers could also, in this manner, be targeted for a successful behaviour change intervention.

behaviour change efforts during the pandemic must continue to be relevant beyond the pandemic

any alternative commodity is only as safe and sustainable as the practices applied to its production and processing

C. CHOOSE LOCALLY APPROPRIATE AND LOCALLY SOURCED ALTERNATIVE PRODUCTS

Proposing suitable alternative options is important for any behaviour change intervention, and the right alternative product for wildlife consumers will vary based on local preferences and local availability. In the Republic of the Congo, imported frozen meats are seen as poor quality and unsafe, often making consumers sick. Local organic poultry and livestock and locally caught fish are seen as fresh, tasty, and healthy, satisfying the main motivators for why people consume wild meat in this area. Fresh fish may be a

good alternative protein source in similar urban coastal areas if fish can be sustainably sourced¹²⁴.

A shift to these alternative products should also account for local needs to improve production capacity and safe food handling, a challenge the Japanese government is supporting in West and Central African fisheries^{125,126}. Any alternative is only as safe and sustainable as the practices applied to its production and processing.

D. SIMPLIFY GUIDANCE AROUND HOW TO CHANGE

Long lists of species prohibited for trade and consumption are difficult to remember and may be ignored. Instead, WildAid and GlobeScan research on urban wild meat consumption in Nigeria suggested that the government communicate a shortlist of several game species that are legal, safe, and sustainable to consume. An example species in Nigeria would be the grasscutter, or greater cane rat (*Thryonomys swinderianus*), which can also be raised on farms. Care must be taken to ensure systems of production such as this meet the requisite safeguards and health and welfare standards, and that the species being suggested will not then also be at risk of

overexploitation. Yet, from an SBC perspective, a clear shortlist is easier to understand for consumers and to enforce for law enforcement officers¹²⁷.

Similarly, all campaign messages and materials (documents, posters, etc.) should be simple to ease understanding and implementation. This relates not just to consumers, but also other actors along legal and illegal trade chains, such as law enforcement officials, hunters, transporters, and sellers. This leads to a final consideration about success factors described next.

E. CONFIRM THE FEASIBILITY OF THE DESIRED BEHAVIOUR AND WHETHER CONSUMERS ARE THE MOST APPROPRIATE INITIAL TARGET AUDIENCE

Taken in total these success factors reinforce that SBC efforts work best when persuading the target audience towards the desired choice or behaviour by using positively framed and clear, succinct messaging, aligned with target audience values and issued by credible and influential messengers. As such, it is worth reflecting at the SBC initiative design stage whether it is always possible to prepare such an approach specifically for wildlife product consumers. To persuade consumers to seek sustainable and safe items, it must first be clear that these options exist. In farming systems in the UK, a simple assurance scheme in this regard is offered through a 'Red Tractor' label¹²⁸. This assurance scheme covers the entire food supply chain

and engages over 50,000 farmers and 450 independent inspectors to ensure the most robust assessments possible. Over 60,000 inspections are conducted each year on 14 billion GBP worth of farm-produced food (from animals and plants). In the research conducted for this Situation Analysis however, equivalent schemes for wild-sourced food products were much less readily available.

It is therefore worth reinforcing that an important factor for SBC initiative success is clarity over whether consumers are the most appropriate wildlife value chain actors to engage in messaging to achieve impact; in this case to shift wildlife use towards a safe, traceable, sustainable supply of products for

meat, medicine, or pets. Alternative actors and entry points for SBC initiatives that might be more influential to catalyse initial changes in behaviour could include e.g., retailers, wholesalers, consolidators/exporters, harvesters/hunters, or collectors, alongside the industry associations, trade bodies and government policy, regulatory and enforcement

agencies managing aspects of the context within which these actors operate. Value Chain Analysis (VCA) thus becomes a final likely success factor, in helping to determine which actors should be the highest initial priority and to account for other context-specific variables influencing target groups within national or sub-national demographics.



Hippo meat packed in polythene bags ready for sale in Tanzania

LESSONS LEARNED

zoonotic risk messaging

can contrast with audience experience of never having contracted a disease from wildlife

A. VARIABLE TRACTION AROUND ZOOONOTIC THREAT AS A LEVER FOR CHANGE

Regionally, disparities were evident in the extent to which zoonoses and disease risks were perceived as effective mobilisers of consumer change. For example, awareness of and belief in the potential link between COVID-19 and wildlife consumption varies by region. Government restrictions on wildlife consumption and trade in China and Viet Nam after the outbreak of COVID-19 emphasise this link to their general public. Among survey respondents in Thailand, 18% stopped eating wild meat because of COVID-19, but more reported ceasing consumption to stop animal cruelty, preserve nature, or avoid the illegality of consuming wild meat harvested from the wild (as opposed to legally farmed wild meat)¹²⁹.

In contrast, in Central African nations consuming local wildlife meat is not perceived as a disease vector nor a risky practice associated with COVID-19's emergence; the virus is seen to have come from outside the African continent and is thus disconnected from local perceptions and behaviours. Responses to Ebola in this region showed how localised risk perceptions can be; in the Republic of the Congo, interviews conducted in 2016 revealed that only some urban wild meat consumers reduced their consumption of wild meat due to concerns over Ebola because these consumers noted that most recent Ebola cases were in other countries in the region¹³⁰. Messages about zoonotic risk can contrast with the audience's experience of having never

contracted a disease from wildlife or wildlife products, thus reducing these messages' legitimacy. In Central Africa, WCS reported that messages about food hygiene had more credence than disease risk messaging. Messaging should therefore be built around the target audience's perceptions of a specific wildlife use type or product and the barriers and benefits to changing their behaviour¹³¹.

It is important to also be conscious of the unintended consequences of SBC messaging. A focus on disease threats to reduce demand for illegal or unsustainable wild meat could also create negative outcomes. For consumers who do not perceive the disease to be a threat in their region, or who do not give credence to the link between the threat of disease and consuming wildlife, such messaging may undermine their confidence in the campaign and its organisers. Using this type of disease-focused messaging in the hope of contributing to the conservation of the animals in question can backfire if the audience responds in attempting to eradicate the animals that are seen to carry the disease¹³². This has played out in several countries, including the United Kingdom, where farmers support badger culls in hopes of reducing tuberculosis in their cattle¹³³, in India (and other countries) where communities have tried to eradicate bats to reduce COVID-19's spread¹³⁴, and in Brazil, where wild urban primates were killed in response to a yellow fever outbreak¹³⁵.

B. DIFFERING MOTIVATIONS FOR CONSUMPTION

Changing behaviours around the consumption of wild meat requires different approaches based on the nature of consumption and the type of consumer. Consuming and serving wild meat on special occasions in some cultural contexts is a status-oriented behaviour intended to gain favour. In contrast, day-to-day wild meat consumption is more for taste, protein/nutrition, and health. Among different age brackets, younger wild meat consumers in the Republic of the Congo reported consuming wild meat

because they perceived it as natural, fresh, and healthy, whereas older consumers reported their consumption was rooted in a sense of connection to traditional culture¹³⁶. Behaviour change messaging can also be more effective if tailored to the type of animal being consumed (e.g., pangolins vs. primates vs. rodents)¹³⁷. Indeed, the CITES Resolution on Demand Reduction (Resolution Conf. 17.4) notes campaigns should be 'species specific' and target the uses and drivers of demand¹³⁸.



Wild rodents and pangolins for sale in Cameroon

In Thailand, wild meat consumers reported that their main reasons for consumption were taste (this preference was closely linked to perceived health benefits) and curiosity to try something new. Most wild meat consumption was also social, with family or friends, or occurred when urban residents travelled to rural areas, and was just as likely to have no occasion as to be linked with a festival or special occasion¹³⁹.

Consumers need to understand and support the reasons for changing their consumption of wildlife and become motivated to change their behaviour. This requires sustained behaviour change efforts. Without this depth of consumer engagement, restrictions on wildlife products risk encouraging consumers [or other supply chain actors] to stockpile¹⁴⁰.

C. ENVIRONMENTAL AWARENESS IS NOT SUFFICIENT TO REDUCE DEMAND

Urban wild meat consumers in the Republic of the Congo are aware of the problem of overhunting, but this did not reduce their demand and consumption. Such larger-scale environmental issues are often thought to be

out of the individual's control, so do not lead to changes in the individual's behaviour¹⁴¹. This is well established in the environmental literature and foundational to various facets of behavioural science (e.g., health)¹⁴².

D. COMPLEXITIES OF ALTERNATIVE PRODUCTS

Some wildlife products such as certain types of illegal wild meat (e.g., Tiger, great ape or pangolin meat) can act as a Veblen good i.e., a luxury good for which demand increases as price increases, contrary to the law of supply and demand. Conspicuous consumption of some types of illegal wild meat can thus serve as a status symbol because of their rarity, exclusivity, relative novelty and high price¹⁴³. Therefore for those consumers motivated by status, rising prices may only increase demand, and proposed alternative products will need to satisfy the same status-conscious motivations. SBC initiatives can change social norms so that consumption of the illegal/unsustainable/

unsafe wildlife product is no longer associated with status, whereas the sustainable alternative is.

Campaign design should also consider possible unintended outcomes of a switch to the proposed alternative product. Replacing wildlife meat with livestock, poultry, or fish at a large scale can, in theory, contribute to the intensification of agriculture and overfishing¹⁴⁴. Intensified agriculture can require more clearing of land for production, which ultimately exacerbates the threat of zoonotic disease emergence by bringing humans and wildlife into ever-closer contact.

SBC can change social norms so that consumption of illegal/unsustainable/unsafe wildlife products is not associated with status

PLANNED ACTIVITIES FOR ALL RESPONDENTS

THIS SECTION NOTES SEVERAL EXAMPLES OF WORK THAT WILL PROGRESS FROM 2021 ONWARDS AS REVEALED THROUGH INTERVIEWS CONDUCTED FOR THIS SITUATION ANALYSIS.

RESEARCH AND INSIGHTS

In the second half of 2021, the IUCN Species Survival Commission (IUCN SSC) plans to release a Situation Analysis on the Roles and Risks of Wildlife in the Emergence of Human Infectious Diseases. It is based on a review of existing evidence, including implications for wildlife trade policy and management relative to potential disease risk.

In Thailand, TRAFFIC commissioned GlobeScan to research wild meat consumption. This report has an expected December 2021

release and will provide insights for SBC initiative development.

In Japan, WWF and TRAFFIC have commissioned GlobeScan to research exotic pets following the February 2021 survey described in the earlier section on SBC Activities to Date on Wildlife Trade and Zoonotic Threat. This research began in May 2021 and will likewise be used to provide insights for SBC initiative development.

SBC CAMPAIGNS

TRAFFIC will be conducting pilot SBC campaigns under the USAID-funded Wildlife TRAPS Project to which this Situation Analysis relates. Further information about this work and potential scope, is included in subsequent sections. A regional approach to describing the other SBC initiatives identified through the research process is as follows:

In East Africa, the USAID-funded CONNECT project will build an SBC campaign in follow-up to its study on the sale and use of wild meat and wildlife-based medicine between 2017 and 2019 from protected species in Tanzania, Kenya and Uganda¹⁴⁵. An initial focus of interventions will be a behaviour change campaign targeting wild meat consumers in Tanzania, with complementary awareness-raising work for species used for Traditional Medicine in Uganda and Kenya. As this work has been focused on sustainability issues, there are opportunities for the Wildlife TRAPS project to test messaging that also focuses on zoonotic disease risk aspects. This is discussed later in this report.

WildAid has plans to launch campaigns in both Nigeria and Cameroon. The Nigeria campaign will build on WildAid and GlobeScan's October 2020 research on urban wild meat consumption in Nigeria and how this has been affected by COVID-19¹⁴⁶.

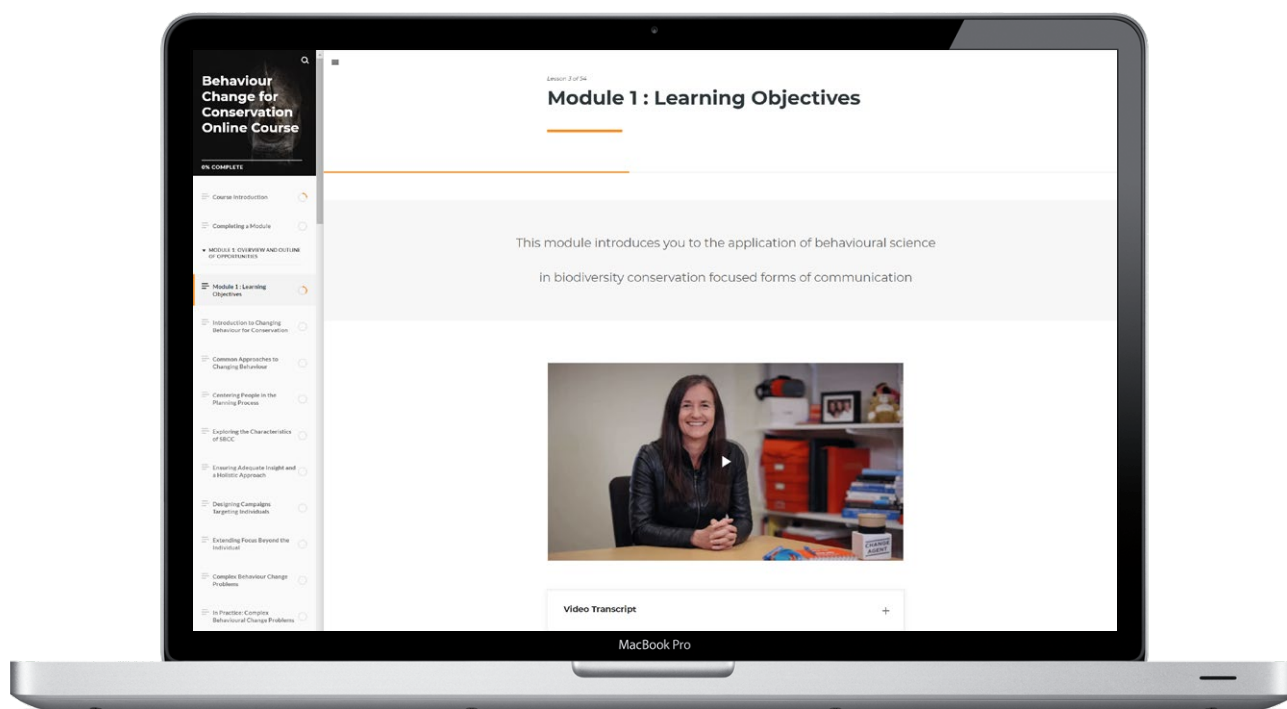
In Cameroon, WildAid's campaign will focus on demand reduction for pangolin meat and scales, scheduled to begin in early 2022 and run for three years. This campaign initially planned to include great apes and grey parrots but narrowed its focus to pangolins because of their Class A legal protection status in Cameroon, their prevalence in seizures there, and the availability of background research from in-country partners. The Cameroon campaign will include PSAs; ambassadors (WildAid's term for their official influencers); radio, TV, and social media; highlighting wildlife conservation's "Unsung Heroes"¹⁴⁷; media training on environmental reporting; and religious programming against unsustainable wild meat consumption.

WildAid decided not to focus its messaging in Cameroon on the zoonotic and economic risks of wild meat consumption because of concerns it will be difficult to influence local audiences from these angles. WildAid will instead use a cultural focus to create a more positive image of pangolins that emphasises ecological values, cultural and natural heritage, and tradition so that pangolins will be seen as having value beyond their meat and scales.

In China, the World Bank launched a project in April 2021 on EID Prevention, Preparedness, and Response, to be implemented with a particular focus on the provinces of Hainan and Jiangxi. The multi-sectoral project will combine expertise from public health, agriculture and food, environment, and wildlife sectors to reduce the risk of zoonotic diseases and other emerging health threats¹⁴⁸. One component of the project will be to improve the infrastructure and risk management practices of markets

using a Hazard Analysis and Critical Control Points (HACCP) approach to meet animal welfare, health, sanitation, and food safety standards. Systematic risk communication campaigns will target regulators, market operators, vendors, handlers, and consumers.

Also in China, TRAFFIC plans to launch an SBC campaign later in 2021 targeting online pet trade in partnership with the China Wildlife Conservation Association. TRAFFIC will also continue to deliver SBC training for Chinese government authorities, with relevance to the private sector, NGOs and others interested in using the SBC toolkit¹⁴⁷. This training will aim to support them to design behaviour change campaigns reducing threats to wild species and the risk of future zoonotic disease outbreaks. The first online component was delivered on 30 June 2021, and others will follow this.



[CHANGEWILDLIFECONSUMERS.ORG](https://changewildlifeconsumers.org)

Online course: *Behaviour change for conservation*

We the New Generation Say No to Illegal Wild Meat



#SayNoToIllegalWildMeat
www.kind-dining.com



KIND DINING

Key visuals and videos for TRAFFIC's SBC campaign launching in Thailand

In November 2021 in Thailand, TRAFFIC helped launch, together with UNDP, the government of Thailand, and ZSL, the 'Kind Dining' SBC campaign to reduce demand for illegal wild meat consumption. This builds on the commissioned GlobeScan research from April 2021¹⁵⁰.

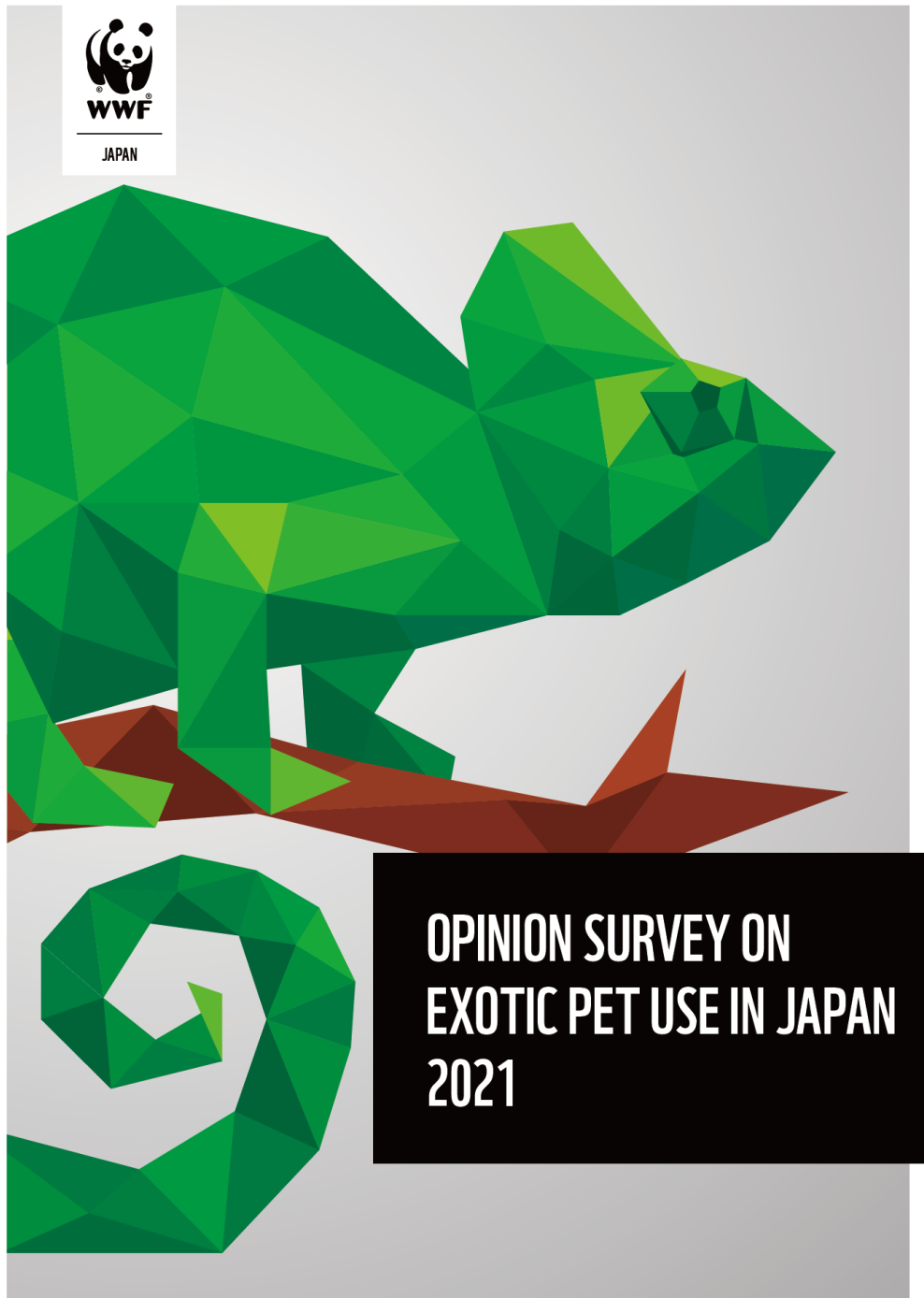
In Viet Nam, TRAFFIC created an SBC visual that was displayed in five Traditional Medicine

schools and 25 clinics in Hanoi from June to October 2021. The visual showed an image of a pangolin and the SARS-CoV-2 virus saying that not using illegal wildlife products contributes to the fight against COVID-19. In Japan, WWF and TRAFFIC plan to develop an SBC initiative on exotic pets based on ongoing GlobeScan research, timeline to be determined.

FIGURE 11

This initial February 2021 survey is now being followed up with additional research that will build towards an SBC initiative on exotic pets in Japan

https://www.wwf.or.jp/activities/data/20200303_wildlife02.pdf



GAPS AND OPPORTUNITIES FOR WILDLIFE TRAPS PILOT PROJECTS

GAPS

Through this Situation Analysis, knowledge, resourcing and SBC campaign implementation gaps were identified across multiple territories, taxa, themes, target audiences and use-types.

As an initial general observation, very little seems to have been done to engage consumers in initiatives to avoid disease risks associated with their purchases of wildlife-derived products. This seems due to several factors, ranging from the relative newness of considering the safety, as well as the traceability and sustainability, of wildlife used for meat, medicine, or pets; through to lack of options and/or clarity about where to direct consumers to instead.

This is an especially prescient issue with wild meat consumption, which seems to represent the largest opportunity for zoonotic disease transfer (compared to medicinal use or pet trade). That is, it seems self-evident more wildlife is used to provide protein or nutrition (subsistence as well as status-driven consumption) than used to provide medicines or pets, and comparatively more raw/untreated source product is involved in the consumption of this type of wildlife product. A top priority for inter-sectoral action should therefore be to develop traceability protocols and good practice management standards and systems that can be applied to help consumers select a safe, as well as sustainable, legal wild meat supply.

The use of wildlife in traditional medicine treatments has meanwhile been researched extensively and multiple SBC campaigns have targeted overexploitation and illegal trade risks associated with this. Examples from TRAFFIC alone include the USAID CONNECT¹⁵¹ project in East Africa and the Chi¹⁵² initiative and other activities under USAID and German funding in Viet Nam. Broadly speaking however, these efforts have not yet incorporated messaging

on zoonotic disease risk. This is due to several reasons: unless the TM treatment is entirely unprocessed, unrefined/unfiltered or a non-diluted form of the source wildlife product, it is unlikely to convey significant zoonotic risk. Rhino horn and pangolin scales, for example, are mainly comprised of keratin, which can carry mites and fleas with zoonotic capabilities, but which is itself a poor vector for and largely inert to, viruses and bacteria¹⁵¹. Tiger bones are mainly calcium, which is not dissimilar. Other reasons include because campaigns tend to be delivered by NGOs whose interests are largely focused on conservation impact. Those designing approaches should thus engage medical professionals with the skillset and credibility to speak persuasively on zoonoses and EIDs.

The potential zoonotic disease risks of trading, buying, and keeping wildlife as pets could also benefit from further epidemiological analysis and SBC efforts. Some promising research studies have been conducted showing the potential for consumer messaging. In addition, pet trade bodies and industry associations more focused on common and legal types of animal trade have safety standards and management systems that might be adapted for wild-sourced, so-called 'exotic' (sometimes meaning simply non-native) species. But little has occurred so far.

Moving from consideration of gaps in SBC campaigns based on use-types, to gaps in SBC campaigns according to the stakeholder groups they engage: Though the cost of a pandemic is far higher than the cost of prevention, initiatives to reduce the risk of disease emergence within wildlife trade, whether via restrictions or reforms, will nonetheless be expensive. Economic expertise is also therefore a gap, and if filled could help assess how the costs of proposed restrictions and reforms compare to each other to help inform the decisions of

evidence from the health sector is needed to determine whether disease risks can be adequately managed

government policymakers around the world. This assessment will also need to consider the costs and methods for transitioning the livelihoods of wildlife trade actors who can no longer continue their work.

To address these gaps, health sector expertise covering wildlife, domestic animal, and human health is needed to further assess which wildlife trade chains, and which points in these chains pose the highest risks of disease transmission, and how these risks can best be mitigated. Practical evidence from health sector partners is needed to determine whether disease risks can be adequately managed through increased management effectiveness and controls on legal wildlife trade. Health sector expertise is likewise necessary to add credibility to any solutions proposed by wildlife organisations to governments and consumers. Greater access to stakeholders and influencers in high-level intergovernmental groups is

needed for these solutions to receive the attention, support, and funding they require. Increased connectivity is needed between national governments and intergovernmental groups in the health and conservation sectors for solutions to be adapted and adopted at the national level.

Lastly, more nuanced messaging on the potential disease risks of wildlife trade is needed for consumers and retailers to make specific, realistic changes to mitigate risks and to understand why these changes are needed without appealing to fear. In some cultural contexts communications emphasising personal risks (rather than planetary ones) from inaction are perceived to be persuasive (T. Nguyen, personal communication, June 2021), but in general messaging should emphasise how to mitigate any risks through simple personal actions¹⁵⁴.

nuanced messaging is needed for consumers and retailers to make specific, realistic changes to mitigate risks



Skinning and preparing a wild-harvested Eland in Tanzania

OPPORTUNITIES FOR WILDLIFE TRAPS PILOT PROJECTS

OPPORTUNITIES FOR WILDLIFE TRAPS PILOT PROJECTS

While the broader opportunities that emerge from this analysis could simply be inverted versions of the gaps aforementioned, as one of the aims of this Situation Analysis is to crystallise Wildlife TRAPS SBC pilot project opportunities, this section focuses on that topic.

The broad geographic scope of Wildlife TRAPS is Africa and Asia. In the SBC workstream, the main use-types of interest were initially characterized as wildlife used for meat, medicine, and pets. However, due to the insights and evidence discussed here, it seems clear the greatest opportunities to build on the past and planned work of others, to fill knowledge and implementation gaps, and to provide the most useful insight for SBC Community practitioners, are associated with wildlife used for meat and exotic pets.

Beyond this, considerations for how best to rationalise pilot project opportunities centre on

the necessity, feasibility, and utility associated with candidate territories, taxa, and themes of interest. For example:

- **Which countries and target audiences** do the evidence suggest have a high level of current consumption of wild fauna (mammals and birds) for these use types?
- **What resources, partnerships or relationships** could feasibly be 'piggybacked' onto?
- **What unique insight would doing so deliver**, and how useful would that be for the SBC Community?
- **How can we best amplify** and maximise the impact otherwise?
- **Based on such considerations, candidates for action emerge** and are discussed in specific relation to either use of wildlife for meat or exotic pets, as follows.



Smoked primate meat for sale in Cameroon

MEAT

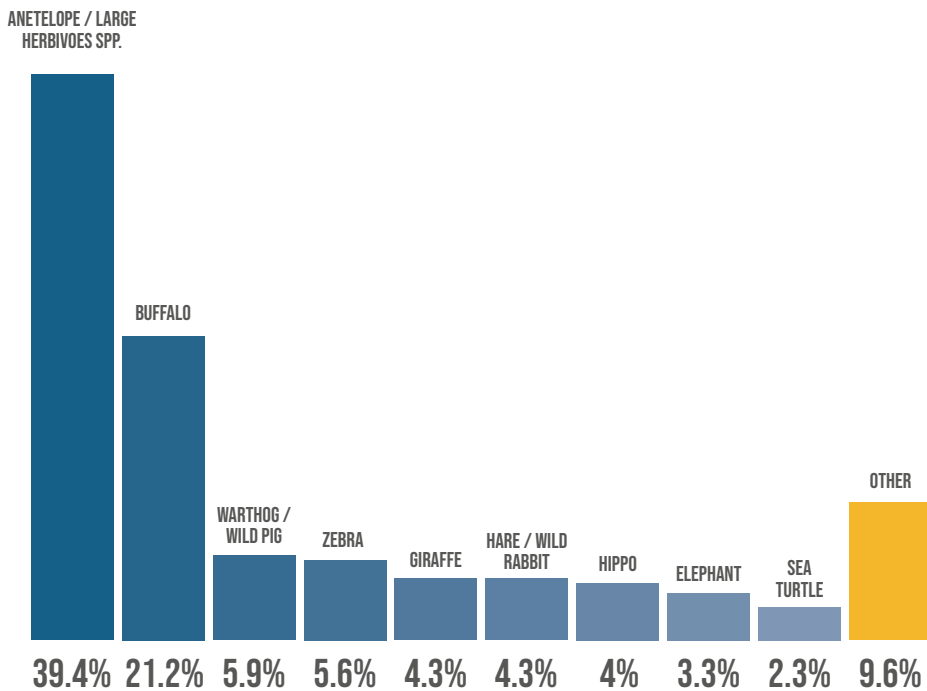
Reflecting on the necessity, feasibility, and utility of different options around regions, taxa and themes, Tanzania, Cameroon, and Viet Nam stand out as potential sites for SBC pilots exploring the best ways to promote a safe, traceable, and sustainable supply of legal wild meat.

In Tanzania, research conducted 2017-19 for the first phase of the Wildlife TRAPS project (with links to CONNECT) identified overexploitation and illegality in wildmeat consumption amongst local Africans in urban

and rural settings. Demonstrating the necessity of pilot project activities, 71% (n=567) of 'Patterns of Use'¹⁵⁵ survey respondents reported consuming wild meat at least once in the past 12 months. When asked if they would be willing to pay more, 51 (36%) of 143 participants said they would. Multiple taxa, including those threatened and protected in Tanzania, were reported as consumed per Figure 13. Demand management strategies and campaigns are now being designed to tackle overexploitation and illegal wildlife consumption.

FIGURE 12

Wild animal taxa commonly consumed for meat in Tanzania, including threatened and protected species. Source: TRAFFIC



OTHER

- 1.7% Rat / Rodent / Moles
- 1.2% Tortoise
- 1.2% Wild birds
- 1.1% Crocodile
- 0.9% African civet
- 0.8% Porcupine
- 0.7% Polecat
- 0.5% Shark
- 0.3% Monkey
- 0.2% African genet
- 0.2% Monitor lizard
- 0.2% Pangolin
- 0.1% Baboon
- 0.1% Elephant
- 0.1% Frog
- 0.1% Leopard
- 0.1% Lion
- 0.1% Quil
- 0.1% Snake

Alongside this, to help develop more sustainable sources of supply, Tanzania is also allowing consumption of legally obtained wild meat through the 'Wildlife Conservation (Game Meat Selling) Regulation' 2020¹⁵⁶. Under this Regulation, specific butcheries (vendors) are being assessed and licensed to sell government-approved wild meat products. As of June 2021, there were 34 licensed butchers, expected to increase to 125 as 91 more applications for licenses have been successful¹⁵⁷. The Tanzania Wildlife Authority (TAWA) has been taking measures to ensure there are sustainable legal wild meat sources beyond this, including by encouraging the opening of ranches, increasing areas for resident and tourist hunting, and giving seminars to game meat stakeholders, resident hunters, and District Game Officers in areas where game meat is sourced.

While such efforts are gradually embedding and scaling up, the feasibility of activities exploring opportunities to promote a safe/well-managed/traceable supply of wild meat in Tanzania is evident. Current funding in Tanzania does not resource campaign testing focused on the safety/removal of zoonotic threat in wild meat products, and as little learning is available around the mechanisms and most effective messages through which to do this in East Africa, the utility of the work also seems clear.

In Cameroon, a pilot campaign aimed towards urban wild meat consumers is similarly considered to carry several advantages. The Central African region is rich in both wild meat consumption and in institutional experience seeking to understand and reduce the risks of this consumption. A pilot campaign in the country could build on lessons from past and current work by WCS in particular. It could contribute to the upcoming efforts of WCS, WildAid, FAO, CIRAD and CIFOR under the Sustainable Wildlife Management Programme¹⁵⁸.

The primary challenge of a health-focused wild meat pilot campaign in Cameroon is that societies in the region have little knowledge of and/or belief in the potential link between COVID-19 and wildlife. Further they do not perceive significant zoonotic disease risk in

consuming wild meat because the practice has deep cultural roots and is widely accepted.

A pilot focused on wild meat consumption in this region might need to approach consumers from an angle other than that of zoonotic risk, such as emphasising the food safety risks of lengthy and poorly managed wild meat trade chains. A food safety approach could focus on other, more common zoonotic diseases present in wild meat (and domestic meat) supply chains such as *E. coli*, *Salmonella*, and *Campylobacter*.

In Viet Nam, an SBC pilot would also have proven necessity, feasibility, and utility.

In GlobeScan and WWF's 2021 survey in Viet Nam, Thailand, Myanmar, China, and the US, 14% of the sample in Viet Nam reported they had either purchased wildlife in a market in the last 12 months or knew someone who had (the overall average was 7%). Viet Nam also ranked highest among the five countries on several other measures: percentage of respondents who bought wildlife products online in the past 12 months (12%); share of respondents who increased their consumption of wildlife due to COVID-19 (10%, up from 4% in 2020); and the number of consumers who were likely to purchase wildlife products in the future (20%, up from 12% in 2020)¹⁵⁹. Thirteen percent of Vietnamese respondents in the 2021 survey had bought or knew someone who had bought wild meat in a restaurant in the past 12 months¹⁶⁰.

In addition to sources from free-ranging wildlife, wild meat consumed in Viet Nam is often sourced from the country's many wildlife farms. These wildlife farms are often insufficiently managed and monitored, so they present a significant risk of EIDs¹⁶¹. Inconsistent government monitoring at these farms, combined with incidences of illegal capture from the wild before laundering these specimens as captive-bred, means that legality is sometimes questionable¹⁶². Illegal snares used to capture these animals from the wild are currently decimating wildlife populations across Southeast Asia, indiscriminately capturing animals of all species¹⁶³. This snaring of wild animals for capture and then laundering via farms that are intended only for captive breeding presents not only a conservation

risk, but an increased risk of zoonotic disease transmission as the origin and health profile of the animal become obscured. The presence of coronaviruses in field rats in wild meat trade chains in Viet Nam was found to increase significantly as animals moved through the trade chain, from 21% among field rats sold by traders to 56% among those sold and served

at restaurants¹⁶⁴. GlobeScan and WWF's 2021 survey results indicate that people in Viet Nam could be responsive to change: 76% of Vietnamese participants were concerned about disease transfer from farmed wild animals being eaten in restaurants¹⁶⁵.

76% of Vietnamese participants were concerned about disease transfer from farmed wild animals being eaten in restaurants

PETS

For a pilot SBC campaign targeting buyers of wildlife/exotic pets, China and Viet Nam are the best potential sites. The culture of pet ownership, both for traditional pets such as dogs and cats, and for exotic pets, is much less widespread in East and Central Africa. In contrast, the popularity of exotic pets, including both mammals and birds, has skyrocketed in China in recent years and is quickly growing in Viet Nam.

China's exotic pet culture includes pet cafes in major cities, where cafe patrons can physically interact with wild animals ranging from owls to otters. These cafes may present broader zoonotic disease transmission risks because of the high volume of people coming into contact with the animals.

Survey respondents in Viet Nam, unlike respondents in Brazil, China, and the US, expressed a greater desire to purchase an

exotic pet when surveyed during the COVID-19 pandemic as opposed to pre-pandemic in 2018¹⁶⁶. This suggests a more urgent need for relevant SBC interventions in Viet Nam compared to other countries.

Viet Nam's exotic pet culture includes the popular keeping of wild-caught songbirds^{167,168}. Approximately 25% of the species common to Viet Nam's trade of these ornamental bird species are known to be susceptible to Highly Pathogenic Avian Influenza, or HPAI H5N1¹⁶⁹. Compared to owners of other exotic pets popular among young people, songbird keepers tend to be an older male audience with limited concern for wildlife conservation¹⁶⁸ and may thus be less receptive to changing their behaviours.

Broader next steps in light of these opportunities for Wildlife TRAPS SBC pilot projects are considered in the next sections.

POTENTIAL SYNERGIES AND OPPORTUNITIES FOR COLLABORATION

partnerships with government

should go beyond engaging environmental agencies to also include agencies working in human and animal health, agriculture, livestock, and traditional medicine

Building on this insight into where Wildlife TRAPS SBC pilot projects might best engage, the Analysis next explores how the pilots and SBC Community might best synergise and collaborate with others to amplify impact.

One of the most powerful collaboration opportunities for SBC messaging on health-related issues is naturally with government. Partnerships to reduce the risk of zoonotic disease emergence should go beyond the typical focus on engaging environmental agencies in wildlife-focused issues (e.g., natural resource management, forestry, fisheries, etc.), to also include ministries and agencies working in fields such as human health, animal health, agriculture, livestock, and traditional medicine.

As the attention to zoonotic diseases and EIDs has grown over the past two decades, there is increased support from governments to work on 'One Health' and associated issues. Germany and the EU have offered new funding opportunities, with the EU planning to increase its funding for zoonotic disease work in Africa in the coming years. Several countries are also issuing new public communications around regulations; for example, Cameroon's Minister of Scientific Research and Innovation has called on citizens to reduce consumption of wild meat species with a high risk of disease transmission, such as bats¹⁷¹. The 2019 N'Djamena Declaration on transboundary transhumance established a framework for regional collaboration with a focus on balancing human health and biodiversity conservation with zoonoses and COVID-19. It was promulgated by the Congo Basin Forest Partnership (CBFP), the Central African Forest Commission (COMIFAC) and the Republic of Chad. The conference brought together ministers of defence, forests/protected areas, environment, and livestock from eight countries: Cameroon, Central African Republic, Chad, the Democratic Republic of the Congo, Niger, Nigeria, Sudan, and South Sudan.

Building on the N'Djamena Declaration's outcomes is essential for the development of the participating countries' investment plans with a focus on transhumance and zoonoses. In the context of the COVID-19 pandemic, the CBFP organised a follow-up meeting on the Declaration titled: "Meeting of Country Experts for the elaboration of Country Investment Plans related to Zoonoses, Transhumance, Cross-border anti-poaching, security and sustainable development" from 12 to 15 July 2021, in Douala, Cameroon. CBFP partner countries reported on their ongoing national initiatives on the links between humans and wildlife, zoonoses and warning and surveillance mechanisms to respond to future zoonoses.

Among IGOs, from CITES to the OECD, there is also now a stronger policy-enabling environment for promoting One Health. In the post-2020 Global Biodiversity Framework, legal and sustainable trade in wildlife will be supplemented with a third component on safety. The July 2021 CBFP meeting contributed to stakeholder mapping of the One Health initiative in the Central African region. Cameroon, Tanzania, and Viet Nam are part of the One Health Workforce (OHW) project, which is developing a health workforce that is prepared to prevent, detect, and respond to the threat of infectious diseases around the world. The project is part of USAID's Emerging Pandemic Threats 2 (EPT2) program, which focuses on cross-sectoral disease surveillance, training, and outbreak response. Teams at the University of Minnesota (Project Lead) and Tufts University provide support for two regional university networks, the One Health Central and Eastern Africa (OHCEA) network, and the Southeast Asia One Health University Network (SEAOHUN). OHW leverages these established university networks to create a sustainable transformation in the regions' health workforces. Cameroon, Tanzania, and Viet Nam, three of the potential sites for Wildlife TRAPS SBC pilot projects, are members of these regional networks.

Closely connected with these USAID-funded One Health networks is the USAID STOP Spillover project, a five-year project launched in 2020 that currently works in Bangladesh, Liberia, Uganda, and Viet Nam. STOP Spillover brings together a global consortium of experts in human, animal, and environmental health to understand and address the risks posed by known zoonotic viruses that have the potential to spill over and cause pandemic crises (<https://stopspillover.org/about/overview>). As of December 2021, the Wildlife TRAPS and STOP Spillover teams are reviewing opportunities for collaboration in Viet Nam.

The USAID Wildlife Asia project, another major five-year project that concluded in 2021, is now transitioning its work to the Reducing Demand for Wildlife (RDW) project through February 2023. RDW will conduct a One Health-focused global situation analysis, building upon the Situation Analysis conducted by TRAFFIC under the USAID Wildlife TRAPS project in 2021, and a One Health stakeholder workshop, both of which will inform the design of a wild meat SBC campaign that is planned for Thailand with potential expansion into the ASEAN region.

Another area for collaboration is among NGOs, government, and the private sector. NGOs can help to research and design SBC message content and facilitate partnerships among government and private sector actors. The Social and Behaviour Change Community is one such platform for collaborative design¹⁷¹. Private sector companies can contribute resources, deliver against CSR priorities, and engage the strength of their brand. Sector-specific associations can facilitate broader change across their membership and sectoral consumers and are likely to have a strong interest in rooting out bad actors and practices. NGOs can support these companies and associations to develop messaging towards the goal of creating a healthier, safer, more sustainable society via consumer engagement.

Such messaging will show the companies' and associations' support for the government's work and demonstrate and promote a green lifestyle as a growing trend.

Potential brand partnerships include luxury brands that already have a theme of natural discovery and adventure in their advertising, such as Rolex or Land Rover. Tiffany & Co. has already established its "Save the Wild" line of wildlife-themed jewellery, with 100% of profits donated to the Wildlife Conservation Network, raising more than 10 million USD thus far¹⁷². Luxury brands like these could provide a source of alternative products for status-motivated wildlife consumers, e.g., targeting drivers of wild meat consumption especially.

There are new opportunities to partner with industries such as the Global Coalition to End Wildlife Trafficking Online¹⁷³, with a sharp increase evident in the use of online platforms by wildlife consumers and others as a result of COVID-19. The legal exotic pet trade is also under increased pressure to demonstrate compliance with safety and welfare as well as sustainability. The dramatic decline in tourism revenues over the last year has strained wildlife-based economies, and safe and sustainable trade may be an opportunity to diversify their economic base.

Past work in Viet Nam under TRAFFIC's Chi Initiative found businesses in the tourism and transportation sectors to be the most receptive to sharing SBC messages targeting wildlife consumers. When the messages were positive, as in the Chi Initiative, these businesses found reputational benefits in sharing them. Upcoming work could also replicate the Chi Initiative's model of echo trainings, in which TRAFFIC staff trained the Viet Nam Chamber of Commerce and Industry's 'Master Trainers' on corporate social responsibility with incorporated SBC messaging on rejecting rhino horn consumption. These Master Trainers in turn trained businesses nationwide¹⁷⁶.

NEXT STEPS

The following emerged as priority next steps for those working on SBC initiatives via the Wildlife TRAPS project as a result of this Situation Analysis. These insights are vital for the wider constituency interested in delivering SBC initiatives to achieve One Health goals in end-markets for wildlife products used for meat, medicine and pets:

EXPERTISE IN HEALTH-FOCUSED INITIATIVES

Engage current stakeholders in the SBC Community who bring expertise in health-focused behaviour change initiatives, and encourage and enable them to share their experience with others

EXPERTISE IN ZONOOSES

Engage new stakeholders in the SBC Community around the issues of zoonoses, EIDs, and wildlife trade, and consider developing a recruitment strategy to expand the SBC Community

HIGH-LEVEL ENGAGEMENT

Engage higher-level stakeholders in national governments and relevant IGOs, including through contacts at donor agencies and embassies

EXPERTISE IN HUMAN AND ANIMAL HEALTH

Engage government stakeholders not normally involved in wildlife trade management, particularly in human and animal health, through contacts at IGOs, donor agencies, and embassies

Opportunities for SBC Community members to collaborate around any aspects of these are available and welcomed. Further details are available at www.changewildlifeconsumers.org.

Any queries on the content of this document should in the first instance be directed to Mr Sam Campbell, Wildlife TRAPS Project Officer: sam.campbell@traffic.org.

GUIDE POLICY DEVELOPMENT

To guide policy development and law enforcement efforts, establish:

- Which species/trade chains and trade practices are too high risk to continue;
- Which ones require reform; and
- Which ones are low risk and thus safe to continue

REVIEW OF SBC MATERIALS

Invite a broad range of partners, especially health sector, to review SBC materials to be developed by Wildlife TRAPS;

TEST APPROACHES

Test approaches to change risky behaviours of actors along wildlife value chains, beyond the consumer level;

MAP OUT URGENT NEXT STEPS

Map out what small steps are most urgently needed to create sustainable momentum for change, and craft a Theory of Change for how these steps can build towards a longer-term goal of reducing zoonotic disease and EID risks associated with wild animal trade

REFERENCES

- Association of Zoos and Aquariums. (2021). Reduce the Risk. Retrieved March 2021, from <https://www.aza.org/reduce-the-risk?locale=en>.
- Behavioural Insights Team. (2021). COVID-19. Retrieved March 2021, from <https://www.bi.team/our-work/covid-19/>.
- Betsch, Cornelia, Wieler, Lothar H, Habersaat, Katrine. (2020). Monitoring Behavioural Insights related to COVID-19. Retrieved March 2021, from [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30729-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30729-7/fulltext).
- Borsky, Stefan, Hennighausen, Hannah, Leiter, Andrea, Williges, Keith. (2020). CITES and the Zoonotic Disease Content in International Wildlife Trade. Retrieved March 2021, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7399621/>.
- Change Wildlife Consumers. (2018). 2nd International Conference: Revisiting Efforts to Reduce Demand for Illegal Wildlife Products. Retrieved March 2021, from <https://www.changewildlifeconsumers.org/event/2nd-international-conference-behavior-change-conference/>.
- Change Wildlife Consumers. (2018). Behaviour Change Decision Tree. Retrieved March 2021, from <https://www.changewildlifeconsumers.org/change/behaviour-change-decision-tree/>.
- Change Wildlife Consumers. (2018). Behaviour Change for Conservation Online Course. Retrieved March 2021, from <https://www.changewildlifeconsumers.org/change/behaviour-change-for-conservation-online-course/>.
- Change Wildlife Consumers. (2021). Wildlife Consumer Behaviour Change Toolkit. Retrieved August 2021, from <http://www.changewildlifeconsumers.org/>.
- Feddema, Kim, Harrigan, Paul, Nekaris, K. Anne Isola, Maghrifani, Dila. (2020). Consumer engagement behaviors in the online wildlife trade: Implications for conservationists. Retrieved March 2021, from https://onlinelibrary.wiley.com/doi/epdf/10.1002/mar.21423?saml_referrer=.
- Grützmaier, Kim, Walzer, Chris, Lieberman, Susan, Fine, Amanda. (2020). One Health and wildlife trade(-offs) – preventing future pandemics. Retrieved March 2021, from https://www.rural21.com/english/current-issue/detail/article/one-health-and-wildlife-trade-offs-preventing-future-pandemics.html?no_cache=1.
<https://www.who.int/news/item/03-09-2020-who-convenes-expert-group-for-behaviour-change>.
- Humane Society International. (2021). COVID-19 materials. Retrieved March 2021, from <https://www.hsi.org/?s=COVID19>.
- International Fund for Animal Welfare. (2020). COVID-19 Response and Recovery: Recommendations for Policymakers. Retrieved March 2021, from <https://www.ifaw.org/uk/resources/covid-19-response-recovery-recommendations-for-policymakers>.
- International Union for Conservation of Nature. (2021). COVID-19 Resources. Retrieved March 2021, from <https://www.iucn.org/resources/covid-19-resources>.
- Ipsos. (2021). Public Opinion on the COVID-19 coronavirus pandemic. Retrieved March 2021, from <https://www.ipsos.com/ipsos-mori/en-uk/public-opinion-covid-19-coronavirus-pandemic>.
- J.P. Morgan. (2020). COVID-19 Impact Across Markets. Retrieved March 2021, from <https://www.jpmorgan.com/insights/research/covid-19-across-markets>.
- Kantar. (2021). COVID-19 Barometer. Retrieved March 2021, from <https://www.kantar.com/campaigns/covid-19-barometer>.
- Kronick, Scott. (2020). COVID-19: How to Communicate in Turbulent Times. Ogilvy. Retrieved March 2021, from <https://www.ogilvy.com/ideas/covid-19-how-communicate-turbulent-times>.
- McKinsey & Company. (2020). Consumer sentiment and behavior continue to reflect the uncertainty of the COVID-19 crisis. Retrieved March 2021, from <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/a-global-view-of-how-consumer-behavior-is-changing-amid-covid-19>.
- Moorhouse, Tom P., Balaskas, Margaret, D'Cruze, Neil C., Macdonald, David W. (2016). Information Could Reduce Consumer Demand for Exotic Pets. Retrieved March 2021, from <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12270>.
- Morse, Stephen S, Mazet, Jonna A K, Woolhouse, Mark, Parrish, Colin R, Carroll, Dennis, Karesh, William B, Zambrana-Torrel, Carlos, Lipkin, W Ian, Daszak, Peter. (2012). Prediction and prevention of the next pandemic zoonosis. Retrieved March 2021, from [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(12\)61684-5.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(12)61684-5.pdf).
- Nature Human Behaviour. (2020). COVID-19 and human behaviour. Retrieved March 2021, from <https://www.nature.com/collections/gdjdbibfg>.
- Nielsen. (2021). Directory of Materials on COVID-19. Retrieved March 2021, from <https://www.nielsen.com/us/en/insights/related-tag/covid-19/>.
- Petersen, Suni, Do, Trina, Shaw, Christy, Brake, Kaile. (2016). Developing a model of health behavior change to reduce parasitic disease in Viet Nam. Health Education Research, Volume 31, Issue 6, Pages 716–728. Retrieved March 2021, from <https://academic.oup.com/her/article/31/6/716/2557020>.
- Rizzolo, Jessica Bell. (2020). Wildlife Farms, Stigma and Harm. Retrieved March 2021, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7601737/>.
- Rizzolo, Jessica Bell. (2021). Effects of legalization and wildlife farming on conservation. Retrieved March 2021, from <https://www.sciencedirect.com/science/article/pii/S2351989420309318>.
- Saylors, Karen E., Mouiche, Moctar M., Lucas, Ashley, McIver, David J., Matsida, Annie, Clary, Catherine, Maptue, Victorine T., Euren, Jason D., LeBreton, Matthew, Tamoufe, Ubald. (2021). Market characteristics and zoonotic disease risk perception in Cameroon bushmeat markets. Retrieved March 2021, from <https://www.sciencedirect.com/science/article/pii/S0277953620305773>.
- Sheth, Jagdish. (2020). Impact of COVID-19 on Consumer Behaviour: Will the Old Habits Return or Die?. Retrieved March 2021, from <https://www.sciencedirect.com/science/article/pii/S0148296320303647>.

- Stephen, Craig, Berezowski, John et al. (2021). A Rapid Review of Evidence on Managing the Risk of Disease Emergence in the Wildlife Trade. Preparedness and Resilience Department of the World Animal Health Organisation - OIE. Paris, France.
- St John, Freya A.V., Edwards-Jones, Gareth, and Jones, Julia P. G. (2011). Conservation and human behaviour: lessons from social psychology. Retrieved March 2021, from https://www.researchgate.net/profile/Julia_Jones2/publication/260403724_Conservation_and_human_behaviour_Lessons_from_social_psychology/links/54ca46430cf2c70ce521a768/Conservation-and-human-behaviour-Lessons-from-social-psychology.pdf.
- The Conversation. (2021). Directory on Wildlife Trade. Retrieved March 2021, from <https://theconversation.com/uk/topics/wildlife-trade-28040>.
- The World Bank. (2020). Corona Life: Ghana Changing Behavior through a Drama Series. Retrieved March 2021, from <https://www.worldbank.org/en/news/feature/2020/10/11/corona-life-ghana-changing-behavior-through-a-drama-series>.
- TRAFFIC. (2018). Reducing demand: Analysis on strategies to change illegal wildlife product consumer behaviour. Retrieved March 2021, from <https://www.traffic.org/publications/reports/reducing-demand-for-illegal-wildlife-products/>.
- TRAFFIC. (2019). Choosing the Right Messenger: Guidelines for reducing demand for illegal wildlife. Retrieved March 2021, from <https://www.traffic.org/publications/reports/choosing-the-right-messenger/>.
- TRAFFIC. (2019). Designing Effective Messages: Guidelines for reducing demand for illegal wildlife. Retrieved March 2021, from <https://www.traffic.org/publications/reports/designing-effective-messages/>.
- TRAFFIC. (2021). COVID-19 Resource Centre. Retrieved August 2021, from <https://www.traffic.org/what-we-do/projects-and-approaches/covid-19-resource-centre/>.
- United Nations Environment Programme. (2021). COVID-19 Materials from UNEP. Retrieved March 2021, from <https://www.unenvironment.org/covid-19>.
- World Health Organisation, Food and Agriculture Organisation of the United Nations & United Nations Children's Fund (UNICEF). (2012). Communication for behavioural impact (COMBI): a toolkit for behavioural and social communication in outbreak response. Retrieved March 2021, from <https://apps.who.int/iris/handle/10665/75170>.
- World Health Organisation. (2006). A Guide to Healthy Food Markets. Retrieved March 2021, from https://www.who.int/foodsafety/publications/capacity/healthymarket_guide.pdf.
- World Health Organisation. (2020). WHO convenes expert group for behaviour change. Retrieved March 2021, from <https://www.who.int/news/item/03-09-2020-who-convenes-expert-group-for-behaviour-change>.
- World Wide Fund for Nature. (2020). Nature and Pandemics Videos. Retrieved March 2021, from <https://www.wwf.org.uk/nature-and-pandemics>.

ENDNOTES

- 1 <https://www.nature.com/articles/d41586-020-00364-2>
- 2 <https://www.nature.com/articles/d41586-020-00548-w>
- 3 <https://www.nature.com/articles/d41586-021-02596-2>
- 4 https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf
- 5 <https://www.traffic.org/publications/reports/situation-analysis-covid-19-wildlife-trade-and-consumer-engagement/>
- 6 <http://www.changewildlifeconsumers.org/webinar/usaid-wildlife-traps-situation-analysis/>
- 7 <https://www.davidquammen.com/dq-blog/34-the-big-one-2>
- 8 <https://www.traffic.org/site/assets/files/12764/covid-19-briefing-vfinal.pdf>
- 9 https://cites.org/eng/CPW_Statement_covi19_wildlife_16102020
- 10 <https://www.frontiersin.org/articles/10.3389/fpubh.2020.596944/full>
- 11 <https://www.traffic.org/site/assets/files/12764/covid-19-briefing-vfinal.pdf>
- 12 <https://www.traffic.org/site/assets/files/12764/covid-19-briefing-vfinal.pdf>
- 13 <https://www.sciencedirect.com/science/article/abs/pii/S1471492216300101#fig0010>
- 14 <https://www.pnas.org/content/pnas/117/17/9423.full.pdf>
- 15 <https://iacuc.wsu.edu/zoonoses-associated-with-reptiles-amphibians/>
- 16 <https://www.changewildlifeconsumers.org/webinar/usaid-wildlife-traps-situation-analysis/>
- 17 <https://globescan.com/public-calls-governments-close-wildlife-markets-covid-19/>
- 18 https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf
- 19 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf
- 20 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf
- 21 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf
- 22 <https://globescan.com/public-calls-governments-close-wildlife-markets-covid-19/>
- 23 <https://www.nature.com/articles/d41586-020-00548-w>
- 24 <https://theconversation.com/bats-are-hosts-to-a-range-of-viruses-but-dont-get-sick-why-139056>
- 25 [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30641-1/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30641-1/fulltext)
- 26 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf
- 27 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf
- 28 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf

29 <https://www.tandfonline.com/doi/pdf/10.1080/13504620220145401>

30 Bergin, D., Cheng, T., Mei, G., Kritski, E. and Meijer, W. (2021). Wild Meat Consumption in Thailand: A research study to explore opportunities to change wild meat consumption behaviour. TRAFFIC and ZSL.

31 <https://zenodo.org/record/4569263#.YR4EutMzZhd>

32 Bergin, D., Cheng, T., Mei, G., Kritski, E. and Meijer, W. (2021). Wild Meat Consumption in Thailand: A research study to explore opportunities to change wild meat consumption behaviour. TRAFFIC and ZSL.

33 http://www.fao.org/fileadmin/user_upload/FAO-countries/Vietnam/docs/Pdf_files/FINAL_wildlife_farm_factsheet_EN.pdf

34 https://www.researchgate.net/publication/248200458_The_conservation_impact_of_commercial_wildlife_farming_of_porcupines_in_Vietnam

35 Bergin, D., Cheng, T., Mei, G., Kritski, E. and Meijer, W. (2021). Wild Meat Consumption in Thailand: A research study to explore opportunities to change wild meat consumption behaviour. TRAFFIC and ZSL.

36 <https://wildaid.org/wp-content/uploads/2021/01/Nigeria-Bushmeat-Consumption-Survey-Report.pdf>

37 <https://wildaid.org/wp-content/uploads/2021/01/Nigeria-Bushmeat-Consumption-Survey-Report.pdf>

38 Stephen, Craig, Berezowski, John et al. (2021). A Rapid Review of Evidence on Managing the Risk of Disease Emergence in the Wildlife Trade. Preparedness and Resilience Department of the World Animal Health Organisation - OIE. Paris, France. https://web.oie.int/download/WG/Wildlife/OIE_review_wildlife_trade_March2021.pdf

39 <https://wildaid.org/end-the-trade-coalition-press-release/>

40 <https://endthetrade.com/>

41 <http://www.npc.gov.cn/npc/c30834/202002/74a850a51661458390c9ae89e35b3807.shtml>

42 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full-Report-May2021-1.pdf

43 http://www.moa.gov.cn/xw/zwdt/202005/t20200529_6345528.htm

44 <https://wildaid.org/vietnams-prime-minister-issues-new-wildlife-directive-shows-strong-leadership-in-protecting-species-and-global-health/>

45 https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2021-04-23&atto.codiceRedazionale=21G00063&elenco30giorni=false

46 <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016R0429&from=IT>

47 <https://nltimes.nl/2020/08/27/dutch-permanently-ban-mink-farming-april-2021>

48 <https://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>

49 <http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1287462/>

50 <https://www.cifor.org/feature/covid-19-and-wild-meat/>

51 [https://www.cell.com/current-biology/fulltext/S0960-9822\(21\)00144-5?returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS0960982221001445%3Fshowall%3Dtrue](https://www.cell.com/current-biology/fulltext/S0960-9822(21)00144-5?returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS0960982221001445%3Fshowall%3Dtrue)

52 <https://www.theguardian.com/environment/2020/may/26/ban-on-bushmeat-after-covid-19-but-what-if-alternative-is-factory-farming>

53 https://c532f75abb9c1c021b8c-e46e473f8aadb72cf2a8ea564b4e6a76.ssl.cf5.rackcdn.com/2021/06/09/5cq7svg1f4_Summary_of_WCS_policy_on_wild_meat_markets_wildlife_trade_and_zoonotic_2021_05_21_Final.pdf

54 <https://updates.panda.org/a-global-call-to-action-on-covid-19-and-wildlife-trade>

55 https://cms.fauna-flora.org/wp-content/uploads/2020/04/FFL_2020_Position_Covid19_Wildlife_Trade_Biodiversity.pdf

56 <https://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>

57 https://cites.org/eng/CPW_Statement_covi19_wildlife_16102020

58 https://cites.org/eng/CPW_Statement_covi19_wildlife_16102020

59 <https://www.sciencedirect.com/science/article/pii/S027795361730758X>

60 <https://www.oie.int/app/uploads/2021/03/a-oiewildlifetradestatement-april2020.pdf>

61 https://www.tawa.go.tz/fileadmin/user_upload/GAME_MEAT_SELLING_REGULATIONS_2020.pdf

62 <https://www.thecitizen.co.tz/tanzania/news/tanzania-government-issues-guidelines-on-game-meat-trade-2703728#:~:text=The%20provisions%2C%20contained%20in%20the%20jail%20term%20is%20one%20year.&text=The%20Tawa%20director%20general%20will,Game%20Meat%20Selling%20Advisory%20Committee.>

63 <https://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaks-protecting-environment-animals-and>

64 [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(21\)00142-X/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(21)00142-X/fulltext)

65 https://www.wto.org/english/tratop_e/sps_e/spsund_e.htm

66 <https://www.dfat.gov.au/sites/default/files/7-sanitary-and-phytosanitary-measures.pdf>

67 <https://ageconsearch.umn.edu/record/301226/?ln=en>

68 https://cites.org/eng/CPW_Statement_covi19_wildlife_16102020

69 <https://www.traffic.org/news/the-coronavirus-pandemic-and-wildlife-trade-traffics-perspective/>

70 https://cdn.who.int/media/docs/default-source/food-safety/ig--121-1-food-safety-and-covid-19-guidance-for-traditional-food-markets-2021-04-12-en.pdf?sfvrsn=921ec66d_1&download=true

71 <https://www.independent.co.uk/news/world/asia/covid-cause-lab-evidence-wildlife-trade-b1815915.html>

72 <http://news.chinhphu.vn/Home/5K-message-launched-in-COVID19-pandemic-time/20209/41455.vgp>

73 <https://www.ilri.org/news/vietnam-launches-second-phase-one-health-partnership-zoonoses-control>

74 <https://actuacameroun.com/2020/04/07/coronavirus-la-ministre-de-la-recherche-scientifique-persiste-sur-le-role-des-chauves-souris-dans-la-transmission-malgre-les-moqueries/>

75 <https://www.lebledparle.com/fr/societe/1112547-coronavirus-madeleine-tchouente-defend-son-point-de-vue-au-sujet-des-chauves-souris-video>

76 https://www.tawa.go.tz/fileadmin/user_upload/GAME_MEAT_SELLING_REGULATIONS_2020.pdf

77 <https://www.traffic.org/what-we-do/projects-and-approaches/behavioural-change/chinas-champions-of-change/>

78 <https://www.changevn.org/tin-tuc/262-change-wildaid-tung-video-hoat-hinh-truyen-thong-giao-duc-keu-goi-ngung-tieu-thu-thit-rung>

79 <https://www.facebook.com/CHANGEvn/posts/3312056068842082>

80 <https://pledge4wildlife.org/en/>

81 <https://biodiversitylinks.org/learning-evidence/combatting-wildlife-trafficking/news-events/webinar-demand-reduction-and-covid-19-response>

82 <https://wildaid.org/dont-eat-buy-or-trade-in-risky-bushmeat/>

83 <https://www.youtube.com/watch?v=1XleBTQtwQ>

84 <https://wildaid.org/dont-eat-buy-or-trade-in-risky-bushmeat/>

85 The training was a tailored version of TRAFFIC's Social and Behaviour Change (SBC) Toolkit and Training Course: <https://www.changewildlifeconsumers.org/change/behaviour-change-for-conservation-online-course/>

86 <http://www.npc.gov.cn/npc/c30834/202002/74a850a51661458390c9ae89e35b3807.shtml>

87 <https://news.globallandscapesforum.org/50495/no-wildmeat-in-cities-says-a-new-campaign-in-the-congo-basin/>

88 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

89 <https://www.cdc.gov/healthypets/pets/wildlife.html>

90 <https://pijac.org/press/open-letter-requested-ban-international-live-wildlife-trade>

91 <https://www.traffic.org/publications/reports/calling-for-compassion-counter-vietnam-songbird-demand-with-buddhist-philosophy/>

92 https://pdf.usaid.gov/pdf_docs/PA00X5WX.pdf

93 <https://web.facebook.com/BijakBerkicau>

94 https://pdf.usaid.gov/pdf_docs/PA00XGJD.pdf

95 <https://www.traffic.org/publications/reports/calling-for-compassion-counter-vietnam-songbird-demand-with-buddhist-philosophy/>

96 <https://chuabode.com.vn/duan/goc-nhin-cua-phat-giao-doi-voi-thu-nuoi-chim-canh/>

97 <https://www.nationalgeographic.com/animals/article/wildlife-seizures-dropped-in-2020-but-an-illicit-trade-boom-may-be-coming>

98 <https://www.sciencedirect.com/science/article/pii/S0013935120313360?via%3Dihub#bib46>

99 https://www.wwf.or.jp/activities/data/20200303_wildlife02.pdf

100 <https://www.japanpitt.pitt.edu/essays-and-articles/culture/japanese-animal-cafes-and-iyashi-boom>

101 https://www.wwf.or.jp/activities/data/20200303_wildlife02.pdf

102 <https://www.frontiersin.org/articles/10.3389/fevo.2021.609547/full>

103 <https://www.frontiersin.org/articles/10.3389/fevo.2021.609558/full>

104 <http://t5g.org.vn/save-the-children-ap-phich-nhung-viec-can-lam-khi-hoc-sinh-bi-sot-ho-kho-tho-tai-truong-hoc-2>

105 <https://wildaid.org/the-year-of-the-pangolin-and-preventing-the-next-pandemic/>

106 <https://endthetrade.com/>

107 <https://wildaid.org/wildaid-and-thairath-tv-launch-talks-for-change/>

108 <https://www.youtube.com/watch?v=3gR2MLwxf4>

109 <https://env4wildlife.org/2020/07/23/never-again-taking-steps-to-prevent-the-next-pandemic/>

110 <https://env4wildlife.org/2020/12/06/envs-latest-psa-encourages-vietnamese-public-to-take-action-to-ensure-another-pandemic-is-never-again-possible/>

111 <https://env4wildlife.org/2020/12/06/envs-latest-psa-encourages-vietnamese-public-to-take-action-to-ensure-another-pandemic-is-never-again-possible/>

112 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

113 <https://www.cifor.org/knowledge/publication/7046/>

114 Bergin, D., Cheng, T., Mei, G., Kritski, E. and Meijer, W. (2021). Wild Meat Consumption in Thailand: A research study to explore opportunities to change wild meat consumption behaviour. TRAFFIC and ZSL.

115 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

116 <https://www.freedomofresearch.org/bear-bile-bad-for-bears-bad-for-humans-by-angela-leary/>

117 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

118 Bergin, D., Cheng, T., Mei, G., Kritski, E. and Meijer, W. (2021). Wild Meat Consumption in Thailand: A research study to explore opportunities to change wild meat consumption behaviour. TRAFFIC and ZSL.

119 <https://library.wcs.org/Scientific-Research/Research-Publications/Publications-Library/ctl/view/mid/40093/pubid/DMX3743300000.aspx>

120 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

121 <https://www.changewildlifeconsumers.org/webinar/reducing-demand-for-shark-fin-consumption-using-sbcc-framework/>

122 <https://library.wcs.org/Scientific-Research/Research-Publications/Publications-Library/ctl/view/mid/40093/pubid/DMX3743300000.aspx>

123 <https://vietnam.panda.org/en/?321490/Hue-ready-to-become-the-first-Wild-Meat-Free-City-of-Vietnam>

124 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

125 https://www.jica.go.jp/english/our_work/evaluation/indicators/c8h0vm000094yxc-att/grant_11.pdf

126 <https://openjicareport.jica.go.jp/pdf/12334710.pdf>

127 <https://wildaid.org/wildaid-and-the-nigerian-government-recommend-campaign-to-reduce-urban-bushmeat-consumption/>

128 <https://redtractor.org.uk/>

129 Bergin, D., Cheng, T., Mei, G., Kritski, E. and Meijer, W. (2021). Wild Meat Consumption in Thailand: A research study to explore opportunities to change wild meat consumption behaviour. TRAFFIC and ZSL.

130 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

131 <https://library.wcs.org/Scientific-Research/Research-Publications/Publications-Library/ctl/view/mid/40093/pubid/DMX3743300000.aspx>

132 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

133 <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/cobi.12454>

134 <https://www.nrdc.org/stories/experts-urge-people-all-over-world-stop-killing-bats-out-fears-coronavirus>

135 <https://theconversation.com/take-bushmeat-off-the-menu-before-humans-are-served-another-ebola-32914>

136 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

137 <https://wildaid.org/wp-content/uploads/2021/01/Nigeria-Bushmeat-Consumption-Survey-Report.pdf>

138 https://cites.org/sites/default/files/document/E-Res-17-04_0.pdf

139 Bergin, D., Cheng, T., Mei, G., Kritski, E. and Meijer, W. (2021). Wild Meat Consumption in Thailand: A research study to explore opportunities to change wild meat consumption behaviour. TRAFFIC and ZSL.

140 <https://library.wcs.org/Scientific-Research/Research-Publications/Publications-Library/ctl/view/mid/40093/pubid/DMX374330000.aspx>

141 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

142 https://www.researchgate.net/publication/353175141_Making_more_effective_use_of_human_behavioural_science_in_conservation_interventions

143 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

144 <https://link.springer.com/article/10.1007/s10745-019-0061-z>

145 Government stakeholders in the three East African countries proposed not to publish the research findings, as sharing the findings with the public could drive trade and consumption further underground and make law enforcement work more difficult. Instead, law enforcement officials will use the findings to develop better means of addressing illegal wildlife trade and consumption.

146 <https://wildaid.org/wp-content/uploads/2021/01/Nigeria-Bushmeat-Consumption-Survey-Report.pdf>

147 https://www.youtube.com/watch?v=GIHH_JlligE&list=PLiOixi4ALzpyWQEE4NQP5awXa20KU5sY

148 <https://www.worldbank.org/en/news/press-release/2020/06/18/china-new-project-to-reduce-risks-of-emerging-infectious-diseases-through-a-multisectoral-approach>

149 <https://www.changewildlifeconsumers.org/change/behaviour-change-for-conservation-online-course/>

150 Bergin, D., Cheng, T., Mei, G., Kritski, E. and Meijer, W. (2021). Wild Meat Consumption in Thailand: A research study to explore opportunities to change wild meat consumption behaviour. TRAFFIC and ZSL.

151 <https://www.iucn.org/regions/eastern-and-southern-africa/our-work/conservation-areas-and-species/conserving-natural-capital-and-enhancing-collaborative-management-transboundary-resources-east-africa-connect>

152 <http://www.changewildlifeconsumers.org/toolkit/chi-initiative-world-rhino-day-briefing-paper/>

153 <https://factcheck.afp.com/not-only-source-virus-unknown-dead-cells-inside-rhino-horn-also-are-incapable-keeping-it-alive>

154 <https://www.traffic.org/publications/reports/designing-effective-messages/>

155 The complete findings of this research were not published, as explained in earlier Section 7 footnote.

156 https://www.tawa.go.tz/fileadmin/user_upload/GAME_MEAT_SELLING_REGULATIONS_2020.pdf

157 TAWA communication, September 2021.

158 <https://www.swm-programme.info/>

159 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf

160 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf

161 <https://static1.squarespace.com/static/5c7d60a711f7845f734d4a73/t/5e71676b1e329d733c2fdc24/1584490349404/CASE+STUDY-SURVEILLANCE-VIETNAM+WILD-LIFE+FARM.pdf>

162 [1]https://www.researchgate.net/publication/248200458_The_conservation_impact_of_commercial_wildlife_farming_of_porcupines_in_Vietnam

163 <https://www.worldwildlife.org/publications/silence-of-the-snares-southeast-asia-s-snaring-crisis>

164 <https://www.biorxiv.org/content/10.1101/2020.06.05.098590v3>

165 https://globescan.com/wp-content/uploads/2021/05/WWF-GlobeScan-COVID19_One_Year_Later-Full_Report-May2021-1.pdf

166 <https://www.frontiersin.org/articles/10.3389/fevo.2021.609558/full>

167 <https://www.traffic.org/publications/reports/calling-for-compassion-countering-vietnams-songbird-demand-with-buddhist-philosophy/> and: <https://www.traffic.org/publications/reports/caged-in-the-city/>

168 <https://www.hsi.org/wp-content/uploads/2020/04/Wildlife-Markets-and-COVID-19-White-Paper.pdf>

169 https://www.researchgate.net/publication/51540340_Investigating_Vietnam's_Ornamental_Bird_Trade_Implications_for_Transmission_of_Zoonoses

170 <https://www.traffic.org/publications/reports/calling-for-compassion-countering-vietnams-songbird-demand-with-buddhist-philosophy/>

171 <https://www.lebledparle.com/fr/societe/1112547-coronavirus-madeleine-tchouente-defend-son-point-de-vue-au-sujet-des-chauves-souris-video>

172 Transhumance: the action or practice of moving livestock from one grazing ground to another in a seasonal cycle, typically to lowlands in winter and highlands in summer

173 <https://www.changewildlifeconsumers.org/>

174 <https://www.tiffany.com/jewelry/shop/save-the-wild/>

175 <https://www.endwildlifetraffickingonline.org/>

176 https://www.usaidwildlifeasia.org/resources/consumer-demand-reduction/csr_en_dec11_final.pdf/view

IMAGE CREDITS

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52	TRAFFIC

ANNEX I: INTERVIEW TEMPLATE

INTRODUCTION / ORIENTATION

- Confirm my and their name / job title / organisation / email
- Scope of role and any countries/ territories / themes they usually work in
- Introduce Wildlife TRAPS project, purpose of the interview, anonymity / non-attribution, recording
- Explain how this IDI fits amongst other data gathering mechanisms (e-Survey / IDIs / Focus groups, alongside desk-research and ongoing exchanges with the Community)
- Output = 1) Stakeholder engagement plan 2) Situation analysis 3) Pilot projects
- Outcomes = More vibrant, informative and engaged SBC Community

PROFESSIONAL EXPERIENCE AND PERSPECTIVES

- What's their broad understanding of the relationship between COVID-19, wildlife trade and consumer engagement? Is there an institutional position on these issues? If so, what? Why?
- {Past comms} What comms if any has your org issued on these themes to date? Where / when? To who? Why? Would you class these comms as social or behaviour change? Why? What was the impact? Did this meet expectations?
- {Future comms} What social and behaviour change initiatives are you/ your organisation planning to do, specific to markets for wildlife products and COVID/ zoonotic disease risks?
 - Which audiences are you targeting? Where?
 - What behaviour/s are you trying to change?
 - How are you doing this? Using what means?
 - What research have you conducted / evidence base are you using?
 - What additional insights would be useful for designing your approach?
 - Who are you working with on activities and campaigns?
- Would you be prepared to share any imagery or impact summaries as case studies, on www.changewildlifeconsumers.org?

UNDERSTANDING OF WIDER SECTOR APPROACH / ACTIVITIES

- What are you aware of that others are doing or have done on DR and zoonosis? Any particular campaigns or comms that have struck you for either an innovative or somehow remarkable approach? What did you like about them? Did you think they were either social or behaviour change, or more about brand alignment and visibility around the issues?
- What do you know about what is being planned or currently in development? Anything that has used consumer or market research / some form of insight or evidence base? Anything that is being co-produced? With who, how, to target which commodities?
- What about how comms differ across regions and cultures – have you seen any comms in countries different to [the one they normally work in]? Any perspectives on the different approaches adopted? Are you aware of how consumer engagement differs on other themes in these other countries? Any approaches you like / think work? Don't like? Why?
- What's your perspective on some of the commentary that DR initiatives risk imposing western ideologies and values on countries and cultures that use wildlife in x/y/z ways?

- How do you think various stakeholders and actors should be co-ordinating around SBC comms with consumers around conservation and zoonotic threats; for example, what's the role of governments, cf. NGOs and public health bodies? What about companies and retailers of wildlife? People that manage wet markets vs. wholesalers or other members of the supply chain?
- How feasible do you think it is to encourage consumers to seek a safe, sustainable and traceable supply of wildlife products for meat / medicine / pets? What aspects in particular do you think they should look for? Any Standards or products you think demonstrate this at the moment? What alternatives are there that could be recommended instead?
- What do you think are the top three priorities for engaging consumers in social and behaviour change initiatives that aim to ensure public health and animal protection, and a safe, traceable and sustainable supply of wildlife products?
 - *{Examples could include: research to identify priority audiences and behaviours to target; skills and capacity development for those regulating current markets for wildlife products, to effectively use social and behaviour change approaches; evidence and ideas around the most clear and convincing / compelling consumer messaging; advocacy to ensure adequate legislation and regulatory protections; effort to persuade retailers to improve sanitation and hygiene/ animal husbandry practices; new partners and collaborations with health professionals, to advise on safe / sustainable alternatives for people to buy; developing current sustainability Standards to include safety considerations; etc..}*

PERCEIVED PRIORITIES MOVING FORWARD

- What do you think still needs to be done? i.e. what are the gaps, priorities and opportunities that demand reduction practitioners should be addressing, to reduce the risk of zoonotic disease transfer and improve protection for endangered species in wildlife trade?
- What skills / knowledge / expertise do you / your organisation bring to this topic? What connections / partnerships / relationships do you/ your organisation bring to this topic? What skills / knowledge / expertise would you / your organisation like to have on this topic? What connections / partnerships / relationships would you/ your organisation like to have on this topic?
- Is there anything in particular you would like to see from the Social and Behaviour Change Community to support your work? Are you interested to deliver joint campaigns? Would you participate in coordination meetings if these were set up monthly? Any other feedback you would like to return, to help us ensure the Community of Practice meets your needs and is useful for your social and behaviour change work?

WRAP-UP / NEXT STEPS

- Thank you / write-up / review & confirmation of comments / sign-off on transcription, etc
- TRAFFIC's next step / focal point for future contact / welcoming comment on Toolkit, etc.

DECEMBER 2021

WORKING TO ENSURE THE TRADE IN
WILD PLANTS AND ANIMALS IS NOT
A THREAT TO THE CONSERVATION
OF NATURE



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