

Project Overview and Acknowledgements



BROOKS McCORMICK JR
ANIMAL LAW &
POLICY PROGRAM
HARVARD LAW SCHOOL

CEAP

Center for Environmental
& Animal Protection
New York University

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AUTHORS

GLOBAL REPORT

This report was written by Ann Linder, M.S., J.D. (Harvard Law School), Dr. Bonnie Nadzam (Harvard Law School), Dr. Kristen Stilt (Harvard Law School), Dr. Dale Jamieson (New York University), and Valerie McCarthy (Harvard Law School).

ANGOLA COUNTRY REPORT

This report was written by Dr. Tamar Ron, Jose Agostinho, Antonio Rafael, Erica Lyman (Lewis and Clark Law School, United States), Dr. Bonnie Nadzam (Harvard Law School, United States), and Dr. Ted Geier (University of California, Davis, United States).

AUSTRALIA COUNTRY REPORT

This report was written by Dr. Clive Phillips (Curtin University, Australia) and Dr. Dora Marinova (Curtin University, Australia), with additional research and editing from Lana Nadj.

BRAZIL COUNTRY REPORT

This report was written by Dr. Caio Graco Zeppelini (Universidade Federal da Bahia, Brazil); Dr. Ianei de Oliveira (Universidade Salvador, Brazil); Dr. Poliana Mascarenhas de Abreu (Universidade Salvador, Brazil); Dr. Rômulo Romeu da Nóbrega (Universidade Estadual Paraíba, Brazil); Dr. Frederico Costa (Universidade Federal da Bahia, Brazil). The Legal Framework and Ver-o-Peso Case Study sections were authored by Dr. Carolina Maciel.

CHINA COUNTRY REPORT

This report was written by Dr. Li-hong Gao (Zhongnan University of Economics and Law, China) and Dr. Da Su (Zhongnan University of Economics and Law, China) with additional research and editing by Dr. Caroline Merrifield (New York University, United States).

GERMANY COUNTRY REPORT

This report was written by James Brückner and Henriette Mackensen.

GHANA COUNTRY REPORT

This report was written by Dr. Amos Laar (University of Ghana, Accra, Ghana) with support and assistance from Kasim Abdulai (University of Cape Coast, Ghana), James Kwaku Agyen (University of Health and Allied Sciences, Ghana), Bernard Borteih Bortei (Council for Scientific and Industrial Research, Ghana), Dr. James Abugri (C. K. Tedam University of Technology and Applied Sciences, Ghana), Pearl Aovare (University of Ghana, Accra, Ghana), Joseph Yaw Jerela, (Volta Regional Health Directorate, Ghana), Rita Ohene Larbi (Animal Research Institute Accra, Ghana), Alice Sallar Adams (University of Ghana, Accra, Ghana), and Bruce Ayabilla Abugri (University for Development Studies, Ghana).

INDIA COUNTRY REPORT

This report was written by Aarthi Kannan, Apoorva, Shreya Padukone, and Vivek Mukherjee (NALSAR University Law School, India) with support from Jayasimha Nuggehalli and additional research and editing by Nirva Patel (Harvard Law School, United States) and Shashank Vura.

INDONESIA COUNTRY REPORT

This report was written by Magdalena S. Svensson (Oxford Brookes University, England), Silvana Sita, Britha Mahanani, and Farabby Aslam Pareke.

ISRAEL COUNTRY REPORT

This report was written by Dr. Anat Ben-Yonatan (Tel Aviv University, Israel), Att. Amnon Keren (Tel Aviv University, Israel), Dr. Dafna Shir-Vertesh (Ben Gurion University of the Negev, Israel), Att. Yotam Shlomo (Bar-Ilan University, Israel), and Dr. Eran Tzin (Tel Aviv University, Israel).

KENYA COUNTRY REPORT

This report was written by Kahindi Lekalhaile, Josiah Ojwang, Benson Wachira, Maureen Magalasia, Josphat Ngonyo, and Purity Karuga, with additional research and editing by Valerie Wilson McCarthy (Harvard Law School, United States).

PERU COUNTRY REPORT

This report was written by Monica Nuñez Salas (Universidad del Pacífico, Perú) and Sayuri Andrade Toma (Universidad del Pacífico, Perú).

SOUTH AFRICA COUNTRY REPORT

This report was written by Dr. Audrey Delsink, Tony Gerrans, and Karen Trendler. Additional comment provided by Dr. Rob Slotow (University of KwaZulu-Natal, South Africa).

UNITED ARAB EMIRATES (UAE) COUNTRY REPORT

This report was written by Dr. Bonnie Nadzam (Harvard Law School, United States), Alex Tam, and Madison Stein, with research and review assistance from Patricia Tricorache, as well as from several expert sources who requested anonymity.

UNITED STATES (US) COUNTRY REPORT

This report was written by Ann Linder (Harvard Law School, United States), Valerie McCarthy (Harvard Law School, United States), Chris Green (Harvard Law School, United States), Dr. Bonnie Nadzam (Harvard Law School, United States), Dr. Dale Jamieson (New York University, United States), and Dr. Kristen Stilt (Harvard Law School, United States).

VIETNAM COUNTRY REPORT

This report was written by Dr. Bonnie Nadzam (Harvard Law School, United States) with research assistance from Lan Ho, Mai Thi Trinh, Pham Thong, Trang Dang, Hang Le, Dr. Tuan Bendixsen, Adam Parascandola, Mai Nguyen, Adam Peyman, and Kimberly Fullerton.



Christian Faesecke / We Animals Media

OVERVIEW

Animal markets, selling live animals, meat, or other animal parts and products, operate across the world in many different forms. For the purposes of the project, the term “animal market” is used to describe venues where the consumption, commercial use, or trade of animals brings them into close contact with humans. These markets and the supply chains that support them are sources of many high-risk human-animal interactions driving the transmission of zoonotic diseases. Still, relatively little is known about these markets and their risks, or how to mitigate them.

This global report includes 15 country case studies researched and written by teams of experts operating in the country of study or with extensive knowledge about that country. The case studies incorporate scientific literature, local and regional regulatory analysis, data, interviews, and other research to describe and analyze what is known about its animal markets from a zoonotic risk perspective. These countries include:

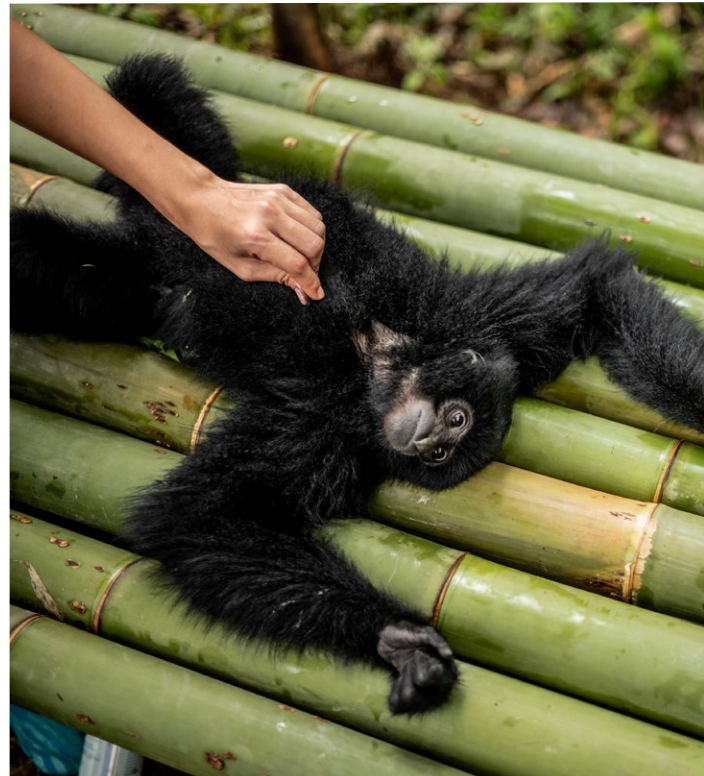
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- CHINA
- GERMANY
- GHANA
- INDIA
- INDONESIA
- ISRAEL
- KENYA
- PERU
- SOUTH AFRICA
- UNITED ARAB EMIRATES
- UNITED STATES
- VIETNAM

MOTIVATIONS

Several concerns and challenges motivated this research. Public discussion surrounding the COVID-19 pandemic all too often displayed a lack of understanding regarding animal markets, evidenced by faulty assumptions, stereotypes, and an incomplete conception of the problem. There was an overreliance on the term “wet market” and an overemphasis on these markets as the sole source of zoonotic risk, to the exclusion of other high-risk sites and practices. At the same time, the term “wet market,” one that can be both over- and under- inclusive for the purposes of describing zoonotic risk, lacked a clear definition and shared meaning; in much of the western world, there seemed to be only a vague general sense of what a wet market actually was. Other terms key to understanding human-animal interactions and zoonotic risk similarly lacked clear definition and shared meaning. For example, definitions of “livestock” and “wildlife” vary a great deal from one region and from one policy to the next, and these differences are often overlooked in policy conversations. In addition, the policy discussion surrounding risks posed by animal markets often offered only binary solutions (e.g., “ban” all wet markets, or do not) that failed to account for the context and cultural significance of these markets or to understand their movements, sources, and functions. And although animal markets are prevalent across almost every country, many observers singled out markets in some regions without regard to the broader global nature of the risk.

The fact that many nations seemed unwilling to fully recognize and account for the ways in which they contribute to global zoonotic risk motivated us to include and study a wide range of jurisdictions. Too often, nations assign blame for zoonotic outbreaks to particular regions of the world, groups of people, or to limited sets of practices. On an international scale, this type of finger-pointing gives way to predictable and unproductive patterns. For example, those in the global north may believe, with unfounded confidence, that a disease outbreak brought on by zoonotic spillover could never originate in their nation, identifying “others” as the source of zoonotic risk, while those in the global south may feel unfairly stigmatized and react defensively, becoming less willing to internally acknowledge disease or to externally report it. Neither reaction leaves room for honest reflection or reform, and, in fact, there are broad similarities among all the countries we studied.

Zoonotic disease emanates from human-animal interactions wherever they occur. Many of the same problems, practices, and patterns associated with zoonotic disease risk characterize each of 15 countries of study. The risks posed by each practice and each country are additive, contributing to the global threat of zoonotic disease.



Justin Mott / Kindred Guardians Project / We Animals Media

This work is also motivated by a desire to examine and correct misinformation that undermines public health by fostering high-risk practices. For example, the belief that only wild animals carry disease and that domestic animals pose no risk may mean that high-risk practices involving livestock are overlooked—that there are too few public health protections in place or that consumers or producers are not taking precautions because they are unaware of the risks. Other common misconceptions include thinking that only particular species of wild animals, such as bats, carry pathogens, that the only way disease can spread to humans is by slaughtering or eating infected animals, and that activities that have not made humans sick in the past are safe and will not harm them in the future. Each of these presumptions is wrong; however, in many places, misunderstandings like these have shaped practices and the policy that governs them. Alongside these assumptions is a sometimes-unfounded faith in our regulatory institutions' ability to monitor and mitigate these risks. But when national economies are dependent on domestic production of animal industries or on animal exports, when there is a desire to downplay risks for political or economic purposes, or when different agencies within a nation do not communicate well, regulation can often fall short of protecting public health.





Haig / Act for Farmed Animals / We Animals Media

Many outbreaks are preventable, and the need to prevent them should be a touchstone of any policy response.

The last and, perhaps most damaging, misperception that our research seeks to correct is the false idea that little can be done to prevent zoonotic outbreaks. This view suggests that any efforts made towards reducing the harms of zoonotic disease should focus solely on surveillance or response to better contain outbreaks that are already underway. Such thinking precludes the kinds of proactive efforts needed to protect global public health security. Limiting policy discussions to post-outbreak approaches inhibits our ability to address zoonotic threats comprehensively and address their root causes. It also neglects the large and growing body of evidence indicating that the number of zoonotic spillover events can be reduced through better regulation of human-animal interactions and overlooks the patterns that characterize zoonotic disease emergence. While zoonotic disease risk cannot be eliminated, risk can be radically reduced. Many outbreaks are preventable, and the need to prevent them should be a touchstone of any policy response.

OBJECTIVES, SCOPE, AND METHODS

The primary goal of this research is to better understand the zoonotic risks posed by animal markets and the sources that supply them, as well as the regulatory landscapes in which the markets and supply sources operate. We aimed to document both what is known and what is not known about animal markets—what forms they take, the purposes and people they serve, and the zoonotic risks they may carry. Our analysis and research aims to begin to map the landscape and crosscurrents of risk as they currently exist, laying the groundwork for policymakers to consider how best to address these risks. Our intention is to help inform policy decisions by documenting how animal markets operate in a



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diversity of cultural contexts and how current regulation accounts for or fails to account for the risks of zoonotic disease that these markets pose. Developing a stronger and shared understanding of zoonotic risk and of where that risk is greatest is essential to protect against future outbreaks.

We have defined the scope of this project broadly as “the intersection between animal markets and zoonotic disease.” This includes both domestic animals (livestock, companion animals, etc.) and wildlife (wild-caught or farm-raised), since both are exchanged in markets. The scope includes live animals and lightly-processed animal parts and products, such as wild meat or many traditional medicines. While markets, both in-person and online, are the primary focus, we also investigate the supply chains that support and move through these markets, and have placed these markets within various value chains to provide additional context.

While our primary focus is viral zoonoses because they pose the greatest pandemic risk, we are interested in zoonoses writ large including those transmitted by bacterial, fungal, parasitic, and protozoan pathogens, as well as prions. Indeed, often, the same kinds of human-animal interactions capable of transmitting one kind of pathogen would facilitate transmission of another. While much of the discussion centers on pathogens of pandemic potential, mitigation measures put in place to address those risks would also be useful in reducing the likelihood of smaller-scale zoonotic outbreaks.

Given the ability of infectious diseases to spread widely from almost anywhere they originate, a comprehensive, global approach to understanding animal markets is needed. We selected 15 countries to serve as case studies in order to examine these issues in greater depth, capture important cultural detail, and provide for a comparative analysis of domestic policy. In this way we have begun to catalog the diversity of types and forms of animal markets in context, illuminating important patterns and underscoring that wherever there is a human-animal interaction, there is zoonotic risk.



Taken together, these case studies show how animal markets and regulatory schemes that govern them vary from one region to the next. The case studies also indicate similarities, and one aspect of our work is to highlight these common threads and themes. This comprehensive study is intended to aid policymakers considering possible interventions and to serve NGO communities as they formulate their own approaches and strategies to avoid pandemics and smaller-scale zoonotic outbreaks.

In order to better understand the risks posed by animal markets and supply chains, as well as the regulatory landscapes in which they operate, we enlisted expert partners for each of the 15 countries of study. Case study countries range from high GDP to low GDP, large to small, and operate along a host of other different cultural, structural, and political spectrums. In selecting countries to include in the study, we sought to capture as much of this diversity as possible. While this sample does not and cannot represent the whole of the world's experience with zoonotic disease, it does offer insights gleaned from six of seven continents, which provide a path forward for policymakers looking to better understand and address their nation's risk, as well as risk globally.

This sample offers insights gleaned from six of seven continents, which provide a path forward for policymakers



George Steinmetz / Nouadhibou, Mauritania 2018.

For each country, we sought experts whom we believed would be well positioned to undertake this research, describing for them the process and intended outputs, and inviting each to author a case study report specific to their country. These collaborators came from a range of disciplines—they included biologists, veterinarians, public health professors, legal experts and law professors, members of the NGO community, and others—to examine socioeconomic, cultural, governmental, and public health dynamics across each country's animal markets and their respective supply chains.

By playing a supportive role in this process, fielding questions and providing a basic framework, we attempted to offer collaborators as much autonomy as possible in how to approach their particular case study and how to best present the findings. The interdisciplinary nature of the cohort yielded similarly diverse and transdisciplinary results. Rather than conform each to a standardized template, we retained the original structure and approach through the editing and review process. Accordingly, like the markets they describe, the case study reports take many forms and each is somewhat unique in style, method, and voice.

We outlined the same instructions and series of research questions regarding animal markets and zoonotic disease for each collaborator to address with respect to their specific country. Questions included inquiry about cultural norms and human relationships with animals, types and practices of animal markets

as well as their supply chains, the economic and regulatory drivers of animal markets, and enacted or proposed policy reforms. We encouraged collaborators to pose additional questions—such as country-specific concerns or practices of relevance to the nexus between animal trade and disease—where they thought the paper would benefit from further detail or related information. Some case studies draw from new and original research including field observations, studies, and interviews; others synthesize sources from scientific journal articles, governmental and nongovernmental reports, records, news articles, legal databases, laws, and regulations.

Once each case study discussion was submitted for each country, each case study was then distributed to one or more outside reviewers with particular expertise in that country. Those comments and suggested edits were shared with the original authors, who undertook an additional, final round of revisions. While we strived to keep these reports as current as possible, the landscape in many of these places is evolving rapidly—with legal changes and changes in practices occurring in real time during the course of this project.

