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WEBINAR

BIODIVERSITY CONSERVATION, ZOONOTIC DISEASES, AND HUMAN SECURITY IN AFRICA TWO YEARS INTO COVID-19

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P R O C E E D I N G S

MS. FELBAB-BROWN: Thank you all for joining us today in our Brookings Institution conversation on conservation in Africa two years since the onset of COVID-19. I am Dr. Vanda Felbab-Brown, the director of the Initiative on Nonstate Armed Actors that also strongly focuses and researches a variety of illegal economies, including poaching, wildlife trafficking, and other illegal economies in natural resources. I am also the co-director of the Africa Security Initiative at Brookings.

Two years since COVID-19 started we are nowhere close yet to defeating the zoonotic pandemic. 5.5 million people have died so far of COVID and the economic devastation has been unprecedented since before World War II. Twenty-five years of global anti-poverty efforts were wiped out in the first 25 weeks of COVID, and many, many since then, with several hundreds of thousands of people around the world pushed into extreme poverty from their formally lower middle-class status.

COVID should have alerted us how dependent our health, human health, and the health of the global economy is on the health of our planet, our biodiversity. Yet despite much talk about the concept of so-called One Health, very few concrete, meaningful, and innovative measures have been adopted so far to prevent poaching, wildlife trafficking, the emergence of zoonotic diseases, the preservation of biodiversity and its habitats, and broader biodiversity conservation.

China, where COVID-19 emerged two years ago, became the only country so far to take some significant new measures. Specifically, it banned the consumption of wild animal meat by humans and phased out wildlife farms for human consumption, though not for other wild animals -- not for other uses of wild animals. No other country has adopted such measures. And, in fact, we see the persistence of wild animal markets in Southeast Asia, Africa, the expansions in Latin America. We see the continuation of unwarranted wildlife farming, illegal wildlife trade around the world, including in the United States. And we are also seeing a variety of other pressures on natural habitats that precedes but are also amplified by COVID. So, we are yet very far away from having taken any meaningful preventative measures to prevent the next zoonotic pandemic that could easily be around within a few years.

Today, with our terrific panel, we will focus on poaching, wildlife trafficking, and conservation developments since COVID in Africa. Learning about how COVID and trafficking has

evolved, what other impacts COVID has had on a variety of conservation stakeholders, in what way COVID amplified preexisting troubling trends undermining conservation, and what are the key lessons and policy implications. We will talk about issues such as new financing measures and governance for conservation.

Let me now introduce our superb panelists. Mr. Alastair Nelson has 25 years' field experience in implementing and leading field conservation programs in the Horn of Africa, as well as East and Southern Africa. This includes designing, establishing, and leading protected area support projects and multi-country projects in countries such as Ethiopia and Mozambique, Tanzania, Kenya, Zambia, Uganda, and Madagascar.

Mr. Nelson is currently the managing director of Conservation Synergies, an organization that supports governments and their nongovernmental partners in conservation efforts, such as tackling wildlife crime and corruption related to wildlife crime. He is also a part-time senior analyst for the Global Initiative Against Organized Crime where he focuses on the convergence between wildlife trafficking and other illicit flows in Southern and Eastern Africa. I'm delighted that Alastair can join us.

I am equally thrilled that Professor Victor Muposhi can be with us today. He is an associate professor in conservation science with the Department of Wildlife and Aquatic Resources at Botswana University of Agriculture and Natural Resources. He is also affiliated with the School of Wildlife Conservation of African Leadership University in Rwanda. And he is also a research fellow with the African Wildlife Economy Institute at Stellenbosch University in South Africa, a member of the International Advisory Committee for International Antipoaching Foundation. In his work, Dr. Muposhi has covered a whole variety of conservation issues including ecological niche modeling and spatial ecology, conservation, and sustainability science, wildlife crime, human coexistence with wildlife, and a variety of other issues.

It is very much my pleasure to introduce Ms. Catherine Semcer, someone I've been privileged to collaborate at various times. Ms. Semcer is a research fellow and lead researcher of the Wild Africa Initiative at the Property and Environment Research Center in Bozeman, Montana, as well as a research fellow with the African Wildlife Economy Institute in Stellenbosch University in South Africa, like Victor is. She sits on the Board of Advisors of the Game Rangers Association of Africa and is a

member of the Sustainable Use and Livelihoods Specialist Group of the International Union for Conservation of Nature.

Previously, Ms. Semcer was the chief operating officer of the NGO Humanitarian Operations Protecting Elephants where she was responsible for leading projects in Zimbabwe, Mozambique, and Ethiopia. She also served as senior Washington D.C. representative for Sierra Club, where she focused on advancing conservation programs within the Department of Defense. And she also has corporate experience with McKinsey & Company, where she supported the environmental practice aspects of the firm.

And finally, I am delighted to introduce Dr. Peter Lindsey, a Zimbabwean, who is the director of the Lion Recovery Fund of the Wildlife Conservation Network. And not surprisingly, the Lion Recovery Fund focuses on the conservation of lions in Africa, something Dr. Lindsey has had longstanding experience having worked on the conservation of predators in Africa since 1993, including issues such as African wild dogs. Since then, Dr. Lindsey has covered a wide variety of conservation issues including issues such as wildlife ranching, very important both for preservation of habitats and land, as well as zoonotic diseases, community-based conservation, and Africa's vast protected areas. And, indeed, Dr. Lindsey is a leading voice on funding mechanism for conservation. I am absolutely delighted that Dr. Lindsey can join us and equally delighted that all of our other panelists will be able to share their important views and insights today.

Let me start by asking a broad question to all of you. If you please can give us a snapshot of the key developments in poaching, trafficking, and conservation in Africa since January 2020 or December 2019, since the onset of COVID. What effects has had COVID on conservation and on wildlife crime? Alastair, if I may, let me turn to you for your thoughts on that.

MR. NELSON: Definitely. Thanks, Vanda. It's a pleasure to be here. Thanks for the invitation and thank you, everyone. So, let me start with some of the bigger patterns. And I might start with a pattern that was started sort of pre-COVID as well to make sure that we don't link that to COVID. So, an important shift that we had been seeing starting really in sort of 2015-'16, but really becoming significant 2018-'19 just pre-COVID, was this major shift in the exports of high value products: ivory, pangolin scales, but also, rhino horn, very much from East Africa to West Africa. The EIA, I think, has

documented that very well in their report that's available on their website. But the volumetric, the size and scale of that shift has been absolutely enormous. So, it's important to recognize that that shift was happening pre-COVID.

So, moving on to what we saw immediately when lockdowns and so on started. So, the first key and most obvious thing was this almost immediate decline in high value -- poaching of high-value products. So, rhinos in South Africa, elephant, pangolins being available on the market. And an immediate uptick in—certainly in the records associated with bushmeat poaching. So, for example, Kenya mentioned a -- recorded sort of a 40 percent increase in bushmeat seizures in the first half of 2020 compared to 2019. Zambia talk about a three-fold increase in snare returns for the same period, 2020 versus 2019. Tanzania, Mozambique, Uganda, all in their national records, talk about a vast increase in bushmeat -- in bushmeat poaching.

Now, it's fairly obvious for us to think where that might come from with people being forced out of work moving back to rural areas, people having to turn to bushmeat to survive. It's also possible, of course, that people in the field not having other things to do were actually in the field and being more effective than before. Wanting to keep their job, suddenly realizing the importance of having a job. So, patrolling effectiveness is something that we haven't looked at as a possible factor that might have influenced that.

But clearly, we see this huge, marked change. Straight after these lockdowns disappeared, went away, we see again this uptick in poaching. Let me also though -- and I want to distinguish very much between the poaching economy and the sort of trafficking economy, basically. So, poaching very much the killing of animals by groups in and around landscape protected areas, be that governmental or local people protecting those areas and working those areas, and trafficking, that sort of more organized crime movement of the goods.

Even during the lockdown period, what we saw -- so, from looking at WJC had put out some interesting reports looking at their intelligence networks. And there we've seen that people were stockpiling. Some people were buying ivory to stockpile. And even now with the ivory prices decreased, we still see this stockpiling of ivory. Some of it still exported through West Africa. So, post-COVID, we see the uptick again in trafficking of high value products, poaching and trafficking of high value products.

In South Africa, Botswana, huge uptick in -- take up in rhino poaching. And certainly, the demand for rhino horn in Asia doesn't seem to have decreased at all.

We see also—in some countries though, we've seen that that increase in rhino poaching hasn't happened. So, Tanzania with a smaller population. Kenya, Namibia, have not necessarily had such a large increase in rhino poaching. And what we see in those countries really is a focus on intelligence networks that work very, very closely around the protected areas the rhinos are that are very targeted on those networks that might be moving rhino horn. And those seem to be being successful.

I think what we've also seen is if we go to protected areas, is the protected areas that were able to maintain their integrity and maintain some levels of protection during the COVID lockdowns, during this post-COVID time when there's been a huge decline in tourism, are where we see success, we see partnerships. And it's not just any partnerships where we see success. We see partnerships that are based on longer-term relationships that have established agreements that lay out governance frameworks, management frameworks, and there's legitimacy in those partnerships. So, and that legitimacy is built-in through trust in how those partners work together, but also so that other local government departments can actually respect those relationships if you have an outside partner working in a protected area. So, we see that these governance management agreements become very, very important in these longer-term relationships, which are helping to protect these protected areas through and post-COVID as well.

So, the other thing that I think we've seen post-COVID is this -- and during COVID -- is this diversification of products that are being poached and trafficked. So, in South Africa, for example, this huge increase in succulent poaching and trafficking. But we've also seen it with the increase in pet trade in this region and people accessing other wildlife to be able to get it into the market and finding ways to get it in the market.

Now, again, I think there's a small tradeoff here in that -- or a complicating factor -- and I think that we're actually just seeing a lot more of what happened before. Because I actually think we've got a lot more effective—our wildlife -- the people who are attacking wildlife crime have got more effective at finding wildlife crime and at diversifying what they're looking for over the last couple of years. And I think in how we do counter wildlife trafficking has improved in effectiveness. So, but I still believe that

post-COVID we've seen a real diversification, that diversification is real of people trying to access money and access markets.

And then the final thing that I want to focus on that post-COVID that I've certainly seen is in a couple of field trips to northern Mozambique in particular. I've certainly noticed and I've lived and worked in Mozambique. You know, worked there for 10 years, lived there for 6 years, always—mostly in the north. So, I know it very, very well. But I noticed a huge increase in local level corruption. And that seemed very much associated with people in law enforcement not being paid salaries, not having access to other mechanisms. Because salaries are so poor, not having access to other mechanisms to bring in money to look after their families. And so, the levels of corruption that I was seeing were far more aggressive and far more widespread than what I was used to. And particularly for an area that I'm used to working and living in and addressing that issue.

And talking about that, being in Mozambique, what that really brings me -- brings concern to me is that in these remote areas, in these areas around protected areas, I think post-COVID we've seen a decline in governance, a decline in finances being made available for local development. That coupled with corruption, creates the conditions -- creates conditions for local people to be completely disenfranchised. And in northern Mozambique, we've seen that turn to violence. And I think that's a real concern that we need to think about going forward is coming out of COVID, how do we address corruption? How do we address governance and management in these remote areas? That's it for me.

MS. FELBAB-BROWN: Thank you. I look, Alastair, forward to your elaborating on that issue more in the second round when we focus on policy implication. At this point, I would just like to alert our audience that we did an event on the violent part of Mozambique on the al-Shabab insurgency policy responses and the broader deficient governance issues. It's on our website. So, look up the Africa Security Initiative at Brookings if you are interested and you can learn more about that.

Before I turn to Dr. Muposhi, I want to ask you one quick question, Alastair, please, and kind of 30-second answer. What caused the shift of trafficking and poaching in high value commodities from Southern and Eastern Africa to Western and Central Africa?

MR. NELSON: In my opinion, it was targeted, very targeted law enforcement action. So, it was trusted wildlife crime units that were established in a number of those countries that targeted

specific networks that were linked to some of the very high value players, basically. And so, those buyers associated with that and some of the key facilitators moved. And EIA document that very well with their Shuidong Connection reports and the follow-ups and there are others as well. But a number of these targeted investigations targeting these really important traffickers, I think, just made it uncomfortable for those people and we saw them shift across. As well as lots of poaching and moving and populations of elephants and rhino and where they were in accessing a movement. But I think the key thing is we saw the movement of key individuals.

MS. FELBAB-BROWN: That's encouraging to hear. It's always encouraging to hear when law enforcement is effective. It's also discouraging because what we see is the classic so-called balloon displacement effect that suppressing an illicit flow in one area out and pushes it to another. And I also wonder whether just the depletion of populations of elephant and rhinos in the south and east made poaching there for trafficking also more difficult.

Dr. Muposhi, let me turn to you and get your take on sort of the big patterns in conservation, poaching, wildlife trafficking since COVID. And maybe you can drill a little bit to what Alastair started prefacing, which is the impact on community conservations in local communities. And including the rise in bushmeat poaching and its implication for the emergence and spread of zoonotic diseases.

MR. MUPOSHI: Thank you. I'm happy to air my views on the subject. I think before COVID, we knew very well that conservation in Africa was actually suffering from a lot of pressure in terms of conservation financing, community involvement, issues to do with livelihoods, issues to do with human and wildlife conflicts, issues to do with encroachment into to protected areas. These are longstanding issues that were there way before COVID. And the coming in of COVID actually exacerbated these challenges in conservation in Africa. And made what was a dire situation much more worse than we have ever imagined.

And so, if you look at most of the areas in Africa, probably except South Africa, which has a totally different conservation model, you will notice that most of the conservation areas are surrounded by communities. And so, all the community or protected areas are considered, or we can consider these as islands. So, conservation islands. Why? Because they are all surrounded by local communities. And

the livelihoods of these people have always been suffering. Not only because they are marginalized, but also because of global environmental change.

And now, with the coming in of these external pandemics such as COVID, we have actually seen that the livelihoods of the local communities who normally depend on agriculture and some of the natural resources, were actually affected. So, the issues to do with drought, issues to do with flooding. And so, I just want to provide these issues so that when I (inaudible) on how COVID then impacted conservation in Africa and actually exacerbated the possibility of zoonotic diseases in Africa, you would actually understand better.

So, you know that when COVID happened, a lot of industries closed. The lockdowns and shutdowns which occurred, the restrictions that were there, a lot of people moved from urban areas. So, there was a massive urban to rural migration and that created pressure. I think Alastair mentioned that as well. That there was a shift and a more diversified, you know, product in terms of bushmeat products. Why? Because there was pressure. They needed something to fall back on. So, we are talking about food security.

And so, if we look at the sustainable development, I'm going to actually briefly talk about the five keys based on the Sustainable Development Goals and link it to COVID and link it to zoonoses and make sure that we understand the impact. And so that when we get to phase two when we talk about the policy implications or ramifications of that, we can actually then make a follow-up.

So, you will notice that we want to focus on the people. But the people who depend on a natural resource, which is protected and we don't want people to overly depend on the natural resource, which results in illegal wildlife trade, which has been exacerbated by the urban to rural migration. So, we have unprotected areas, why? Because we had law enforcement agents trying to protect. And remember there was a need to balance whether they ought to be there, out there in the bush, whilst others are on lockdown. It was a balance between their safety or health versus protecting nature and protecting our natural heritage. So, that's number one. So, the issues to do with livelihoods was compromised.

Issues to do with poverty traps was exacerbated. Food security was affected. Mind you, a lot of other farmers depend on selling their produce, food vendors, and all that to the markets. The

markets were closed. So, it means that those who had farms and depending on agriculture around conservation areas or in rural areas, it means also that their livelihoods were also affected. And so, the only thing that people could actually survive and lean on was to depend on the natural resources. And so, there needed to be a balance there. So, we need to think beyond the impact of COVID and look at better ways in which we can promote and enhance the livelihoods of people so that (inaudible, "they have"?) alternatives.

So, the issues now to do with the impact on depending on natural resources therefore becomes an issue when it comes to zoonoses or zoonotic diseases. I will look at issues to do with prosperity. We cannot overemphasize the loss of jobs and a lot of people got unemployed. So, the only thing is that somebody needs to feed his or her family. They can actually depend on a resource which is in their backyard. Which is our protected conserved areas or national parks or private game ranches.

So, in this case, I actually believe that a lot of impact was there, but some of it was not documented. Allow me to skip that part and talk about the pressures at the protected area agencies because the fiscus or governments had to shift because they had to make decisions in order to make sure that they secure vaccines. They had to make sure that they support the health sector. And because of that, a lot of (inaudible) that was meant for people in conservation or (inaudible) was diverted. And a lot of donors normally would support but because of the recession that was caused by the COVID, it means that there was little funding or there is little funding towards, you know, conservation financing in general. Because a lot of countries in Africa really depend on two mechanisms to support or to promote conservation financing, which is law enforcement, road maintenance, water provision, habitat maintenance, and all that, which is ecotourism, number one. And the second one is mostly hunting tourism. And all these two could not support.

Just towards the end of 2021, I was -- I was in Maun and a lot of people were decrying the challenges that they faced. They had to postpone the bookings. They had to survive, you know, from hand to mouth because there was no business for two years. And just about when we thought probably tourism was peaking and then Omicron became, which is this year.

And looking at what happened for southern African state, disaster. Because people who were now having faith in their (inaudible) to promote about the domestic and international tourism to

support and then all that happened. It means that a whole lot of effort needs to be put in place in order for us to lend fight issues to do with illegal wildlife trade. Why? Because there is no employment. And secondly, there is very little financing coming from the fiscus or from government. And, therefore, we certainly need to start thinking about better policy alternatives or conservation financing alternatives, which we can talk about when we talk about policy measures and support mechanisms.

But there are some positive things that the impact what happened. We have actually seen that there is power in numbers in that when we are in trouble, when we get together, we can achieve so much. Regional and international cooperation that happened for the (inaudible) we were able to have a vaccine within a year, which is historic. It has never happened. And it means that there is cooperation. It means that when a lot of scientists, a lot of people, a lot of nations put their minds to do something together, they can achieve it. It means that there is also a possibility that we are able to put our minds, put our resources, put our intellectual capabilities together to address issues to do with illegal wildlife trade. There is nothing that can stop us if there is regional and international cooperation.

Because the reason why we have products coming from Africa ending up in Asia or in Europe is because there is lack of regional or international cooperation. But COVID has taught us a very positive, you know, lesson that if we cooperate regionally and internationally, we are able to stop the spread of COVID. We can stop its spread. And therefore, there is nothing that can stop us from taking a leaf from what we have learned so far to stop illegal wildlife trade by using TRAFFIC, by using Peace Corps. All these, you know, available bodies that are there that can help us to stop the challenge that we have at hand. Thank you so much. I will stop here.

MS. FELBAB-BROWN: And I hope that we will drill more into the policy implications and lessons in the second round. I want to highlight two of your comments, Victor. One is, if you care about conservation, get vaccinated. If you care about public health, get vaccinated, if you haven't done so already.

The second, the more difficult point, is the complexity you raised about bushmeat and on the one hand its significance in food security and protein access for wide communities. But at the same time, the risks that are urban concentrated wildlife meat market without good hygienic measures present to the emergence of new diseases that could emerge in Africa, could emerge in Latin America, as well as

across Southeast Asia. And the real Gordian Knot of conservation, the right balance between the use of natural resources and their depletion, their overuse that affects not just wild meat markets or wildlife meat in general, but fisheries, land use, forests.

Ms. Semcer, Professor Muposhi started speaking about the financing issues and the impact on the tourism industry, something that also Mr. Nelson raised. You have been very much focusing on the role of tourism for financing and the impact on a whole variety of stakeholders. Please give us your take, your further elaboration, and your thoughts in this domain.

MS. SEMCER: Thank you. So, you know, no matter where you look in the world, our conservation systems are fragile. Often to a shocking degree given the importance of conservation to our prosperity and our security. And another thing that COVID really brought to the fore was just how fragile the conservation systems in Africa are. And this is due to no one's fault. It's just the way that things have shaped up over history. And this fragility really comes from the fact that so much of conservation in Africa is overly dependent on one revenue stream, one source of financial support, and that is income that is derived from tourism.

Now, this is especially true in the private sector, which plays a large role in delivering conservation in Africa. As, you know, Peter and others have reported, you know, if we just look at the hunting areas alone, you know, that takes up almost, you know, 340 million acres of land, you know, across Sub-Saharan Africa. And what this translates to in say countries like South Africa, is 50 million acres of land that in some way, shape, or form contributes to the conservation of biodiversity being dependent on tourism revenue. Now, that can come from the hunting industry. It can come from the photo tourism industry. Sometimes it comes from both.

Now, COVID struck at a very inopportune time for Africa's hunting industry in particular. Every year, hunting operators from across Africa travel to the United States right around this time. And they travel to the United States because the U.S. is the largest consumer market for African hunting experiences. There is a series of trade shows that are held in Texas and Nevada and elsewhere where these operators book about 75 percent of their business for the year. So, you can imagine, you know, in January 2020, you had effectively an entire industry that is part of a key sector to conservation here in the United States booking their business for the coming year and then almost as soon as they go home,

there's a global tourism shutdown.

So, what happened as a result of that global tourism shutdown? Well, clients who had just booked, you know, their trips to Africa a few weeks ago, started doing one of two things. They either cancelled their trips outright or they postponed those trips until a later date. What this equates to is lost revenue for the individuals and the companies who are managing this huge expanse of land. And one of the biggest fixed costs that these operators have is providing game scouts to patrol these properties. Now, these game scouts are often trained as rangers and they serve as a force multiplier for national law enforcement authorities. They have their own response capabilities, their own intelligence capabilities, and their own enforcement capabilities, you know, on these patches of land.

So, with declining revenue, that security aspect that the private sector, you know, was able to provide all of a sudden, you know, comes into jeopardy. Now, in interviewing many of the people in this industry, they did not want to let that go. You know, no one knew how long the COVID lockdowns were going to last. And so, many of them took out loans in order to support their security operations, as well as the other operations essential to the conservation that underpins the businesses that they run.

Those loans have to be repaid at some point. And to put it briefly, right now the industry is arguably on the backfoot financially. The trade shows are happening again this year. I was just at one conducting interviews. And it sounds like business is picking up. You know, people are starting to book trips to return to Africa. But, you know, the operators themselves are in debt and it's going to take them years to recover. Now, whether or not they'll be able to sustain, you know, operations, particularly security operations, you know, should further lockdowns continue, should other shocks happen to the system, remains in question. And even if they can, there's other factors that are starting to play out that are cause for concern.

Tanzania, for example, is right now preparing to auction off its hunting concessions. Something that it does, you know, with regularity. But it's doing so in a way that many operators right now are concerned whether they're going to even have a business in a few weeks. So, they're booking clients, but they don't know if they're going to have access to land in the coming year because of the way that the auctions are being structured. And if they lose that access to land, they're going to lose their business. And as we've seen in cases in the past few years when these operators go out of business,

you also lose a security capacity. You know, sometimes as many as, you know, 150 boots on the ground with air support just vanishes, you know, almost overnight, leaving huge gaps and holes in the law enforcement capacities of various African countries.

So, we don't know what's going to happen just yet with the tourism sector and what the long-term impacts of COVID are. But it's certain that there is going to be long-term impacts and that we need to find a new and more sustainable path forward and not have these important activities completely dependent on one source of revenue.

MS. FELBAB-BROWN: Thank you very much, Ms. Semcer, for getting into those issues and raising one of the very controversial issues in conservation, trophy hunting. Which one of the impacts of COVID, an amplification of mobilization to try to stop trophy hunting and a very strong response from many actors in the conservation community pointing out that that would, in fact, hamper conservation. And you spoke about the role of private security and land -- of private concessions in land ownership and in fielding anti-poaching security, as well as providing livelihoods. And, of course, the fact that land is kept intact, allows the preservation of the other elements of the ecosystem, as opposed to for hunting, as opposed to land being converted in the absence of hunting to agricultural production, African oil palm, soybean, cattle ranching.

And, of course, the issue of auctions of hunting permits raises the very real and complex issues of corruption that Alastair started us thinking about in the first comments. All of these issues, of course, precede COVID and are simply amplified and exacerbated and complicated by COVID. If I can turn to you now, Dr. Lindsey, for your thoughts on the broad impacts, but importantly, your thoughts also on the big challenges that have in fact preexisted COVID, not the least the issue of financing for protected areas and more broadly, financing for conservation of biodiversity that is not covered by protected areas.

MR. LINDSEY: Yeah, thank you for that. I hope I'm coming through clearly. Yeah, so, I mean, you know, a lot of the speakers who preceded me have raised a number of key points of relevance. So, when it comes to COVID's impact on conservation in Africa, the primary impacts that I've seen, the main ones, have been a decrease in tourism revenue, both hunting and especially photographic tourism. And an uptick in particularly bushmeat poaching, which -- and the bushmeat poaching is one of, if the most, significant threats to wildlife in Africa even before COVID.

Now, the tourism revenue issue is a big one because some of the wildlife authorities on the continent are heavily dependent upon it for their operations, particularly in southern and east Africa. So, but what COVID has done essentially, as others have alluded to, is essentially exacerbated preexisting challenges that the conservation sector faced. So, in Africa, you know, I think it's easy to be very gloomy, but we have to remember that on the continent we are gifted with incredible assets for conservation. You know, we have the most impressive and exciting and charismatic assemblage of large mammals. We have a truly vast protected area network, particularly the state protected areas, but also the growing areas of community and private conservation land.

But so, I think -- and the strong, you know, the strong political will for conservation in a lot of the continent. And I think there's a growing environmental consciousness within Africa itself. And all of which are reasons to be optimistic about the continent. But it's also true that the conservation on the continent was already facing some very significant challenges.

So, Africa is obviously a country that is developing. It has rapidly growing human populations. It's the only continent where over the next few decades, human populations will, you know, most of the future human population growth in the world will occur in Sub-Saharan Africa. And that is going to pose challenges for conservation in terms of pressure on wildlife and on natural areas.

And so, the key challenge that preexisted COVID was both acute and chronic underfunding and underfinancing of conservation areas on the continent, particularly state protected areas because they are by far the majority of the conservation estate in Africa, but also of community conservation areas too. So, we did a paper on protected areas in the savanna biome with using lions as a focal species. And we estimated that the annual budget deficits for the management of protected areas where there are lions is about between $1 and $2 billion per annum. And we did a follow-up study that was published recently, just in December, that showed that only about 10 percent of protected areas in the savanna biome are in a state of success, essentially, and most of the remainder are in a state of decline.

And this is because the footprint of effective -- so, inadequate funding translates into inadequate management on the ground. And where you have inadequate management on the ground, protected areas, wildlife areas, and the wildlife therein become susceptible to human pressures. So,

whether the human pressures are bushmeat poaching or poaching for wildlife for body parts, or whether it's just kind of encroachment with livestock, or, you know, the boundaries being, you know, pushed for logging or charcoal burning or small-scale agriculture, it's in a sense protected areas. It's a little bit analogous to a human body where if you allow the human body to get rundown, it becomes a lot more susceptible to pressures and threats.

So, we had the situation already where pre-COVID where conservation was dramatically underfunded and some of the key funding sources, tourism was one of them, was not adequate. So, tourism is a hugely important tool and we shouldn't downplay that. But the problem with it is it's very skewed in terms of there's some areas in some parts of the continent that get a lot of tourism. But even within the popular countries for tourists, only a minority of protected areas run at a profit at the site level. And so, most protected areas require this eternal subsidy to function. And this shouldn't be surprising because it's also true in other countries, the U.S., and other parts of the world as well.

I think in Africa we've collectively made the mistake that protected areas can and should pay for themselves at the site level. Most of them just can't at this stage. And so, they require subsidy. But it's important to note that they have potential to deliver a very strong net positive economic contribution even if you're subsidizing them at the site level because they do support these tourism industries. They do support the provision of ecosystem services, fresh water, clean air, all of these kind of -- these kind of issues.

So, we had a situation where a high proportion, let's say 80 to 90 percent of protected areas were underfunded and severely undermanaged. And this poses a threat, a real threat, in future as the human population grows that we're going to lose a high proportion of Africa's conservation estate. Now, this might happen in two ways. It could happen in some contexts to gradual kind of attrition and human encroachment. And then in some other contexts, by governments making difficult decisions about degazetting and downsizing protected areas.

And this is particularly likely if -- so, if conservation areas are underfunded, they have become susceptible to pressures, they have become depleted of wildlife, and they have become essentially unproductive in economic terms, and then it becomes a tough decision for countries to retain these areas. And let's bear in mind two factors we have to bear in mind is particularly in southern and

eastern Africa, a lot of countries have set aside a far higher proportion of their land for conservation than the international average, like much higher. That's not true for Africa as a whole. But for many southern and eastern African countries, in particular, it absolutely is true.

And what that mean -- and a second point, before I forget that one, is that the burden of conservation areas in Africa relative to national wealth is a lot higher. So, Africa needs -- and at the same time, the continent has all these competing developmental needs -- and so, the continent needs a lot of help to support these conservation areas. And if in future, it doesn't get this help, we are going to lose very big areas of conservation land in Africa. And that has very real implications for biodiversity conservation and also for climate. And I think this is the biggest, it's something, the most underappreciated issue in the climate change discussion, I think globally at the moment, is the risk of large-scale habitat conversion in Africa in future. And I think the world's eye is not on that ball. And I think it's really dangerous.

COVID has simply served to exacerbate these issues because the one significant funding stream that there was, tourism, which includes the various kinds of tourism that have been mentioned, has been cut at the knees. And so, the tourism industry is completely, you know, horizontal at the moment. I mean, it's picking up in some places. Hunting's picking up faster. But still, there's a long way to go to get it back where it was. But even where it was, was massively underfunded. So, it does sound very depressing. There's a lot of reasons to be positive. But there's also a lot of reasons to be concerned. And we need to develop much more significant and diversified funding streams for conservation in Africa.

MS. FELBAB-BROWN: Thank you very much for not shying away from the real difficult and real fundamental issues, Dr. Lindsey. I remember when I was doing research for my book, *The Extinction Market*, on how to combat wildlife trafficking, I visited the places in various parts of Africa like Ethiopia where it nominally had national parks protected area that would make from tourism maybe $10,000 a year. And maybe they would get double in subsidy. In contrast to say some of the big parks in eastern or southern Africa that featuring big iconic mammals, easily visible by tourists, and desired to be seen by tourists would be able to make tens of millions of dollars. But imagine running the national park of any kind of size on $20,000-budget a year.

Similarly, in places like Nepal, Indonesia, and other places, those issues of funding were really fundamental and the notion that tourism could generate the funding was simply just not feasible in many areas like in big iconic animals. So, how do we get other funding into the system is really critical and I will start with you to ask that question. And then to go to Catherine, Victor, and Alastair to ask them about their key thoughts on what are the policy implications, the key policy issues to be learned and to start implementing. And if we all can stick to no more than five minutes, ideally less, so that we have plenty of time for many questions from the audience. Please, Peter.

MR. LINDSEY: Yeah, so, I don't intend to have all of the answers to this very difficult question. But I am increasingly of the belief that African countries and particularly countries that have set aside above average proportions of their land for conservation. So, if you look at a country like Tanzania, for example, it has somewhere between 30 and 40 percent of its land area under conservation. Which is a massive sacrifice. It's a huge contribution. The same token it's developing and it has one of the, you know, fastest human population growth rates in the world. And so, it's completely inconceivable that Tanzania -- and this is no offense meant to Tanzania. It's just it's using it as an example. But in my view, -- because actually Tanzania needs to be hugely applauded for its efforts in conservation, I just want to make that point. But I'm just using it as an example. To me, it's inconceivable that with the rapid human population growth rate in Tanzania that unless that country gets very, very substantive international support, there's no way in 30, 40 years' time it's going to have 40 percent of its land under conservation. It's just inconceivable.

And so, I think that for me, there's a need for two, at least two types of very significant funding streams. So, one, is I think countries like Tanzania and many others on the African country -- continent, sorry -- need and deserve and merit payments to the central fiscus just to continue to set aside above average areas of land for conservation. And even in countries that have on average or even somewhat below average areas for conservation but are struggling with real developmental challenges at the same time in the same way that other parts of the world are perhaps not.

You know, I think there is a case for developed countries making annual payments to countries like, for example, Tanzania whereby they get X amount of money that just goes into the central fiscus. And that doesn't even necessarily have to be spent on conservation but is a very strong

justification for them to continue to set aside and make the sacrifice of having big areas of land for conservation. I really actually think that that's quite important.

And there is a bit of a precedent for that because the Gabonese government was recently paid a significant chunk of funding I think by the Norwegians or the Swedish. So, I think that's important particularly in countries with above average areas of land under conservation. And then secondly, we need to come up with mechanisms that allow for the expansion of the area under effective management. So, I think it was Alastair alluded to the fact that most of the areas that are in a state of success at the moment are those that are being managed through public-private partnerships between NGOs or the private sector and wildlife authorities. And I think there's a real case for mobilizing significant annual funding to expand the footprint of these kind of partnerships. Because the fact is if we can't do that and we can't expand the footprint of effective management, we're going to lose a lot of these areas and the implications for climate are very, very, very significant. So, yeah, perhaps someone else can chime in.

MS. FELBAB-BROWN: Great, thank you. A very important issue of international subsidies. A controversial one given how lots of the Norwegian funding for the Amazon and Indonesia have panned out. The notion basically was we pay to keep land preserved, lots of challenges, some of which have to do with governance corruption, but also just pressure from interest groups. And, indeed, in both countries despite international subsidies and despite COVID, we have seen significant weakening of environmental protection and significant expansion of logging and burning in both Indonesia and the Amazon. Which is not to say that subsidies is not the way to go. It just raised the complexities of international government financial transfers to keep land protected.

Catherine, let me turn to you to continue in this vein. So, the other idea of new financing, of course, is not to rely on this kind of financial subsidies transfers but to think about the market development of the payments of ecosystem services with companies, industries themselves paying for conservation to offset their environmental footprint elsewhere. Please give us your thoughts on how well that has gone. What are the possibilities, the limitations, challenges to use that for financing?

MS. SEMCER: Sure, you know, the way I look at conservation is that, you know, conservation is the business that enables every other business. You know, as you just mentioned, we all depend on ecosystem services. And what we really need to do is harness this growing interest among

investors in offsetting ecological risk. You know, if you look at the most recent World Economic Forum Global Risks Report, you know, once again the loss of biodiversity ranks among one of the top concerns of, you know, global business leaders.

And what we've really failed to do as a conservation movement is engage this interest at an appropriate scale and with an appropriate energy. And we need to take conservation out of the silo that it's currently in. You know, we can't just discuss these issues, you know, at the Convention on International Trade and Endangered Species or the Convention on Biological Diversity. We really need to incorporate conservation into trade talks. We need to incorporate conservation into other business as well as security discussions that are going on. And help countries in Africa figure out a way to develop conservation programs and protected areas that have some degree of investability that can harness the capital that's out there in the private sector that is looking for investable projects so that we're not entirely dependent on subsidies from government entities alone and we're also moving away from just a near strict reliance on tourism revenues to fund conservation activities.

There's a tremendous amount of potential to do this but we really haven't worked out the details yet on how it can be done. But I think if we invest the appropriate amount of brain power, we can solve the challenges and answer the questions that investors have, you know, presented to us.

I would also add that, you know, on the policy front, we need to make sure that we're not undermining Africa conservation. You know, I had chatted, you know, earlier about the importance of the trophy hunting industry within the context of the larger tourism sector. And, you know, there's currently legislation pending in the United Kingdom and the United States that would impose blanket bans on the importation of hunting trophies. Something that because of the importance of the U.S. market in particular, would have severe ramifications on the survivability of that industry.

Now, you know, we're a democracy. We should debate these issues. But I think we need to tread very carefully particularly at this time when there is so much uncertainty into how conservation is going to be funded in Africa over the next several years.

MS. FELBAB-BROWN: I mean, certainly moving to bans on trophy hunting rapidly would mean catastrophic drying up of existing funding streams without any immediate offset. So, to the extent that our conversations and thinking wants to evolve to that direction, identifying and making operational

other funding streams would seem like a prerequisite for a step before that money is taken away and entire ecosystems and species collapse.

I would also sort of latch on to Catherine your comments about the private industry cannot -- or private companies cannot do it alone in developing payment for ecosystem service markets and highlight once again the role of regulation. If you look at other conservation successes like ozone and CFs and acid rain, often legislation mandating changes in behavior was critical in getting innovation in the industry and its spread across industry, as well as often government support in developing insurance and support systems for the early market development before the private sector could essentially pick it up and run on it with its own.

Victor, let me turn to you now for your thoughts on the key policy implications, briefly, as I am asking everyone, please. And perhaps you want to reflect on both the international cooperation that you were speaking about as well as perhaps maybe the local community level. But up to you, your crisp point on key policy takeaways, please.

MR. MUPOSHI: Thank you. Yes, there is mention so far of consideration of PEP's, payment for ecosystem systems. It is very critical because we have seen the success in other sectors like you have mentioned. So, ideally, we need to start talking about I think (inaudible) put in place. I am sure it will be refined over time. But the spirit which people are doing it, I think, need to be improved to make sure that we start to have conservation offset mechanisms in place. But there has to be a balance between conservation offset mechanisms and conservation incentives. Because when you have a conservation offset mechanism, ideally probably the finances or the money might go towards law enforcement and park management and et cetera. But it then overlooks the community.

So, the second part of it is to ensure that we do not overlook conservation incentives. Like the people who live with the resource like the local communities, they need an incentive. So, when our policies or guidelines are being put in place in order for us not to rely on piecemeal funding mechanisms which are not sustainable, like donor funding, et cetera, we need these long-term (inaudible) and sustained approaches of financing that take into consideration the local people's needs, livelihoods, and also their rights to the resources.

And the other aspect that I also wanted to talk about is the issue of partnerships. This

one can never be overemphasized. I've seen it work in Zimbabwe. I think there are quite a number of testimonies that can be given now. You have the Gonarezhou Conservation Trust. And recently they got just an announcement that they got funding from Legacy Landscape Fund and they're going to be having 1 million per annum just to support the management of that park. That is evidence of what our partnerships can bring into conservation.

So, there is need to support that kind of objectivity when we are looking at conservation financing. We can talk about the efforts that African Parks is doing. We can talk about other organizations such as FRO, AWF are actually doing in the region to support conservation. But because some of these organizations are supported by (inaudible), that is not sustainable. So, we need something that is more sustained, something that we are assured that even if we have shocks, even if we have these problems, at least there is something guaranteed coming through.

But I wanted also to bring in the context of saying that we need a transformational policy shift. But for that to be possible, it means that the government and the citizens themselves are convinced that the trade and the challenge that we are facing today when it comes to illegal wildlife trade and zoonotic diseases actually is a greater threat to livelihoods and also to human life.

So, until we do that we will not be able to convince most of the African states or governments to prioritize some of the things that we always try to push and talk about. So, we need to make sure that whenever we emphasize and talk about One Health, One Planet, and Safe Planet for all and all that, we will never (inaudible) as a planet, as a region until such a time when our ecosystem and our conservation spaces are protected. So, we need that transformational, you know, change and shift in the mindset both of the local people and also the government.

And then thirdly, we need to reform the global food systems and move towards a secular food system to ensure that we mainstream agro, our ecological principles or processes that maintain a biodiversity in natural habitats. And that, therefore, would remove and reduce the pressure that we see today. So, when we talk about the challenges that Peter was talking about, it is also about our failure to impress issues to do with secular food systems. So, we need to actually to look into that.

And, therefore, I don't want to belabor much on that, but to say that the other main issue that we need to talk about is issues to do with devolution. And building capacity for local governance of

the natural resources base. Because if the governance system is weak, no matter how much amount of money you put in the coffers, in the system, that money will sink. It's like pouring water in a broken bucket. So, there is need to build capacity for local governance, promote devolution, and ensure that there is sustainability. So that the spillover effects that we get be it from zoonotic diseases are minimized by all cost.

So, I am sure I would like to end here so that there is more time and space for discussion later.

MS. FELBAB-BROWN: And that's actually a terrific transition to Alastair who brought up the issue of governance and combatting corruption in the conservation sector right at the beginning. And as you said, you know, money is essential but if money is mismanaged, it doesn't help. I am also delighted that you brought up the issue of reducing human footprint in our food production, in our industrial production that pertains across environmental conversation to issues such as water overuse and catastrophically wasteful approaches around the world with using water and the consequent effects on ecosystems around the world. Alastair, governance, anti-corruption, partnerships.

MR. NELSON: Yeah, yes, absolutely. So, I think governance is fundamental to all of our solutions. You're not going to get private sector investment. You're not going to have established partnerships. You're not going to be able to empower and change local peoples' livelihoods and outlooks on life if you don't have good governance.

That said, I think our leadership at national levels in this region in Sub-Saharan Africa, but not only in Sub-Saharan Africa. You don’t have to look far to find weak leadership at international, you know, national level across most countries in the world. Not all, but most.

So, I think we have to focus the strengthening of governance at a local level. And to help achieve that we need to -- there's a couple of things we need to put in place. So, first of all, let me get to corruption straight away. I also, of course, believe that we need to address corruption. But I think the approach to -- the punitive approach to addressing corruption is not going to solve the issue. That's just putting a band-aid on the problem.

We need to address the driving forces behind corruption. We need to help build resilience to corruption. And to me, a lot of that is around leadership, values, ethics, and the reasons that

people took on those jobs in the first place. So, again, we have to focus at the local level. People in district governments working in those protected areas, what are their values? What are their ethics? Why did they take those jobs? How can we help empower them to actually be able to deliver something that they are proud of and be part of a system that they are proud of?

So, to me, all this comes to two things. One is changing our perspective in how we look at conservation in these areas and to make it broader. To include what Peter was saying, what Victor was saying, so to include the impact of climate change, to include the fact that we have to protect biodiversity because we're losing it at such a huge rate. To include the fact that it's in these areas that people will come into more contact with potential zoonotic diseases. So, these are the critical areas where we will be protecting ourselves against future zoonotic diseases.

So how do -- we have to broaden that approach -- sorry. There are also the areas where we can lead to major human security issues as we've seen in northern Mozambique in these remote poorly governed areas. Violence can erupt because people are completely disempowered by the elite. So, I really believe we have to focus on local communities -- sorry, our local areas, local communities, local government, and partnerships.

And I think that we have to tell our story differently to attract the funding, as Peter has said. To attract the private sector funding to do this to empower local people as well to get a bigger share of the pie, to be able to live their lives more sustainably and in a more effective way. And to achieve that, the final thing I wanted to say, I think as conservation organizations, we have to change our approaches in how we work. We have to lead the way in having ethics, values. We have to lead the way in building the leaders of the future. So, there are some terrible leaders in this region. But there are some amazing young people working in conservation from these countries. And we need to empower those people. And it might take -- we might not be able to deliver as quickly as bringing some old guy like me in, who's, you know, done this for 25 years. So, we might not be able to deliver as quickly on that USAID project, but what we're going to do is build something for the future. And I don't know what it's going to look like, but I can be sure it will be better because I've met a lot of young people who—working in organizations I work who I know will make major changes, way beyond what I can imagine.

So, I think that that's what we have to do. We have to work on governance, empower

local people, build resilience to corruption, and we have to do this with this long-term vision of empowering local people to achieve that.

MS. SEMCER: Thank you, Alastair. While we wait for Vanda to rejoin us, I wanted to build on what you were saying about local people and governance. And this obviously all fits into the Sustainable Development Goals. And, Victor, you know, I'm wondering given your experience working with communities, what are the lessons, you know, to be learned from COVID in relation to achieving the Sustainable Development Goals that have been set by the United Nations and others?

MR. MUPOSHI: Thank you, Catherine. Really, you know, for us to be able to achieve the SDGs, link them with the local communities, I mentioned poverty traps. I mentioned about livelihood issues. I talked about food security. I talked about nutrition issues. I talked about women empowerment. These are the core things that local people really need.

And so, we need to have locally designed because the thing about SDGs, these are high-level, you know, policy pronunciations that we have. But the scalability issue, we need to see some traction and action on the ground to make sure that these issues are addressed. And so, whenever we are reflecting on what COVID has done, we look at the negative impact of what COVID has done. But we also look at the other positive side to look at people coming together as a community, as a society, and fighting with one cause at least for once speaking for one cause to have one health, to be a healthy system. So, that's the starting point. To make sure that we rally behind, build capacity of our local institutions through devolution processes, and ensure that communities are empowered not only issues to do with money, but we are talking about empowerment that talks about capacity building, skills building, skills to do other things other than going into the forest and hunt. So, those are the key things that we want. Secular food systems. Being trained into doing things better so that it's not about the size of the land that is important that you want to encroach into your protected area. But it is how you do your production system. So, that's one key and important aspect.

And the more we respect women, because we know that if we capacitate or build capacity for women, we have built capacity for the whole village. We have built capacity for the whole community. So, when you are dealing with communities, we have seen women doing a lot of hustling to support their families during COVID. And that need to be respected to naturally strengthen their ability to

being resilient and build more strong networks across communities, across the countries and regions because of that cooperation that is needed. So, people can learn from one another through best practices. Thank you.

MS. FELBAB-BROWN: Thank you very much, Victor. And thank you very much Catherine for bringing up the issue of Sustainable Development Goals and lessons from COVID something that we got many questions from the audience about. And I'm grateful that Victor highlighted the needs to move beyond global declaratory goals to really thinking about concrete implementation on the ground. Devolution of capacity to implement on the ground and empowerment including the role of women.

Let me pose a question to Alastair and to Peter. Two questions I'll ask each of you one related to predator conservation. So, Alastair, maybe to you I can direct the question about whether the recent -- and iconic species, not just predators -- whether the recent rise in rhino poaching and trafficking in South Africa is related to COVID or are there other reasons why we are seeing that? Perhaps having to do with the new upticks in demand markets in Asia.

And, Peter, to you, a question about lions and the recent ban on lion bone or farming of lions for lion bone to feed Asian markets. An issue that's very complex. On the one hand it promises to give land for protection to private hands and keep the land protected. On the other hand, it raises issues of illegal demands stimulate—illegal demand poaching, more pressures like we see on jaguars being now poached across Latin America for the China market. So, Alastair and Peter, please, take it away.

MR. NELSON: Yeah, all right, I'll start. So, very relatively quickly start. In terms of the demand, I mean, it's not something, the rhino side is not -- rhino horn demand in Asia is not something I know incredibly well right at this minute. But what I see is and what I can imagine and relate to is the fact that the demand for alternative medicines and alternative solutions right now it's high. People want to -- will fall back on anything to help treat themselves. And we see this as well and I'll bring this in, in this expansion of TCM into Africa now is sort of a soft policy coming from China. And we're seeing the developments of TCM training centers and local supply of TCM, traditional Chinese medicine solutions as an alternative medicine solution in Africa as well.

So, I don't see how the rhino horn demand would have decreased particularly in a time of

COVID. I think it will only have increased. And we're seeing that increase for other alternative medicine types in Africa as well. So, with the market not going away, I think all we've seen is the supply to that market. I think the, you know, the rhino population has declined so hugely in South Africa and in national protected areas, which are key most important rhino populations. And so, what we've seen is a change in how people are accessing that market as well. And driving with corruption has become the easiest way to get access to rhinos in the national protected area estate. And I think that's critical for us to realize in how we approach that. And again, coming back to I don't think a punitive approach is the right way.

In terms of TCM locally, we've certainly seen a huge increase in pangolin scale, for example, local live pangolin market demand in southern Africa as well, which seems to be to feed some of this TCM and local TCM centers that are developed in Africa. And that's a major issue that we have to think about going forward is understanding what demand those might drive for other species that we're not looking at right now. So, I think that's an emerging problem for us to think about.

MS. FELBAB-BROWN: Great. And I will do a little bit of advertising and mention that Brookings and I are putting out a major report on the impact of China. China's ban on ivory, China's ban on wildlife markets, but also Chinese legal trade on wildlife trafficking and conservation around the world. The report will be out at the end of February, beginning March, and we will be doing an event at the end of February. And I look forward to all of you joining us at the time. Peter, to you, lion bones, China, TCM, impact on conservation, was the ban good? Yes or no?

MR. LINDSEY: Yeah. Yeah, no, we can't -- yes, I think so. So, okay, so, there were a lot of lions being bred in captivity in South Africa. And there was a trade that was established in lion derivatives with the Far East. And there is some concern that with the closure of that industry, that the demand for those products will shift to wild populations. So, it is a concern. We don't know what the impact of that is going to be. There certainly is a spike in poaching of lions for their body parts in parts of the continent. Mozambique, for example, has experienced quite a bit of that as an example. Certainly, not the only place.

But by the same token, you know, the -- I know it's a very contentious issue, but the breeding of lions in captivity in South Africa for, you know, canned hunting and for the sale of body parts, I just don't think is justifiable. I think that it's, you know, it potentially created the problem by -- I'll probably

get hammered by the legal wildlife trade people here for this -- but by essentially opening a Pandora's box of trade in lion body parts with Asia. And so, that genie is out of the bottle now. And so, I don't think that that's good enough reason to allow that industry to continue. I think it was unethical. I think there were a lot of animal welfare issues. I think there was zero conservation value to that industry. I think it was the right decision to close it down.

I also think ultimately, you know, I think ultimately, I generally have a fairly kind of pragmatic view towards wildlife conservation, but I think when it comes to trade in wildlife products, we need to have an unambiguous approach whereby trade in wildlife products is a bad thing, not this ambiguous kind of idea that this kind of lion product is okay, but that kind of lion product is not okay. Because it's too complicated and too confusing.

I think we have to try and work towards having no trade in wildlife products, you know, for medicine and for other similar kind of activity. So, I do support the closure of that industry. I do think it's for the best, but we are bracing ourselves -- I say, we, as the collective lion conservation fraternity or broader conservation fraternity -- for an uptick in lion poaching as a result. So, yeah, it's certainly not a simple issue. Yeah, that's my view.

MS. FELBAB-BROWN: Thank you very much, Peter. And the issue of what wildlife products to allow legal trade are not, as you said, is enormously complex and enormously contentious with very significant and certainly informed segment of the conservation community supporting a legal trade in wildlife products, and often pointing to the fact that wildlife only stays if it pays.

Which is a good transition to a question I want to pose to you, Catherine, namely that -- that has come in from the audience -- namely that we have been focusing by and large on illegal trade, but, of course, legal trade in wild animals are -- in some wild animal parts, specifically wild meat, raw meat, also poses tremendous zoonotic risks. And we have seen one significant action. China shut down the wild meat markets in China. But we haven't seen other actions. You and I have spoken at a variety of fora on One Health zoonotic diseases. And I would love to get your latest take on the risk and benefits of continuing to trade in pets, wild animal pets, wildlife animal breeding, yes or no? And ways to improve that industry also from the perspective of zoonotic diseases.

MS. SEMCER: You know, it's an excellent question. And, you know, where I come down

it is that these are very serious challenges. And we're not going to enforce our way out of these challenges. You know, enforcement is absolutely key and some bans do have their place, particularly for higher risk species. But I think what we really need to do is take a harm reduction, a risk mitigation approach to this subject. And really focus on the trade in species that pose the most significant threats to human health. You know, pangolins, you know, would be a prime example of that, civets, you know, et cetera.

In many cases, you know, we look at bans on wild meat and we've seen them put in place in countries before. And they have failed to achieve their goals. You know, you're pushing up against thousands of years of human culture. And in some cases, trying to impose your culture on another culture. And it's not surprising that they haven't been successful. So, we need to be pragmatic, and we need to prioritize and not take a blanket approach, you know, take the proverbial chainsaw to the stick of butter in trying to solve this problem.

And I think if we are surgical about it, we're going to get a lot further a lot faster a lot more effectively than if we just try to ban the trade of everything as some people are currently proposing.

MS. FELBAB-BROWN: And another dimension of that also is to engage in better monitoring of what's actually being traded legally across borders. Even in a country like the United States, single digit percentage of animals, live animals coming across the U.S. border are actually inspected for diseases. And often they're only inspected for a set of diseases. But this has vast implication, not just for human health and zoonosis and interdictions of diseases such as monkey pox, but also for diseases that can be spread to native animals and wipe out entire classes of animals.

I am well aware --

MS. SEMCER: I understand. And if I would just add to that, you know, that could have second and third order effects as well given that we know that illegal wildlife trade, you know, is related other types of illicit activity as well. So, more monitoring, more inspection will obviously be a helpful thing to do.

MS. FELBAB-BROWN: I am aware that we are seven minutes to closing. And at Brookings we take our deadlines very seriously, which in this case is 11:30 a.m. So, I would like to ask all of you one same last question and ask you please to take one minute or perhaps one and a half minutes,

but no more, to answer it.

In October, we had the first part of the Biodiversity Conference that took place in Kunming. China was the lead organizer of the conference. And in the spring, we will have the second part of the conference take place. From all that we have been discussing today, the lessons from COVID, the issues preexisting COVID, what is your take, Alastair, Victor, Peter, and Catherine on what should be the two, three key issues from Africa's conservation perspective, or globally conservation perspectives that should be emphasized and prioritized in the second part of the global biodiversity conference?

MR. NELSON: My immediate thing would be to lose these goals of huge percentages, stop this 30 percent stuff. It's just it's headline grabbing. Focus on process, getting governance right, local people empowered, building resilience to corruption, focus on having long-term solutions that protect areas and recognizing who's putting in the effort to do that and to helping to find mechanisms to fund that. So, change from big numbers of area to long-term visions that's secure because we know what works. Let's just do more of what works.

MR. MUPOSHI: Thank you. I just want to say that a regulated wildlife trade is just but one of the solution to the mega or to the big problem that we have in conservation. And, therefore, a singular approach or focus on this special solution itself, it risks the diverting attention from a much bigger threat to both zoonotic diseases emergency and biodiversity loss. And so, whenever we (inaudible) about conservation, we need to then look at it from the holistic perspective beyond, you know, bans and this. It has to be holistic making sure that we are working towards a paradigm shift towards a more sustainable, equitable, and inclusive conservation model globally. Thank you.

MS. SEMCER: You know, from where I sit, I would agree with Alastair. I think it's important that we increase the financial stake that local communities and landowners have in conservation. You know, having that local control, that local governance, but also, you know, local returns stemming from conservation activities is absolutely critical. And then that too, you know, should be married with making conservation a more investable pursuit so that the wealth that is in this world, the private capital that could be brought to bear to conservation concerns increasingly is.

MR. LINDSEY: Would you like me to go? I guess so. So, yeah, for me, I think the priorities in Africa are perhaps unsurprisingly, is making sure that the continent's vast conservation estate

is properly funded in the context of this, you know, the serious demographic challenge that we have. You know, from a conservation perspective in terms of competing demands for land. The conservation areas have to be properly funded. We can't take them for granted. I think the world is taking them for granted. We need to get it properly funded. We need to roll out these management regimens that we know work. For example, these public-private partnership models. And then also as several speakers have alluded to, we have to start making conservation areas work more effectively for local people, be more inclusive of local people, and become a driver and not an inhibiter of development.

MS. FELBAB-BROWN: Thank you very much, Peter. I would take my prerogative as the chair today to add one other plea or urging for the biodiversity convention. Which is for governments and the conservation community to go into it with far more focus than many governments gave the fall meeting, actually. And to shed the cage that we have been in where biodiversity conservation has often been the poor relative of global warming. With global warming, of course, being critical for enabling biodiversity conservation, but at the same time many of the approaches adopted to mitigate global warming, in fact, need to be the conflict that's synchronized with biodiversity conversation and not undermine it. And unfortunately, we are still in a situation with some of the very important -- very important policy directions for global warming do actually more damage to biodiversity than we want to see.

With that, thank you all very much. Dr. Lindsey, Professor Muposhi, Mr. Nelson, and Ms. Semcer, for your enormously informative comments, for your honest comments, and your willingness to step into very hard, very difficult, very contentious debates in the conservation communities on many topics where there is a wide variety of views. But your clarity also in laying out your arguments and your recommendations so that we can, in fact, see significantly improved conservation in Africa and significantly improved conservation around the world and move toward much better prevention of both biodiversity loss and zoonotic diseases.

And very many thanks to our audience today. I look forward to being with you again such as at the end of February when we will be hosting an event on the impact of China's various regulations on wildlife trade and wildlife conservation around the world. Thank you.

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