

Dear colleagues and Friends, good morning from the Bronx, I hope you are all well and staying safe in these tumultuous times. Many thanks to the organizers, and especially Guido Plassmann and his staff from ALPARC for having me here today.

I have been asked to give a 10.000-meter view which my colleagues later in the session will fill with more details. As a wildlife veterinarian working across 60 countries with a focus on the nexus of emerging zoonotic-origin pathogens environmental encroachment and the commercial wildlife trade the past year has been a challenge, to put it mildly. I will ask you to bear with me as I anchor my narrative in a health perspective.

On the backdrop of a relentlessly heating up planet, atmospheric carbon dioxide breaching the 400-ppm barrier and some one million species threatened to go extinct over the next few decades a novel coronavirus has catapulted across the ever-evolving interfaces between humans and wild places, relentlessly spreading coronavirus disease and bringing immense suffering and death to the outermost reaches of our planet. This dramatic global situation is caused by a virus that previously existed beyond the human-wildlife interface and a disease that was unknown and still unnamed at the beginning of 2020. Today we and the planet are clearly in distress.

It was immediately apparent, that the virus responsible for this outbreak originated, at some point in time, in wild animals. A wildlife source is not a surprise, as the majority of emerging infectious diseases are zoonotic and two-thirds have their origin in wildlife. Importantly, their spillover rate is increasing. Take, for example, Ebola virus disease first discovered in 1976 in the Democratic Republic of Congo (DRC) in a village near the Ebola river. Since its discovery nearly 45 years ago there have been 11 Ebola outbreaks in the DRC, four of these outbreaks have occurred in just the last three years. Beyond Ebola, it has been estimated that there are some 700,000 viruses with zoonotic-potential as yet undiscovered. As the world anxiously welcomes a COVID vaccine, we mustn't fool ourselves into complacency. A vaccine, while critically important, from a public health perspective, is but a stop-gap measure in the larger context of emerging zoonotic-origin pathogens.

Dear colleagues and friends, let us be absolutely clear: this pandemic is primarily not about bat soup, pangolins or specific viruses but all about our interactions, exploitation and destruction of nature. It is about the interfaces – these edges of destruction– between humans, wildlife and nature in general.

Following the 2002 SARS outbreak, there was broad scientific consensus, that long term, structural changes are necessary to prevent future epidemics. Unfortunately, we did not heed this advice. Basically, Viral, species switching, and spillover events into humans are simple. It all comes down to a numbers game. The more often we force conditions that increase direct contact between wildlife and humans across damaged ecosystems, the higher the likelihood of another spillover event.

A single logging road through a previously pristine forest is not just a road from A-to-B as the infrastructure sector may see it, but constitutes a novel linear contact area between wildlife, their pathogens, and humans. This road invariably leads to ever-larger urban centers ending in a multi-million-agglomeration from which with great ease and speed, any point on the globe can be reached within 24 hours.

Dear friends,

Along with climate change, biodiversity loss and raging inequities and injustice, COVID-19 is just another symptom of an ailing planet and has starkly reminded us of the basic fact: Human, animal, plant, and environmental health and well-being are all intrinsically connected. As the UN Secretary General Antonio Guterres summed it up a few weeks ago: **the state of the planet is simply broken.** In order to limit the impacts of the next spillover event we will need a holistic one health approach across all policies such as the Berlin Principles on One Health which we developed with the German Federal Foreign Office just a few weeks prior to the start of the present pandemic.

The pandemic is also an opportunity for an essential hard-reset. We need to pull the plug, count to ten and plug into paradigmatic change. **We need to move from being apart from nature to being a part of nature.** The virus has humanized environmental destruction and

exploitation and highlighted our entanglement with, and dependency on, intact nature: a tropical bat virus is killing my neighbor down the road here in the Bronx. Everyone suddenly gets it. [As an optimist I dare use “EVERYONE”]

As WCS’s CEO Cristiàn Samper highlighted on Monday at the One Planet Summit one of the most important and proven solutions to this global crisis are protected areas. This is a practice that has been used by Indigenous Peoples and local communities for centuries, setting aside areas that have important natural, cultural, and spiritual values. In recent decades governments have created more and larger protected areas on land and sea, and there is strong evidence that effectively designed and managed protected areas are key to the conservation of biodiversity, climate mitigation and sustaining local livelihoods. However, many protected areas are not well managed; they do not represent the necessary diversity of ecosystems. And many of them are simply too small to be viable in the long term, especially in view of climate change. In a few words, protected areas must be located in the right places, be large enough and interconnected to be functional and sustain viable populations of key species and functions. It is not sufficient to protect the highest elevations while neglecting the rampant land-use change across the valley floors. If we want our protected areas in the Alps to remain strongholds of biodiversity and long-term refugia for species we necessarily need to protect the entire altitudinal gradients. Protection also provides numerous ecosystem services, including regulating climate and air quality, and amongst others providing water, energy food while also providing sociocultural benefits to the large urban centres adjacent to the Alpine space and beyond. Across the Alps we need to make sure that our protected areas are not only connected – ecologically and functionally but also valued appropriately across sectors and by the highly urbanized belt surrounding the Alps.

Multilateralism with increased global collaboration and solidarity constitute the basis for a future healthy planet. In order to be successful in addressing and preventing future pandemics and securing our own health and wellbeing we need tight transsectoral cooperation between governments, robustly funded multilateral institutions and strengthened collaborations with conservation NGOs who work on the spillover and conservation frontlines.

Stating in January 2021 that emerging zoonotic pathogens, climate change and biodiversity loss have significant implications for both public health and economic stability is perhaps the most tremendous understatement of this still-young century. Returning to zoonotic-origin spillovers: The costs of many individual recent major outbreaks such as SARS, MERS, and Ebola are estimated in the tens of billions of Euros. However, when all is tallied, the economic devastation caused by COVID-19 will certainly be orders of magnitude greater: in the tens of trillions of Euros. The ongoing and future costs of climate change and biodiversity loss appear simply unimaginable.

As the pandemic continues to rage across the planet, we must urgently recognize and value the foundational importance of intact and resilient environments for our health and wellbeing. **Basically, we need biodiversity conservation, climate change mitigation and health in and across all policies and administrations. Existing siloed approaches are unacceptable and must become a thing of the past.**

We need to be radical in the true sense of the word and move beyond symptomatic therapy to boldly address the root causes of our ailing planet. We rapidly have to move beyond a TAKE-MAKE-WASTE approach to our planet. We can no longer view nature protection and conservation as a competing interest to economic and social development.

We need to stop, discounting nature right now. And irrevocably accept that nature is not, and can never be considered a cheap externality to our unrestrained production and consumption patterns. Moving forwards, these externalities with which we have burdened our environment must be fully accounted for. Nature can no longer be considered cheap.

It is painfully apparent that addressing the complex interactions of human, animal, and environmental health requires environmentally inclusive, just and shared values that heed landscape- and society-level issues. The quality of current and future human and animal health and well-being will depend on our respectful, humble and responsible environmental stewardship.

Thank you for your attention!