



Keynote address: Conservation, Awareness, and Knowledge: Zoos and Aquariums in Support of the Biodiversity Agenda

By Elizabeth Maruma Mrema, Executive Secretary, Convention on Biological Diversity

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Distinguished participants, dear colleagues,

Greetings to you all and all protocols observed!

It is my sincere pleasure and privilege to join you today. I am honoured that you are giving me an opportunity to connect with you all on this auspicious occasion of 75 years of action!

Let me thank Mr. Theo Pagel, your President, for inviting me to connect and exchange views with you on the importance of zoos and aquariums in support of our biodiversity agenda in terms of conservation, awareness and knowledge.

Zoos and aquariums are important bridging institutions that connect several domains. Their work in support of *ex situ* conservation demonstrates their role as the proverbial “ark” from Biblical tales that provides shelter and protection for vulnerable populations that would otherwise suffer extinction. Your institutions are also an important part of the knowledge base of the species and genetic diversity of our world – providing opportunities to build taxonomic and species information that is shared across the regions. And, finally, zoos and aquariums represent the place where urban dwellers, otherwise alienated from nature and biodiversity, can meet the wondrous variety of life and learn in a very direct way. In this latter aspect, zoos and aquariums are also a central part of the economies of cities, tourism and entertainment, which has a significant monetary value. You are key partners in so many aspects of the agenda.

In this spirit, let me share words of action, of common goals, and the task we have ahead of us.

In this context, I want us to talk about our current conjuncture – the pandemic and the state of biodiversity, and the challenges and opportunities it provides to us. In so doing, I would touch upon the role that you all play in the protection of life on Earth through zoos and aquariums, and the ways in which we can work together to further conserve and enhance awareness and knowledge on the biodiversity agenda. I would also like us to think forward beyond 2020 – to the work of the decades ahead of us.

Dear colleagues,

We stand here approaching the end of the year 2020 – the year that all of us in the biodiversity community began with the phrase and call for action: “Super Year for Nature.” This year has proven to have super-powers, this is true, but it has been completely unpredictable. Our world is in a state of flux and change that we have not seen in human history.

The COVID-19 pandemic that has so quickly surged and taken hold has highlighted in a stark way, the importance of the relationship between us, human beings – the most dangerous species on Earth – and nature. It reminds us all of the profound consequences on our own well-being and survival that can result from continued biodiversity loss and the degradation of ecosystems.



Human health is intimately interconnected with the health of our planet and how we manage the life-sustaining resources that biodiversity and ecosystems provide. But human activities disturb both the structure and functioning of ecosystems.

Many of the underlying drivers of biodiversity loss also amplify disease risk: large-scale deforestation; habitat conversion and fragmentation; agricultural and livestock intensification; the unregulated trade in species used as food and medicine, and the overharvesting of species to the brink of extinction; and anthropogenic climate change. These interacting pressures continue to create the conditions for potential new diseases to emerge, re-emerge and spread.

Reducing biodiversity loss has long-term benefits for humans, ecosystems and animal health. The Secretariat of the Convention on Biological Diversity has worked closely for many years with the World Health Organization and a wide range of partners to promote whole-of-government, whole-of-society integrated approaches, that prioritize long-term prevention.

Concerted cross-sectoral and interdisciplinary action can be embedded in the next 10-year global framework for biodiversity – under negotiation, and which I will refer to later – to build the resilience needed to address our interrelated environmental, health and development challenges.

The fight against COVID-19 is bringing to the forefront an unprecedented sense of collective solidarity, shared purpose and common humanity. We will need to harness these positive forces to achieve the shared and interdependent goals of healthy societies and a healthy planet.

Dear colleagues,

We need to take stock of where we are now, after a decade of action in support of biodiversity.

Ten years ago, the Parties to the Convention on Biological Diversity gathered together in Nagoya and adopted the Strategic Plan for Biodiversity 2011-2020 and its 20 Aichi Biodiversity Targets.

Since then, governments and actors around the world have taken significant action to address our present biodiversity crisis. Many of these actions have had meaningful impacts, and the world's biodiversity would be in much worse shape were it not for these efforts.

However, it has not been enough. The world has not achieved the Aichi Biodiversity Targets. According to the fifth edition of the *Global Biodiversity Outlook*, published last month, none of the 20 Targets have been fully achieved, though six Targets have been partially achieved.

But despite encouraging signs — for instance, for half of the national targets, progress is being made but not at a rate that will allow them to be met by the end of 2020, and 11 per cent of national targets show no significant progress — obviously, we are not presently on track to achieve the 2050 Vision of “living in harmony with nature” and the sustainable future that we want.

Biodiversity is still declining at an unprecedented rate, and the pressures driving this decline are intensifying. This threatens the achievement of the Sustainable Development Goals, 14 of which depend on biodiversity contribution; it equally undermines efforts to address climate change mitigation and adaptation, as well as land degradation, and, thus, clearly threatens human well-being and the planet.

We all need to play our different roles and act, and ACT NOW. This call includes actions to be undertaken by zoos and aquariums.

Dear colleagues,

When I say this, I want to be clear that, to date, all of you and your institutions have already played a strong role.

For decades now, zoos and aquariums have played an important role in addressing *ex situ* conservation as per Article 9 of the Convention. It is especially important as we can see the continued worrisome negative global trend for species extinction in the wild stressed by the IPBES *Global*

Assessment, WWF's Living Planet Report and the findings of our own fifth edition of the Global Biodiversity Outlook.

Found in many countries, zoos and aquariums contribute towards conservation of the components of biological diversity in countries of origin of those elements while also having collections outside those countries. In many cases, you are serving as the source of additional genetic diversity. This often helps to support and even make possible many reintroduction programmes all over the world. I can think of the reintroduction of Przewalski's Horse in Mongolia as a result of the work of collaboration of the Prague Zoo with the Czech and Mongolian Governments, for instance. The Global Species Management Plans that you introduced at the beginning of the century represent an important way to coordinate important regional efforts organized around the world. The nine working Global Species Management Plans that you reported in 2019 were for important species, such as, the Sumatran tiger, the red panda, the blue crowned laughing thrush, the Amur tiger, the Goodfellow's tree kangaroo, the Amur leopard, the Anoa, the Babirusa and the Banteng, to mention but some. These are part of the efforts that show that conservation works – when governments and other organizations collaborate.

The results from the recently published fifth edition of the Global Biodiversity Outlook demonstrate the value of working together, including with zoos and aquariums. First, where conservation management policies have been put in place and enforced, extinctions have been prevented – the number of extinctions of birds and mammals would likely have been at least two to four times higher without conservation actions over the past decade. Second, deforestation rates have been reduced by 30 per cent. Sustainable management of fisheries has led to substantial improvements in fish stocks. Finally, successful eradication of invasive mammal alien species in the context of island ecosystems has led to improvements for endemic species on islands.

Zoos and aquariums have also provided support in terms of resource mobilization in support of conservation. Many zoos and aquariums that are members of WAZA have established foundations and charities which provide financial support for species and habitat conservation processes globally. This role in mobilizing financial resources for biodiversity conservation, especially from zoos and aquariums, conservation, management and maintenance has been great and should be further enhanced in the future. We should further encourage both the Convention's national focal points and zoos and aquariums to collaborate to ensure that those efforts are well recognized and accounted for, including through national reporting under the Convention. Currently, national reports do not take these efforts into account.

It is also important to acknowledge the important role that zoos and aquariums play in raising awareness and connecting people with nature. I note with appreciation the excellent WAZA initiative "Biodiversity is Us" developed in support of Aichi Target 1 and timed to support the United Nations Decade on Biodiversity 2011–2020. The campaign, with its films, mobile phone applications and activities across the entire membership of WAZA, provided an important boost to raising awareness. We know this because of the important measurement of public awareness taken by WAZA before and after.

A global survey of visitors to zoos and aquariums, initiated by WAZA in association with Chester Zoo and the University of Warwick, provided an evaluation of the impact of visiting a zoo or an aquarium on biodiversity literacy. This study, perhaps the largest and most international study of zoo and aquarium visitors ever conducted, provided compelling evidence that visiting zoos and aquariums can have a positive and lasting impact on biodiversity literacy.

But, probably more importantly, the study showed that this literacy had an impact on environmental behaviour overall. This shows that the biodiversity literacy developed in collaboration with zoos can be further enhanced through coordinated public engagement initiatives.

These initiatives and actions that you have already undertaken have made a difference. They reflect the feeling that we are now seeing around the world, including among Heads of State and Government, that there is a need to build on these successes.

The world has acknowledged this in the strong support we saw recently for the Leaders' Pledge for Nature, with the European Union joining 76 other States stepping forward, signing and committing to act. We further saw this in the strongest terms possible and support from over a hundred Heads of State and Government at the United Nations Biodiversity Summit held virtually at the end of last month.

What did the United Nations Biodiversity Summit tell us?

The statements of the Heads of State and Government delivered at the Summit showed that Governments are ready to reassert their commitment to the Strategic Plan for Biodiversity, reassert their commitment to protecting and conserving biodiversity in support of sustainable development, and fully show their commitment to a robust and ambitious post-2020 global biodiversity framework.

This strong sign of support is key. The current targets under the Strategic Plan for Biodiversity will expire at the end of the year. They need to be replaced in a way that drives us forward to a life in harmony with nature – the 2050 Vision of the Strategic Plan. This new framework must fill certain gaps – let me take time to spell these out:

(a) First, the new plan must address the direct and indirect drivers of biodiversity loss. This requires integrated and holistic approaches to planning and implementation, as well as greater interaction among government ministries, economic sectors and society generally. This can be done by further strengthening national biodiversity strategies and action plans, adopted as whole-of-government and whole-of-society policy instruments;

(b) The new plan also needs to integrate and engage all stakeholders, including gender, indigenous peoples and local communities, the private sector, youth and civil society, to mention but a few;

(c) The framework must be based on well designed goals and targets formulated with clear and simple language as well as with quantitative elements (i.e. according to “SMART” criteria).

We also know that there is a need to get to work right away and reduce time lags in planning and implementation of biodiversity strategies and action plans, the majority of which already exist and are still fit for purpose and thus will enable countries to account for unavoidable time lags in implementation.

Whatever the shape of the plan, it is clear that national commitments need to be more ambitious.

And, finally, there is a need for learning and adaptive management, including through greater efforts to facilitate technical and scientific cooperation, and to understand the reasons for the effectiveness or otherwise of policy measures.

Dear colleagues,

In this grand project, there is a key role for you all to play, to engage and contribute tremendously to the future success we want. Zoos and aquariums cannot be left behind but should be ahead and contribute in several ways, and this forum provides us with the opportunity to dive into them and others and discuss them in depth. You work at the nexus of conservation, knowledge development and public awareness. In all these ways, you have already contributed to the implementation of the Strategic Plan for Biodiversity. In all these modes, your contribution will be key to the implementation of the upcoming post-2020 global biodiversity framework.

As the Secretariat of the Convention on Biological Diversity, supporting and facilitating negotiations on an ambitious post-2020 global biodiversity framework, we expect active contributions from zoos and aquariums in its development and later active engagement in its implementation through an array of multiple streams far beyond immediate *ex situ* conservation measures.

Based on the current draft of the framework, I would like to briefly mention some key areas for specific contributions. I would start with specific examples and elements currently on the updated draft 2030 targets.

Mobilization of sufficient resources essential for implementing the post-2020 global biodiversity framework by generating additional financial and non-financial resources from various sources, including the private sector and general public. Zoos and aquariums may directly contribute to increase new, additional and effective financial resources to support ambitions of the targets of the framework. Such resources can also be used to implement the strategy for capacity-building and technology transfer and scientific cooperation to meet implementation needs.

Capacity development to support enabling evidence-based implementation as well as building capacities at the individual and organizational levels to facilitate implementation of the framework. The networks for global and regional collaboration created for species protection show the role that zoos and aquariums have in capacity development at the subnational, national and regional levels.

Knowledge generation, management and sharing for effective biodiversity planning, policy development, decision-making, implementation and transparency and responsibility, including through promotion of biodiversity science and education, and organizational learning. Zoos and aquariums traditionally produce new quality scientific information and support multiple research activities. This information may continue to be available for decision makers and the public and may inform effective management of biodiversity both *ex situ* and *in situ*.

Technical and scientific cooperation, technology transfer and innovation: As an example, the research programmes of zoos and aquariums may contribute to informing elements of spatial planning to address land/sea use change. This research can also inform us all on the existing intact and wilderness areas which may be a priority for conservation. This will be extremely important as we move to further develop an extensive system of global protected areas that is both representative and effective. It is also important as we move to a system that also incorporates other effective area-based conservation measures beyond national parks and other traditional protected area systems.

We will need research and the information in zoo and aquaria collections for active management actions in the future. Only by tapping this information can we enable recovery and rehabilitation of threatened wild species of fauna and flora, including reintroduction into their natural habitats.

An area under the Convention that has seen successes – the control of invasive alien species, will require greater work in the future. Zoos and aquariums can use their knowledge and experience to support efforts in identification of invasive alien species as climate change and other forces lead to a greater need to control introductions.

Partnerships with a variety of stakeholders to leverage activities and programmes at the local, national and regional levels, including through engagement of the private sector, academic institutions and the general public. As zoos and aquariums are usually located in cities, they have special opportunities to involve subnational governments, cities and other local authorities.

I also want to point out that, through their education and awareness programmes, zoos and aquariums may support actions to eliminate unsustainable consumption patterns and help people understand and appreciate the value of biodiversity. Education programmes of zoos and aquariums will contribute to the design and promotion of responsible choices commensurate with the 2050 biodiversity Vision of living in harmony with nature.

Dear colleagues,

Let me speak about the importance of outreach, awareness and uptake of the post-2020 global biodiversity framework by all stakeholders.

It is clear that this is essential to effective implementation of the framework. And this is a traditional area of strength for zoos and aquariums. We expect zoos and aquariums to further increase understanding, awareness and appreciation of the values of biodiversity, including the associated knowledge.

Zoos and aquariums can support the Secretariat of the Convention and our partners in promoting or developing platforms and partnerships, including with the media and civil society, to share information on successes, lessons learned and experiences in acting for biodiversity.

I stress this because a growing body of evidence consistently demonstrates that, in addition to awareness, meaningful experiences and connection with nature are key to engendering stronger valuation, support and action for biodiversity conservation across generations, sectors, and societies. Increased attention to the importance of public engagement and connection with nature will be important for achieving behaviour change and creating and maintaining the political will for Governments to implement the Convention.

Many human beings are living with little direct and conscious experience of the beauty and complexity of the Earth's living systems. The realization that humans are just one part of this interdependent and interconnected web of life has been forgotten or lost in the memories of many. While this disconnect can occur even in rural and undeveloped areas, it tends to be exacerbated for people living in cities and heavily urbanized areas. Significantly, more people live in urban areas than in rural areas, with 55% of the world's population residing in urban areas in 2018. This is not to say that urban areas cannot be biologically diverse; they can, and are, with care and effort. In fact, urban areas hold great potential for connecting people with nature in their everyday lives. Doing so will be good for people and for the planet.

The post-2020 biodiversity framework will recognize the growing societal disconnect from nature as an important indirect driver of biodiversity loss. It will include strategies for addressing this disconnect in order to bring about the transformations necessary to halt biodiversity loss.

Dear colleagues,

The success we all need, we all strive for, demands transformational change. It demands new pro-environmental behaviours. It demands partnerships and information exchange. It demands financial resources and capacity development and enhancement.

It can only be built and strengthened if the whole of society works together. Zoos and aquariums stand poised to be an important part of the post-2020 global biodiversity framework over the next 10 years. Your work with national Governments as well as local and subnational governments is equally crucial.

Your ability to pull people and societies to work together is likewise imperative. You may exist in certain cities and national contexts, but you bring the world together in your conservation work, and in your exhibitions to many visitors. You can bring us all together to connect with nature in all its splendour. All these efforts are a *sine qua non* for our biodiversity agenda to halt and reverse biodiversity loss. On my own behalf and that of the Secretariat as well as the global community, I offer sincere thanks and appreciation for all the splendid work and engagement undertaken by the zoos and aquariums for the benefit of biodiversity conservation. Results and impacts are vividly clear and seen.

Thank you for listening to me.
