



WAZA

*World Association
of Zoos and Aquariums*

2021

03



NEWS

**Updates from IUCN
World Conservation
Congress**

**Building Capacity for
Conservation Planning**

**Where Are We Failing to
Stop Species Declining?**



WAZA

*World Association
of Zoos and Aquariums*

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WAZA Membership

WAZA members as of 22 November 2021

Affiliates	10
Associations	23
Corporates	22
Institutions	281
Life/Honorary	135

Future WAZA Conferences

- 2022:** Loro Parque, Tenerife, Spain, 23-27 October
2023: San Diego Zoo Wildlife Alliance, San Diego, United States

President's Letter

Dr Clément Lanthier

WAZA President

Dear WAZA Members,

I would like to start my first magazine letter to you as the new WAZA President by saying that I am very much looking forward to working with you over the next two years. I thank the WAZA membership for the trust you have placed in me to lead this organisation. As WAZA President, I will do my best to advocate and promote this community's collective commitment to animal welfare, conservation and education. And I will do my best to communicate the significant role of zoos and aquariums in saving species and impacting humans.

I would like to thank my predecessor, Prof Theo Pagel. Over the past two years, he has been the first WAZA President to think globally while working locally which has had an enormous impact, and he has left an amazing legacy. He has shown his commitment to WAZA, the Executive Office and Council and has successfully navigated WAZA through some genuinely unprecedented times. Among many achievements as President, he effectively organised the WAZA Office, led the redevelopment of the WAZA Bylaws, recruited a new CEO and completed the transition of the Executive Office from Switzerland to Spain. In addition, he demonstrated his determination to build and promote a more robust, reputable, scientifically run zoo and aquarium world community.

Additionally, thank you to the WAZA Executive Office team for organising and hosting a fantastic virtual conference in October. You can read more about the conference in this issue of the magazine. And if you did not register but would like to view the conference recordings, be sure to contact the WAZA team at conference@waza.org. I look forward to hopefully seeing you all next year in person at the 77th WAZA Annual Conference in Tenerife, hosted by Loro Parque.

At the time of writing this letter, the 26th United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP26) has just ended. World leaders, alongside tens of thousands of negotiators, government representatives, businesses and civil society groups, gathered to negotiate and discuss climate change and the environment. After two weeks, all parties eventually agreed to The Glasgow Climate Pact. What was clear from the conference is that the biodiversity crisis and the climate crisis are two parts of the same problem; therefore, urgently addressing our broken relationship with nature and climate change must go hand in hand.



Although inextricably linked, the biodiversity movement has a lot it can learn from the climate change movement. It is vital for the public to recognise that climate change mitigation and adaptation can be supported by biodiversity conservation actions. For me, both crises are incredibly significant to our global community and require urgent action. One of these movements gets the spotlight, while the other must change the paradigm. As Her Excellency, Razan Al Mubarak, IUCN President, said in her keynote address at the WAZA Annual Conference: we need to scale up, go big and go fast because we do not have time to waste. As progressive zoos and aquariums, we currently play a key role in addressing these matters, but we need to scale up our efforts rapidly.

And finally, I end my letter by inviting WAZA members to feel free to reach out to me with your suggestions and ideas. We are a global community, and we are stronger when we work together.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Clément Lanthier'.

Dr Clément Lanthier

WAZA President

CEO's Letter

Dr Martín Zordan

WAZA Chief Executive Officer

Dear WAZA members and friends,

As the year draws to a close, I would like to reflect on two recent highlights for WAZA this year: the IUCN World Conservation Congress and the 76th WAZA Virtual Annual Conference.

The first event was vital to our efforts of being part of something bigger than our own zoological network, and the second event was about our uniqueness as a community and continuous internal evolution.

The IUCN World Conservation Congress (WCC) that took place in Marseille, France, between 3-11 September 2021, had an in-person attendance of almost 6,000 people, in addition to 3,500 online attendees. For WAZA, it provided a fantastic opportunity to be visible within IUCN in a way that we had not been before. Through the Reverse the Red Pavilion, we had a significant presence and were able to raise the flag for progressive zoos and aquariums. We would like to thank all the WAZA members that sponsored the Pavilion. At a time when the majority of our interactions are virtual, the Pavilion space turned out to be a refreshing opportunity for WAZA and its members to network with colleagues, IUCN members, partners and new acquaintances.

Additionally, we voted at the IUCN Members' Assembly and represented several of our IUCN/WAZA mutual members who could not attend the congress. We celebrated the election of our endorsed candidate, Her Excellency Ms Razan Al Mubarak, as the new IUCN President and later welcomed her as the opening keynote speaker of the 76th WAZA Virtual Annual Conference.

As soon as the IUCN WCC concluded, we dedicated our efforts to hosting our own conference. My gratitude goes to the team of the WAZA Executive Office for pulling off a fantastic virtual conference for the second time. I also thank our great speakers, panellists, sponsors, exhibitors, poster presenters, partners, and so many others who made the event possible. The annual conference remains our key gathering for sharing progress and enabling connections within and beyond our community. We look forward to reuniting in person at the 77th WAZA Annual Conference, kindly hosted by Loro Parque in Tenerife.



As per our bylaws, after proclaiming the results of the WAZA Council elections at our Annual General Meeting on 14 October, we welcomed the 2021-2023 WAZA Council. Led by our new President, Dr Clément Lanthier, this council includes eight women and ten men representing 11 zoos, two aquariums, four regional zoo and aquarium associations, and one IUCN commission distributed in 12 different regions of the world.

The team at the office and myself are extremely grateful to the outgoing members of the WAZA Council. They kindly share their time, skills and talent to support us in better serving our community. I especially thank Dr Jenny Gray, who leaves our council after ending her term as Immediate Past President and after eight years of exemplary service and dedication to WAZA.

As we get ready for the next WAZA cycle, we are planning a WAZA Council strategic planning session in April 2022 to assess current and new priorities and evaluate how to continuously improve how we serve our members.

We will share more information on that soon.

Best wishes,

A handwritten signature in black ink, appearing to read 'M Zordan'.

Dr Martín Zordan

WAZA at the IUCN World Conservation Congress

Participants at the Reverse the Red Pavilion at the IUCN World Conservation Congress in Marseille.
© Kelly Griesse



Gavrielle Kirk-Cohen, Valy Gourdon¹

¹*World Association of Zoos and Aquariums*

After being delayed multiple times due to the pandemic, the IUCN World Conservation Congress (WCC) 2020 was finally able to take place in Marseille, France, from 3-11 September 2021. The Congress brought together government, civil society, indigenous peoples and youth from around the world to set the nature conservation agenda for the next decade.

The hybrid format provided an opportunity for both IUCN members and non-members to join online despite international restrictions to travel. The Congress was well attended by 5,700 delegates in person in Marseille and 3,500 online participants, while more than 25,000 members of the public attended the Congress Exhibition Hall.

WAZA is pleased to have been able to attend the WCC as a founding member of the Reverse the Red movement while also representing its global membership base. Across the week-long event, WAZA fostered its relationship with members, represented the role of progressive zoos and aquariums in conservation and sustainable development at the Reverse the Red Pavilion, and voted on key decisions at the Members' Assembly.

Reverse the Red Pavilion

The Reverse the Red Pavilion at the WCC was a joint initiative between WAZA, the IUCN Species Survival Commission (IUCN SSC) and 23 other partners, of which 15 are WAZA members. The leading Pavilion partners included HHMI Tangled Bank Studios, Smithsonian's Earth Optimism, San Diego Zoo Wildlife

Alliance and On the Edge Conservation.

The coalition of partners brought optimism to the congress to show that when we all work together, we can save species and reverse the red.

The pavilion was one of only six large stands in the Exhibition Hall at the Congress, while the rest of the exhibition hall consisted primarily of small to medium stands.

Over six days, the Reverse the Red Pavilion and central stage events celebrated species conservation success stories by hosting a diverse range of presentations, speakers, workshops, discussions, and networking opportunities. The pavilion programme introduced the Reverse the Red movement to the congress and highlighted the important work of zoos and aquariums in conservation and education.

At the Reverse the Red Pavilion, speakers and panellists examined topics such as sustainable use, wildlife trade, *ex situ* conservation, zoos and aquariums mainstreaming biodiversity, saving extinct in the wild species, and many more.

**When we put our knowledge
and tools together, we can
save species from extinction.**

On the two central stages, Reverse the Red hosted several presentations, including one by then WAZA President, Prof Theo Pagel, on where we are failing to save species. The European Association of Zoos and Aquaria (EAZA) Executive Director, Myfanwy Griffith, discussed the successful conservation campaign by European zoos to focus conservation efforts on Asian songbirds, and Carmel Croukamp, CEO of Parque das Aves, spoke about the Brazil Centre for Species Survival.

A series of workshops were held, including one hosted by IUCN Commission on Education and Communication (CEC) Chair, Sean Southey on building a social movement. While another workshop examined capacity building for the Assess-Plan-Act cycle for species conservation.

The Reverse the Red movement was officially launched at a hybrid event on the main congress programme featuring then WAZA President, Prof Theo Pagel; IUCN Deputy Director, Dr Grethel Aguilar; IUCN Commission on Ecosystem Management Chair, Angela Andrade; and IUCN Species Survival Commission Chair, Jon Paul Rodríguez. The panellists discussed starting a global movement with Reverse the Red to save species and ecosystems, and the role of zoos and aquariums in conservation.

The pavilion also served as an important networking hub of activity from early in the morning to late in the

evening, with many people coming together to meet and discuss ideas and partnerships.

WAZA hosted an evening in the Pavilion – Wild Drinks with the *Ex Situ* Community – which was a roaring success and was well attended. The gathering provided a great opportunity to network again for the first time since the pandemic began and was attended by several WAZA members, IUCN members, researchers, scientists, conservationists and more.

The IUCN SSC also hosted an evening event which was attended by special guest Princess Laurentien of the Netherlands, who spoke about the urgent need to conserve the Sumatran rhino.

Throughout the Congress, green face masks were given out with the Reverse the Red logo and a message saying “spread optimism not germs”, in addition to branded canvas bags. The masks were incredibly popular with participants and served as a nice little green beacon of hope amongst a sea of faces in masks. There was also a temporary species tattoo stand, which drew crowds and plenty of excitement, and even the newly elected IUCN President, Ms Razan Al Mubarak paid a visit to show her support for the Reverse the Red movement.

More information and summary videos of the congress and pavilion are available to view on the Reverse the Red website at reversethered.org.

Participants taking part in a workshop at the Reverse the Red Pavilion. © Kelly Griesse/Indianapolis Zoo



WAZA at the Member's Assembly

WAZA was one of the founding members of the IUCN when it was first established in 1948 as the International Union for the Protection of Nature (IUPN). At the time of its founding IUPN was the only international organisation focusing on the entire spectrum of nature conservation. Today WAZA's role, as a guiding and support mechanism, promoting cooperation between its members continues.

In the weeks leading up to the IUCN Congress, WAZA provided its members with communications on important information they should be aware of ahead of the event. This included a template letter in French, English and Spanish for members to use to inform their governments and relevant stakeholders that the global community of zoos and aquariums would be present at the WCC through WAZA. Also, a short guide was created on how to join and navigate the minefield of the virtual programme.

WAZA also shared information on who it would be supporting and voting for in the IUCN Council elections, as well as its official endorsement of Her Excellency Razan Al Mubarak for the position of IUCN President.

Alongside 1,500 IUCN members – some in-person and many online – Zordan participated in the Members' Assembly to vote on several motions supported by WAZA and served as a proxy holder for WAZA members who were unable to attend the WCC.

Among all the IUCN motions, 109 were already approved online by members before the WCC. WAZA co-sponsored five motions, and 26 were sponsored by WAZA Members. To the right are the motions:

- **Motion 47:** Treating environmental crimes as serious crimes – Sponsored by Association of Zoos and Aquariums (AZA), European Association of Zoos and Aquaria (EAZA), and WAZA, among others.
- **Motion 57:** Law enforcement regarding commercial trade in tigers and tiger parts – Led and sponsored by EAZA and co-sponsored by WAZA, and several EAZA/WAZA mutual members.
- **Motion 78:** Promoting conservation through behaviour-centred solutions – Co-sponsored by WAZA and several WAZA members.
- **Motion 94:** Linking *in situ* and *ex situ* efforts to save threatened species – Co-sponsored by WAZA and several WAZA members.
- **Motion 119:** Improving process and action to identify and recover 'Extinct in the Wild' species – Co-sponsored by Calgary Zoological Society, Canadian Wildlife Federation, Marwell Wildlife, PROVITA, WAZA, Zoological Society of London.
- **Motion 120:** Action against songbird trafficking – Motion led by EAZA and supported by several EAZA/WAZA mutual members.
- **Emergency motion 132:** Controlling and monitoring trade in croaker swim bladders to protect target croakers and reduce incidental catches of threatened marine megafauna – Among the sponsors are AZA and Calgary Zoo.

In addition to the motions, the Assembly voted for the IUCN president and the chair of the commissions. Razan Al Mubarak, was elected as the new President of the IUCN, and Jon Paul Rodríguez was re-elected as Chair of the IUCN Species Survival Commission.

WAZA would like to thank EAZA for all of its support and for helping WAZA to navigate the voting process ahead of and during the Members' Assembly.

All in all, we believe it was a very successful IUCN Congress and we were delighted to be able to raise the profile of progressive zoos and aquariums on the international conservation stage and introduce the Reverse the Red movement to the world.

Photo: Russel Mittermeier and Princess Laurentien of The Netherlands. © Kelly Griese/Indianapolis Zoo



From Marseille to Buenos Aires Reverse the Red WCC Side Event in Argentina



Participants of the 'Ex situ Conservation as a Strategy to Reverse the Red – Experiences and Next Steps' at Fundación TEMAikèn's Biopark.
© Fundación TEMAikèn.

Florencia Roqueta

Fundación TEMAikèn

Ahead of the IUCN World Conservation Congress (WCC) in Marseille, WAZA asked whether any of its members would be interested in hosting satellite events to better connect WAZA members and their supporters to the WCC in Marseille and Reverse the Red.

Fundación TEMAikèn, in Argentina, hosted two satellite events that brought together local leaders to work collaboratively on the conservation of endangered native species. In 2020, the organisation signed an agreement to develop Argentina's first IUCN SSC Center for Species Survival. A key component to the future success of Reverse the Red is for leading conservation organisations within each region and country to join the movement as Centres for Species Survival.

While participants were gathering in France for the IUCN World Conservation Congress to make decisions to drive conservation on a global scale, Fundación TEMAikèn convened conservation decision makers in the provinces of Buenos Aires and Misiones to drive conservation of species locally.

The aim of the satellite events was to build a collaborative and interdisciplinary approach to the conservation of threatened species in Argentina. The roundtable style workshops were attended by almost 80 stakeholders, including government agencies, ministerial officials and legislators, scientists and academic organisations, civil society conservation organisations and tourism enterprises.

One of the satellite events titled: 'Ex situ Conservation as a Strategy to Reverse the Red – Experiences and

Next Steps' was held in Fundación TEMAikèn's Biopark. The event brought together more than 50 specialists from 22 organisations (NGOs, zoos, universities and governmental agencies) in order to evaluate the relevance of *ex situ* conservation strategies for threatened species in Argentina, identify needs and outline future actions.

The day began with a presentation on the Center for Species Survival that Fundación TEMAikèn is establishing in Buenos Aires with the IUCN SSC. Prior to the workshop a survey of the *ex situ* conservation field was conducted to better inform decision-making at the workshop. Participants delivered presentations to share the strategies, species and threats that are currently being addressed in the field. Using this information participants plotted the strengths, opportunities, threats and weaknesses regarding *ex situ* conservation, before working on the planning and prioritisation of next steps.

Meanwhile, the side event in Misiones sought to generate an action plan for the conservation of endemic flora in Misiones, their environments and associated species of high conservation value in the region. The event brought together 26 specialists from different disciplines, as well as government participants.

Both satellite events concluded with an agreement amongst multiple parties on the importance of continuing and re-evaluating the contribution of *ex situ* conservation as part of a comprehensive approach to species conservation. The need for immediate management of some threatened species was also highlighted.

Where are We Failing to Stop Species Declining? Join Reverse the Red!

Children admiring the marine life.
© Two Oceans Aquarium

Prof Theo Pagel^{1,2} and Paula Cerdán Codina²

¹Cologne Zoo, ²World Association of Zoos and Aquariums

The following article is an amended and abridged version of Prof Pagel's (WAZA Immediate Past-President) speech at the IUCN World Conservation Congress in Marseille.

Introduction

As you all know WAZA is the global alliance of regional associations, national federations, zoos, and aquariums, dedicated to the care and conservation of animals and their habitats around the world. We are the umbrella organisation for the scientifically run, conservation, conservation education, and research-driven zoos and aquariums, which operate under the highest constantly evolving animal welfare standards.

Currently, we have over 300 members worldwide, all united under the same goal: We want to connect people with nature, inspire people to protect it and have communities living in harmony with nature. Our members, spread across five continents and over 50 countries and regions, are the force that drives the positive impact we want to have in the world.

WAZA members offer a unique opportunity for people to connect with nature. Worldwide our institutions open their doors to over 700 million visitors a year, representing the world's conservation societies and all of their biodiversity. But in order for us to make a real impact, WAZA needs to grow. We need more zoos and aquariums to become effective partners and active members of WAZA. We need more organisations around the world who adopt, share, and implement our tools and skills and together, reaffirm zoos and aquariums as an indisputable major force for the protection of nature and its biodiversity, saving species from extinction.

Recognising the need to unite efforts and the urgency to act, WAZA has already established strategic partners beyond our zoo and aquarium community, which allows us to maximise our conservation impact and expand upon our areas of influence through them.

The change we want to see in the world, starts on our doorstep, inspiring our visitors and inspiring future generations to care.

Prof Theo Pagel

WAZA Immediate Past-President

Zoo visitors in North Carolina Zoo's Kaleidoscope Butterfly Garden.
© North Carolina Zoo

External recognition

The contribution of modern zoos and aquariums is increasingly being recognised by external organisations such as the IUCN Species Survival Commission (IUCN SSC) and the United Nations Convention on Biological Diversity (CBD) as a crucial element in halting species decline.

The IUCN SSC's *Guidelines on the Use of Ex-situ Management for Species Conservation* (IUCN SSC, 2014), outline a detailed set of nine potential roles that an *ex situ* programme might serve for the conservation of a species:

- Insurance population
- Temporary rescue
- Long-term *ex situ* population
- Demographic manipulation
- Source for population restoration
- Source of ecological replacement
- Source for assisted colonisation
- Research and/or training
- Education and awareness programmes

The roles of modern zoos and aquariums are also outlined in several laws and other legal frameworks. In an ideal scenario this would be standard practice globally with WAZA being part of the initial conversation, as was the case with the European Union Zoo Directive from 1999, which used WAZA's World Zoo and Aquarium Conservation Strategy from 1993.

The role of zoos and aquariums, as organisations dedicated to *ex situ* conservation, is also recognised in Article 9 of the CBD, which highlights the importance of *ex situ* conservation as complementary to *in situ* conservation. *Ex situ* conservation is embodied in the foundational articles of the CBD.



Photo: A young child interacts with an educational display.
© Marwell Zoo



Photo: Visitors reading signage that conveys conservation messaging.
© Parque das Aves



A young visitor gets up close to a tortoise.
© Tennessee Aquarium

Zoos, aquariums, and the post-2020 global biodiversity framework

Zoos and aquariums can support and deliver on the post-2020 targets and milestones of the CBD's global biodiversity framework. Twenty-one targets and 10 milestones have been proposed for 2030, and some of them are particularly relevant to zoos and aquariums.

2050 Vision Milestone A.2. The increase in the extinction rate is halted or reversed, and the extinction risk is reduced by at least 10 per cent, with a decrease in the proportion of species that are threatened, and the abundance and distribution of populations of species is enhanced or at least maintained.

2050 Vision Milestone A.3. Genetic diversity of wild and domesticated species is safeguarded, with an increase in the proportion of species that have at least 90 per cent of their genetic diversity maintained.

2030 Action Target 4. Ensure active management actions to enable the recovery and conservation of species and the genetic diversity of wild and domesticated species, including through *ex situ* conservation, and effectively manage human-wildlife interactions to avoid or reduce human-wildlife conflict.

This support and expected contributions from zoos and aquariums on achieving the post-2020 framework is something that CBD Executive Secretary, Ms Elizabeth Maruma Mrema, acknowledged during her keynote address at the 75th WAZA Annual Conference last year and again during the 76th WAZA Annual Conference in October 2021:

“While the world recovers from Covid-19, it is imperative that we build back better. Our future and well-being depend on protecting, sustainably managing, and conserving our biodiversity and ecosystems, both *in situ* and *ex situ*.”

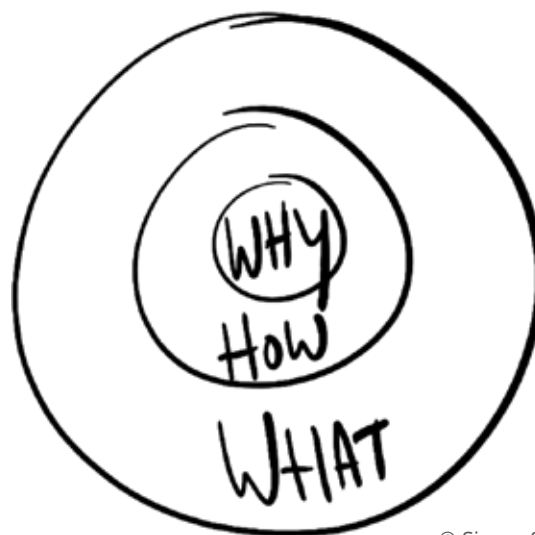
Elizabeth Maruma Mrema, Executive Secretary of the Convention on Biological Diversity

Progressive zoos and aquariums are committed and ready to actively participate in this biodiversity and conservation action change but we need a united front to make this happen.

Going back to the big question: Where are we failing to stop species declining?

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) landmark biodiversity report in 2019, warned that one million species are at risk of extinction and urged the world to act before it is too late. This loss on such a scale would be detrimental. But with none of the CBD's Aichi Targets fully achieved, biodiversity is still declining at an unprecedented rate, and the pressures driving this decline are intensifying.

As conservation organisations – and we are not only referring to leading zoos and aquariums – we are actually failing at stopping species declining. If we use Simon Sinek's Golden Circle to assess our conservation work, it becomes obvious:



© Simon Sinek

Our 'Why', is clear, which is saving species from extinction. But it is on the 'How' and the 'What' that we are failing. And why are we failing? We have strong tools to help us save species, but these are not harmonised, coordinated, nor integrated. We need to change our approach; we need to start integrating efforts and working together, and to do that, we need to embrace the One Plan Approach.

Sally Jewell, former United States Secretary for the Interior in her address to the IUCN World Conservation Congress in Hawaii 2016 said:

“Conservation needs to move beyond random acts of kindness and instead mobilise strategic, coordinated action.”

Supporting this view, during the World Conservation Congress in Marseille, Motion 94, which clearly highlights and addresses the problem of working in silos, was put forward and approved.

Reverse the Red: a solution to the problem

There is a simple answer to the big question we have posed in this article. We are failing to stop species declining because we are not linking efforts, nor engaging all stakeholders and responsible parties sufficiently to see a change.

We already have strong tools and fragmented success stories, but they are not coordinated – we can and need to improve cooperation and coordination between all of us.

We, together with the IUCN SSC and other leading partners have decided to take the lead and help find a solution. Reverse the Red is a platform to unify these efforts, to quantify achievements and conservation investment and harmonise actions. Reverse the Red will become a global movement that ignites strategic cooperation and action to ensure the survival of wild species and ecosystems.

Reverse the Red embraces the Species Conservation Cycle: Assess, Plan, Act.

Assess: monitoring species and informing the world about the status and trends of biodiversity.

Plan: enhance collaborative, inclusive, and science-based strategies, including policy change, to ensure the most effective species conservation actions.

Act: improve the status of biodiversity, by convening and mobilising actions involving governments, academia, civil society, and the private sector.

Reverse the Red, besides the movement, hopes to be able to create missing tools including access to training and methodologies, which will allow for easier cooperation. We should now work toward common national goals, bringing us to a stronger direction. And Reverse the Red is active on building capacity, such as through National Red Listing and Species Survival Centres. The existing Species Survival Centres are all situated at and managed by zoos and aquariums. Reverse the Red is in its inception, and we can ask all of you to join this important leading initiative which will hopefully result in a much-needed change of direction.

Let us start working closer together, let us all **Reverse the Red!**



Prof Theo Pagel speaking about the role of progressive zoos and aquariums in Reverse the Red and saving species from extinction at the IUCN World Conservation Congress.

© Gavrielle Kirk-Cohen/WAZA

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www.reversethered.org

WAZA

Virtual Annual Conference

11-14 October 2021



Highlights from the 76th WAZA Annual Conference

Gavrielle Kirk-Cohen

World Association of Zoos and Aquariums

For the second year in a row, WAZA held its annual conference online. The 76th WAZA Annual Conference took place from 11-14 October 2021, drawing the highest number of participants for a WAZA conference to date, with nearly 1,000 people from more than 30 countries registered.

We want to extend a big thank you to Moscow Zoo, the original hosts of the 2021 WAZA Annual Conference. The team at Moscow Zoo had gone to a great deal of effort preparing for the conference and were incredibly excited to welcome and see colleagues from the community again. Unfortunately, given the uncertainty of the pandemic and travel restrictions, the decision was made to host the conference online.

While this year's annual conference did not have a theme, the logo for the virtual conference was designed to include a Guam kingfisher – an extinct in the wild species, which can only be found in zoos and aquariums. More than 30 years after its disappearance from the wild, several zoos are working together with the IUCN Conservation Translocation Specialist Group, federal agencies, scientists, and indigenous people in Guam to hopefully reintroduce this species back to its natural habitat. The conference logo highlights the vital role that progressive zoos and aquariums have in wildlife conservation and in bringing species back from the brink of extinction.

The conference took place through Zoom and was simultaneously translated into Japanese, Mandarin

and Spanish; thanks to the generous support of the Japanese Association of Zoos and Aquariums (JAZA), Chimelong Safari Park, Chile National Zoo, and Fundación Temaikèn.

This year, participants had the option to do some virtual networking with colleagues from around the world before and after the conference. The thirty-minute sessions were a nice opportunity to catch up and share insights on the talks of previous days and the agenda for the day.

To give WAZA members the opportunity to get to know the WAZA Executive Staff a bit better, the WAZA team took on Master of Ceremonies duties for the duration of the conference, introducing sessions and speakers and coordinating the Q&A sessions.



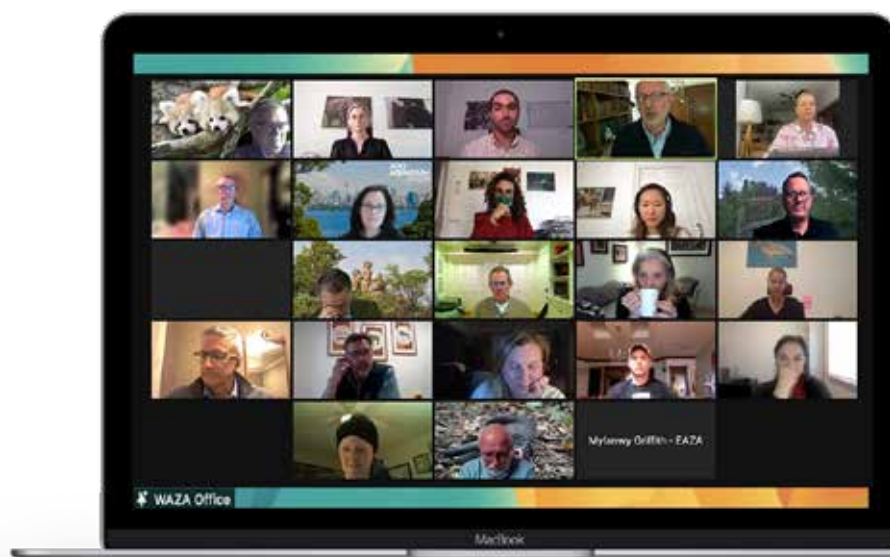
WAZA staff took on MC duties during the conference.

Day 1

The Conference was officially opened by outgoing WAZA President, Prof Theo Pagel, who provided an update on WAZA's activities at the IUCN World Conservation Congress and said that we are living in a time of crisis, where world leaders are ignoring climate change and biodiversity loss, and are destroying forests. He called on our global community to share stories of hope and conservation success and maximise conservation impact.

Her Excellency Razan Al Mubarak, IUCN President and Managing Director of Environment Agency Abu Dhabi (EAD), the Mohamed bin Zayed Species Conservation Fund, and Emirates Nature WWF, was the conference opening keynote speaker. Ms Al Mubarak encouraged everyone to scale up efforts to protect biodiversity and highlighted the valuable role of WAZA members to IUCN's mission, pledging to work closely with WAZA.

This was then followed by a panel discussion on Covid, with panellists from zoos and aquariums around the world sharing their experiences of handling the pandemic in their institutions, the financial impact and solutions for recovery. The first day of the conference came to an end with a presentation by Dr Paul Smith, Secretary-General of Botanic Gardens Conservation International (BGCI). Dr Smith spoke about conservation and common challenges to botanic gardens, zoos and aquariums and shared opportunities for collaboration between WAZA and BGCI.



Conference attendees from around the world attending the conference through Zoom.

Day 2

On 12 October, Elizabeth Maruma Mrema, the Executive Secretary of the UN Convention on Biological Diversity (CBD), delivered a video message keynote address as she could not join the conference in person as she was attending part one of COP15 in Kunming, China. She stressed the critical role of zoos and aquariums in conservation and in supporting the post-2020 Global Biodiversity Framework.

Following Ms Maruma Mrema's address was an update on WAZA's work on its latest short guide on carbon, which will be launched in 2022. An update was also given on the Reverse the Red movement and what WAZA accomplished at the IUCN Congress in Marseille. Dr Jenny Gray, Dr Kira Mileham and Dr Judy Mann-Lang gave a well-received presentation on Reverse the Red and shared the many ways in which WAZA members can become involved in the movement.

The European Association of Zoos and Aquariums (EAZA) Danny de Man, followed this with a detailed update on EAZA's new population management model.

WAZA then launched a brand new WAZA short guide on 'Sourcing Sustainable Palm Oil at Your Zoo or Aquarium', which is available on the WAZA website. You can also read more about the short guide in this magazine.



Download the guide here:
waza.org/palm-oil-guide

Day 3

Day three of the annual conference began with an update from Ron Kagan, former CEO of the Detroit Zoological Society, and Prof Lori Gruen, William Griffin Professor of Philosophy at Wesleyan University, on the exciting work being done to update the WAZA Code of Ethics.

In his keynote address, Prof Mauro Guillén, author and Dean, Cambridge Judge Business School, looked to the future and shared trends for the next decade, encouraging zoos and aquariums to embrace technology.

This was followed by a panel discussion featuring several Association members as panellists to share updates and progress being made on the WAZA 2023 Animal Welfare Goal.

The third day came to an end with presentations by Dr Clément Lanthier and Dr Andrew Moss. Dr Lanthier, CEO of Calgary Zoo and incoming WAZA President, discussed various regulatory matters impacting zoos and aquariums worldwide, looking at the topics of cetaceans, habeas corpus and the recently introduced 'Jane Goodall Act' which could become one of Canada's strongest captive animal welfare laws, among others. Dr Moss shared the results of the WAZA Nature Connect Grants programme and what has been achieved over the past few years of the programme, which saw WAZA members globally, implement projects connecting families to nature.

Day 4

The final keynote address was delivered by Dr Brian Davis, President and CEO of Georgia Aquarium and Chair of the Board of Directors for the Association of Zoos and Aquariums (AZA) on AZA's 5th Promise: Diversity, Equity, Access, and Inclusion (DEAI). Dr Davis gave an inspiring talk on the DEAI journey and how zoos and aquariums can work to ensure everyone has a seat at the table.

The final day of the conference included updates from several WAZA Committees and WAZA partners with details of what they have been working on in the past year, as well as upcoming plans.

Photo (right): WAZA Director of Membership, Janet Ho (left) and WAZA Animal Welfare and Conservation Coordinator, Paula Cerdán Codina (right) working behind the scenes of the conference.
© Gavrielle Kirk-Cohen/WAZA



WAZA Chief Operating Officer, Christina Morbin, in front of the camera hosting conference sessions.
© Gavrielle Kirk-Cohen/WAZA



WAZA Communications Director, Gavrielle Kirk-Cohen hosting conference sessions.
© Paula Cerdán/WAZA





Dr Simon Tonge holds the Heini Hediger Award.
© Simon Tonge



Miroslav Bobek, CEO of Prague Zoo with the
WAZA Conservation Award. © Prague Zoo



Pat Simmons, CEO of the North Carolina Zoo holds
the WAZA Environmental Sustainability Award.
© North Carolina Zoo

WAZA 2021 Award Winners

Throughout the conference, WAZA announced the winners of the 2021 WAZA Awards. The top honour of the year, the Heini Hediger Award, was presented to Dr Simon Tonge, former CEO of Paignton Zoo/Wild Planet Trust, recognising his outstanding service and lifelong commitment to the global zoo community. Dr Tonge helped develop and support the international zoo community throughout his career. He has worked his way from a keeper to director, and he has been a role model and mentor to many individuals. He has recognised the importance of collaboration within the zoo community and has worked tirelessly within zoo and aquarium associations. He served on the WAZA Council and as the Chair of the WAZA Committee for Population Management for many years, and also served as the Chair of EAZA.

Prague Zoo, in the Czech Republic, was awarded the WAZA Conservation Award for its 'Return of the Wild Horses' conservation programme to reintroduce the Przewalski's horse into Mongolia's Great Gobi Desert. The Zoo's programme has helped to increase the population of this species while supporting the protection of the horse's natural habitat and at the same time engaging local communities. As a result of these efforts, there are now more than 300 Przewalski's horses in the Great Gobi B Special Protected Area, and the species has been reclassified from extinct in the wild, to endangered on the IUCN Red List of Threatened Species.

North Carolina Zoo, in the United States, was awarded the WAZA Environmental Sustainability Award for the zoo's long-term commitment to sustainability, with sustainable practices having been integrated into all zoo operations since 1989. The Zoo minimises waste, reuses materials, and prioritises using the most effective, least harmful methods for cleaning, pest management, and horticulture. They have also played an influential role in encouraging zoo visitors to take action and make changes in their own lives to benefit the environment.



Conference Wrap-up

The conference came to a close on 14 October and was followed by the Annual General Meeting (AGM), which saw the official handing over of the WAZA Presidency from Prof Theo Pagel, Cologne Zoo, to Dr Clément Lanthier, Calgary Zoo. WAZA would like to extend a heartfelt thank you to Prof Pagel for his support and hard work as WAZA President over the past two years.

WAZA welcomes Dr Clément Lanthier as the new WAZA President and the new WAZA Council members who were elected to join the Council.

The conference recordings will be available to view for the next six months. If you did not register for the annual conference but would like to view the recordings, please write to conference@waza.org for more information.

We look forward to seeing everyone for the 77th WAZA Annual Conference, which will take place at Loro Parque, Tenerife, from 23-27 October 2022!

And finally, a big thank you to our sponsors and exhibitors for supporting the WAZA Annual Conference!



Exhibitors & Sponsors



Giant short-tail stingray.
© Two Oceans Aquarium

WAZA Membership Survey 2020 Results A Year of Trials and Adaptations

Janet Ho

World Association of Zoos and Aquariums



2020 was without exception an immensely challenging year for all of us, and the uncertainties and challenges of the pandemic continue to have an impact on our lives. Whether at a personal or organisational level, we had to be flexible to face the challenges that were thrust upon us by the pandemic. The zoo and aquarium community was especially hard hit, with many zoos and aquariums across the world being forced to temporarily close to the public, ranging from a few months to over a year for some facilities.

To determine the effects of the pandemic on the zoo and aquarium community and gauge how WAZA can better support our members, we sent out two surveys evaluating the period from 1 January to 31 December 2020. The first was created for our organisational members (WAZA Affiliate, Association, Corporate and Institution Members) and the second, specifically for our individual members (WAZA Honorary and Life Members). Both surveys received a response rate of approximately 50% with 162 responses from organisational members, and 60 responses from individual members.

Covid impacts

Data from 134 WAZA Institution Members who provided their visitor attendance figures for the periods reflecting 1 January to 31 December 2019, and 1 January to 31 December 2020 shows a dramatic overall decrease of 71% in total attendance from 2019 to 2020.

All Institutions which responded to the survey have had to reduce their facility capacity to uphold social distancing standards. Nearly 90% of respondents had to request government funding, and 80% had to reduce their workforce.

Total Attendance

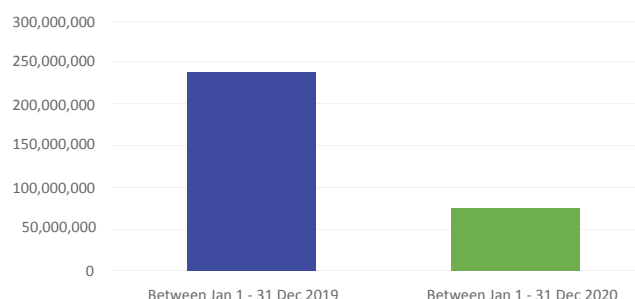


Figure 1. Total attendance 2019 vs 2020, data from 134 institution members who replied.

The operating budget for the years 2020 and 2021 remained unchanged for over 85% of respondents, while 7.8% had a decrease in their operating budget.

This difference in data could be attributed to the design of the survey, as the rating scale had a range of 5 million euros. The results also showed that over 50% of members operate on a budget below 10 million euros.

Operating Budget

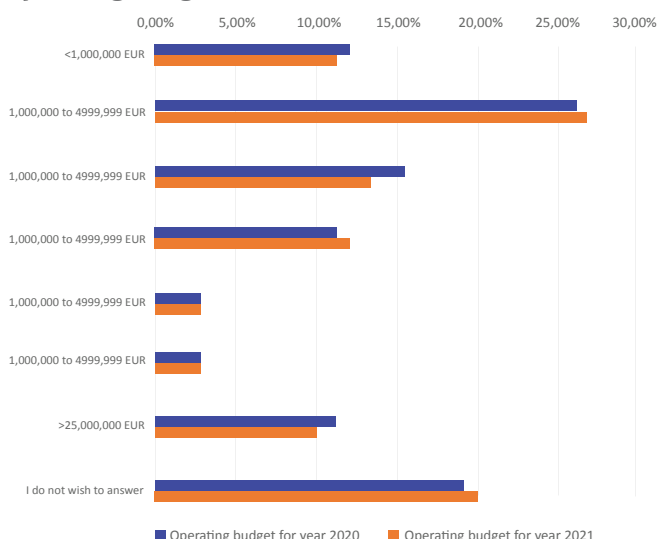


Figure 2. Operating budget 2020 vs 2021, data from 149 institution members

Satisfaction with WAZA Executive Office's work

Prompt and supportive assistance from the WAZA Executive Office is important, especially during such a challenging period. We were delighted to learn that both organisational and individual members were satisfied with the Executive Office's assistance when they required it. This was reflected most commonly in areas such as membership, conference matters, communications, and conservation. The office is also encouraged by our members' compliments to the team for being responsive, easy to work with, and having the ability to communicate respectfully with our members from such diverse cultures. Over 90% of members think that the frequency of communications from the Office is 'just right', and the majority of members are very 'satisfied/somewhat satisfied' with membership benefits.

Figure 3. Satisfaction of membership benefits by organisational members

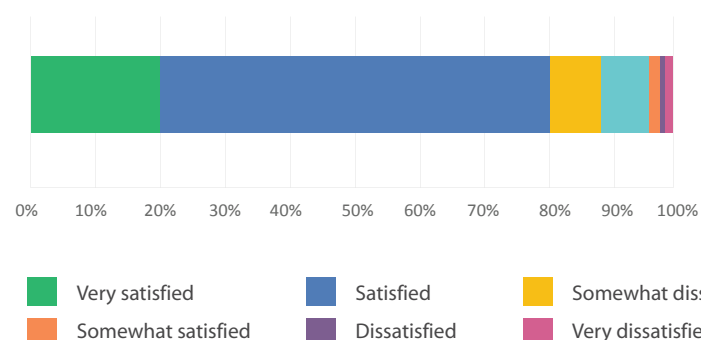
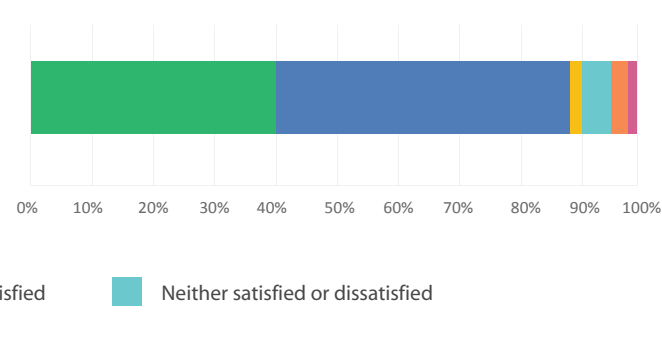


Figure 4. Satisfaction of membership benefits by individual members



According to survey respondents, the most valued membership benefits by organisational members include, by rank:

- Global networking opportunities.
- WAZA membership status/branding, which is a mark of international excellence showcasing that the member meets high standards, a commitment to animal conservation and welfare, and is a world leading zoo or aquarium.
- Communication – sharing of information from the global community, receiving weekly newsletters and printed publications from WAZA.
- Having international representation at global forums such as the International Union for Conservation of Nature (IUCN), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and International Air Transport Association (IATA) etc.
- Involvement in the development of WAZA policies, strategies, and guides; and accessibility to these documents.
- Support from WAZA and other members.

As for individual members, the most valued benefits include, by rank:

- Receiving updates on global zoo and aquarium community and conservation projects via weekly newsletter and publications.
- Global networking opportunities.
- WAZA webinars.
- Membership discounts to join WAZA Annual Conference and events.
- Inclusion in strategic discussions and decisions pertaining to conservation initiatives.
- Honour of being in such a membership category.

Future focuses and membership benefits

The 2023 WAZA Goal on Animal Welfare Evaluation Processes will be an important milestone in WAZA's commitment to animal welfare and continuous improvement of welfare standards globally. We asked our members what their awareness and understanding of the Goal is, and found that the majority are aware of the goal, but their understanding of the requirement drops slightly. The Executive Office and WAZA Council will examine how to better promote the requirements, and take onboard our members' suggestion of how to position WAZA as the global voice of welfare accredited zoos and aquariums after the Goal is achieved.

Figure 5. Awareness of WAZA 2023 Goal on Animal Welfare Evaluation Process

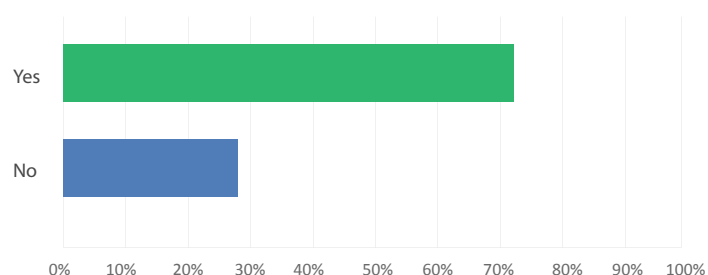
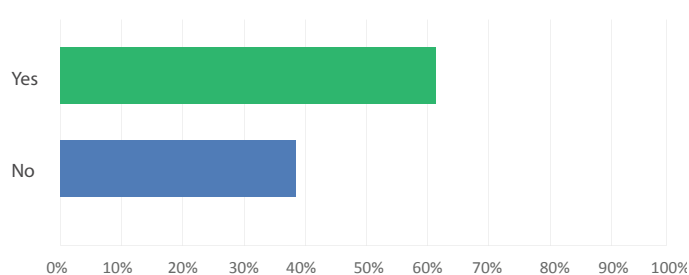


Figure 6. Understanding of what is required by the 2023 goal



Additionally, the survey results showed that members saw it as a positive step that WAZA has visibly increased its engagement with global partners. Some members remarked that they would like to see more engagement from WAZA with their regions, hosting of more virtual meetings, and elimination of language barriers to ensure greater inclusivity – which was a comment also highlighted in the 2019 survey. We are grateful for these constructive comments and are working on assimilating the different suggestions. In the meantime, we were pleased to be able to simultaneously translate the 76th WAZA Annual Conference into three additional languages, minimising the language barrier for some of our members.

The WAZA Council and Executive Office would like to thank our members again for sharing your invaluable opinions with us. We plan to discuss some of the key suggestions in an upcoming strategic meeting with the new Council members, and should you have any further feedback or comments, please don't hesitate to write to Janet Ho at membership@waza.org.

WAZA members voting at the WAZA Annual General Meeting in Buenos Aires, 2019 © WAZA



New Container Requirements for Giraffe in the IATA LAR

Andreas Kaufmann

WAZA/EAZA Consultant, GoWild

Thanks to the work of the WAZA Associations Committee and particular contributions by the Latin American Association of Zoos and Aquariums (ALPZA), European Association of Zoos and Aquaria (EAZA), Japanese Association of Zoos and Aquariums (JAZA), Pan-African Association of Zoos and Aquaria (PAAZA) and Zoo and Aquarium Association Australasia (ZAA), WAZA was able to provide feedback on the revised version of the International Air Transport Association (IATA) Live Animals Regulations (LAR) for giraffe containers (Container Requirement 73A).

The body within IATA responsible for the development of regulations pertaining to the air transport of live animals is the Live Animals and Perishables Board (LAPB). Expertise on animal welfare, animal care, identification, animal behaviour, scientific progress and commercial trade requirements are provided by government agencies involved in the regulation of animal transportation and the LAPB's Advisory Panel. WAZA has been serving on the LAPB Advisory Panel since 2012 through its representative Andreas Kaufmann.

While discussing WAZA initiated amendments to Container Requirement (CR) 73 during the IATA Live Animals and Perishables Board (LAPB) virtual meeting in November last year, it transpired that no suitable provisions were available for shipping juvenile as well as adult giraffe by air. The (then) latest version of the Live Animals Regulations (LAR) stated, that when giraffe exceed an overall height of approximately 1,5 meters (which would be the case at the time of birth), CR73 should not be used and suggested the use of CR2, originally designed for domestic horses and large camels. Investigating the use of CR2 for giraffe transportation also raised concerns, especially with airline representatives.

This led to the formation of a temporary task force, comprising of LAPB, Animal Care Team, and Advisory Panel members, tasked with developing a viable solution for the transport of giraffe by air.

At the start of 2021, the task force had an initial call to review and discuss available documents, guidelines, ideas, and options, which over the following weeks, led to the drafting of a new container requirement for giraffe.

As a result of WAZA's seat on the Advisory Panel, it was possible to circulate the draft among WAZA members for input. Relevant expertise was received and incorporated into the proposal CR73A, which included information on container construction and design, ventilation, preparations before dispatch, guidance on feed and watering, general care and loading as well as special requirements for giraffe.

The final proposal was presented to and endorsed by the IATA LAPB during its spring meeting in May 2021. The outcome of the meeting was that the IATA LAR will be amended accordingly. New images which will serve as crate examples will be drawn from pictures provided by members of the task force and complete the new container requirements for giraffe which will enter into force on 1 January 2022.

A big thank you to everyone who contributed to this successful process. We would welcome your feedback on whether you believe that the new CR73A would be appropriate for okapi too.

Please feel free to contact me at letus@gowild.at or through the WAZA Executive Office.

Sustainable Palm Oil Awareness and Sourcing at your Zoo or Aquarium

Tracey Gazibara

Co-chair of the WAZA Subcommittee on Sustainable Palm Oil, and Cheyenne Mountain Zoo

WAZA's commitment to certified sustainable palm oil (CSPO) has grown even stronger since 2017, when it first signed a Memorandum of Understanding (MoU) with the Roundtable on Sustainable Palm Oil (RSPO). The main goal of the MoU is to build consumer awareness and increase the demand for CSPO that is deforestation-free.

To fulfil the goals of the MoU, a WAZA Palm Oil subcommittee, under the Conservation and Environmental Sustainability Committee (CESC), was established. The subcommittee has been working diligently to make progress on two of the main goals:

- 1** 50% of WAZA members will have sustainable palm oil awareness programmes, and
- 2** 50% of WAZA members will demonstrate their commitment to sustainable palm oil by converting to the use of non-sustainable palm oil products used at their facilities.

Over the last couple of years, the subcommittee has developed several tools to help WAZA members meet the goals of the MoU. We are excited to present our latest resource which adds to an exhaustive existing library of resources, a digital [WAZA Short Guide: Sourcing Sustainable Palm Oil at your Zoo or Aquarium](#).

The short guide is an excellent resource to help zoos and aquariums either start or continue their journey towards using only CSPO that is deforestation-free. The guide is filled with easy-to-use templates and informative, inspiring, case studies from 10 WAZA members who already support CSPO and are working to make it the norm. With more than 700 million people visiting zoos and aquariums each year, WAZA members can play a significant role in creating a sustainable palm oil movement. Our guests, as consumers, give us an opportunity to empower them to make sustainable choices when doing their personal shopping. The guide offers several ways to interact with guests and help increase consumer awareness around sustainable palm oil.



As important as it is to create consumer awareness at your zoo and aquarium, it is just as important that your facility is converting from non-sustainable palm oil sourcing practices to the purchase of sustainable palm oil. The guide gives examples of how to get started as well as tips on overcoming barriers that you may encounter. Converting all purchasing to sustainable palm oil can't happen overnight. It is a process that takes time and due diligence – it is all part of the journey toward sustainable palm oil.

The guide also covers a topic that has often been in the media spotlight – boycotting palm oil. We hope the information in the guide will encourage zoos and aquariums to adopt a sustainable and informed mindset with regards to boycotting palm oil. The reality is that boycotting palm oil is not a sustainable option. Oil palms produce four to 10 times more oil per hectare than other crops, such as soy or canola. Sustainable palm oil can be a more environmentally friendly oil because less land is needed to produce the same amount of oil. If we boycott palm oil altogether, it is likely another crop will take its place that will potentially be more damaging to the environment. The use and purchase of CSPO is the answer.

The WAZA short guide will supply you with further information about the RSPO and why they are the most comprehensive certification standard currently available. With seven Principles and 39 Criteria that members must follow, it proves to be a robust certification.

The guide also includes a full page of additional resources including a link to the WAZA Palm Oil Resource Website created by the palm oil subcommittee earlier this year. Another exciting tool that will soon be available in some countries (US, Canada, UK, Australia and New Zealand) is a new sustainable palm oil shopping mobile app – PalmOil Scan. A smaller group of the palm oil subcommittee has been working on the development of the app for more than two years and we look forward to it becoming reality. Stay tuned for more information over the next couple of months.

I would like to give special thanks to Paula Cerdán at WAZA and Chelsea Wellmer at Cheyenne Mountain Zoo for all their hard work on this guide. If it were not for all their hard work, it would have taken much longer for the guide to be published. From their initial research, to the written content, and the overall design, they did an amazing job!

I hope you will enjoy the guide and it will prove to be useful on your sustainable palm oil journey.

Oil palm workers.
© Centre for International
Forestry Research (CIFOR)



Smallholder producer showing
oil palm fruit in Pachiza, San
Martín, Perú. © Juan Carlos
Huayllapuma/Center for
International Forestry
Research

**Visit the WAZA website to
download the *WAZA Short Guide:
Sourcing Sustainable Palm Oil at
your Zoo or Aquarium.***

**It is now also available in French
and Spanish, and we hope to
have it translated into additional
languages.**



Building Capacity for Species Conservation Planning

Jamieson Copsey, Caroline Lees, Onnie Byers

Conservation Planning Specialist Group

From principles to practice

What does effective planning for species conservation entail? This is the question that CPSG's resource, *Species Conservation Planning Principles & Steps* (CPSG 2020), was designed to answer. It outlines seven planning principles and eight general planning steps that ensure effective plans are produced. Moreover, CPSG's approach has been proven to lead to a reversal in the decline in the status of threatened species. The publication provides support for those looking to fulfil the planning component of the SSC's Species Conservation Cycle. In this article we will share additional resources available through CPSG that can help zoo and aquarium professionals acquire the skills necessary to put these principles and steps into practice.

Training

CPSG has been delivering training in process design, collaborative species planning and quantitative risk assessment for more than twenty years. Since the appointment of our first training officer in 2017, we have invested in the development of a more structured capacity building programme, established new courses and complemented in-person training with our seven-week, online *Facilitating Species Conservation Planning Workshops* course. Over 500 individuals have completed this selective training course, more than 250 of whom are from zoos and aquaria (See insert on next page).

The course runs bi-annually, in Autumn and Spring, and regularly receives more than 200 applications for each iteration. In-person, four-day condensed versions of this online course are also hosted by institutions who wish to make the training available to their staff and members of other institutions nationally, such as at White Oak Conservation, in Florida, USA and Chester Zoo, UK.

We also provide in-person training in *Wildlife Disease Risk Analysis (WDRA)* and *Ex Situ Conservation Assessment and Planning*. We are pleased to announce that both courses will be launched online in early 2022. As new planning tools and processes are developed, such as *Assess to Plan (A2P)*, additional training courses will be designed to enable others to put these approaches into practice. Over the next year, we will be developing *Advanced Facilitation & Process Design* training to support select groups of competent planners and facilitators in tackling particularly complex and challenging planning situations.

“[The CPSG] course's learning contributed to the understanding and development of the Zoo's population plan, together with the team. The course concepts and practices are fundamental for people who work *ex situ*”.

CPSG online course participant, 2018

Mentoring opportunities

Training courses are an excellent way to introduce people to planning and facilitation tools and help them to develop knowledge and skills. However, it is when that training is put into practice that deeper learning takes root. Our Professional Development Path programme is an intensive mentoring and coaching process designed to provide this practice.

The Facilitator Development Path is for individuals who show strong potential to be effective species conservation planning facilitators. We pair mentees with experienced planners for 18 months of support in the design and facilitation of species conservation planning processes. The aim is that each mentee is a competent and confident planner by the end of the programme. They should then be able to lead on the design and facilitation of their own organisation's species conservation planning work, and support CPSG in responding to requests as more organisations (including government bodies) seek our input.

The Technical Development Path is designed for individuals with a population biology background and an aptitude for quantitative risk assessment, particularly in the use of the Population Viability Analysis (PVA) tool Vortex. Over an 18-month period, mentees will be supported to develop their ability to put these skills into practice within the context of a multi-stakeholder workshop, enabling groups to make more informed decisions regarding the impact of threats and potential interventions.

This year we're delighted to announce the first seven individuals – including the co-chairs of two IUCN Species Survival Commission (SSC) Specialist Groups and staff from Auckland Zoo (New Zealand), Point Defiance Zoo (USA) and Taipei Zoo (Taiwan) – to successfully complete the Facilitator Development Path.

Now recognised as CPSG Species Conservation Planning Facilitators, these individuals are leading in planning design and facilitation for species as diverse as gibbons, butterflies, hornbills and iguanas.

There are currently 17 mentees on our Professional Development Path programme including staff from nine zoos or zoo associations. By the end of the current SSC quadrennium, we aim to have nearly 100 Professional Development Path graduates able to design and facilitate their own workshops and mentor others in the process, so we will be recruiting!

Assessing impacts

Our 2021 annual post-training survey provides evidence that participants who have completed our training programme feel more confident and motivated to undertake species conservation planning work. Half of the survey respondents report having been involved in designing and/or facilitating one or more species conservation planning processes in 2020. Collectively, respondents report planning for several hundred species across South, Central and North America, Europe, the Middle East, Africa, the Indian Ocean, and Asia. Ongoing annual surveys alongside more in-depth, semi-structured interviews will continue to inform us on the difference the training is making and how we could improve it further.

Insights on CPSG training from Zoos Victoria CEO Jenny Gray (CPSG online course, 2020)

Every day, zoo and aquarium staff are engaged in the formulation of complex plans. The diversity of expertise, variety of stakeholders and often large investments, challenge leaders and participants. Plans may include conservation action plans, enclosure designs and even improvement to species management. The complexity of the subject matter necessitates good processes and decision-making skills to navigate the various vested interests and emotional content.

The CPSG Conservation Planning Facilitation course is full of clever tools and techniques to address the complexity of planning required by zoos and aquariums. Following the eight-step process, the training will empower you to plan and undertake a complex planning exercise. The advice is practical, presented in easy to access videos and documents. While focused on conservation planning, the course handbook is an excellent guide for anyone leading or participating in any kind of strategic planning.

Every day we facilitate discussion, between colleagues, with the public and with decision makers. I have found huge benefits in improving my facilitation skills, from working with the IUCN SSC on Reverse the Red to negotiating for Covid relief funding from our government.

What would you do with better facilitation skills?

We know planning works!

We know from our own research that the type of collaborative species conservation planning processes that form the basis of our training programme can be significant catalysts for positive change. Lees et al.'s 2021 review of 35 planning case studies carried out in 23 countries over 13 years, revealed that the aggregate decline to extinction slowed in the years following CPSG workshops, and was reversed within 15 years (Figure 1).

Though it was on-ground action that led to changes in status for these species, evidence indicates that the planning process provided a turning point, helping stakeholders to transition to more effective ways of working together.

Call to action

We now have the Principles and Steps to planning, the training and mentoring to put it into practice, and the evidence that this approach works. As we scale up our capacity building efforts, there are opportunities to support zoo-inspired initiatives such as Reverse the Red, designed to catalyse collaborative species conservation action, in part through increasing national capacity to Assess-Plan-Act. Looking ahead, we will be excited to work with a growing number of zoos and aquaria in a collective effort to ensure that all threatened species have the planning support they need in place to secure their long-term presence in this ever-changing and vibrant world.

To find out more about the training opportunities available, please email jamie@cpsg.org.

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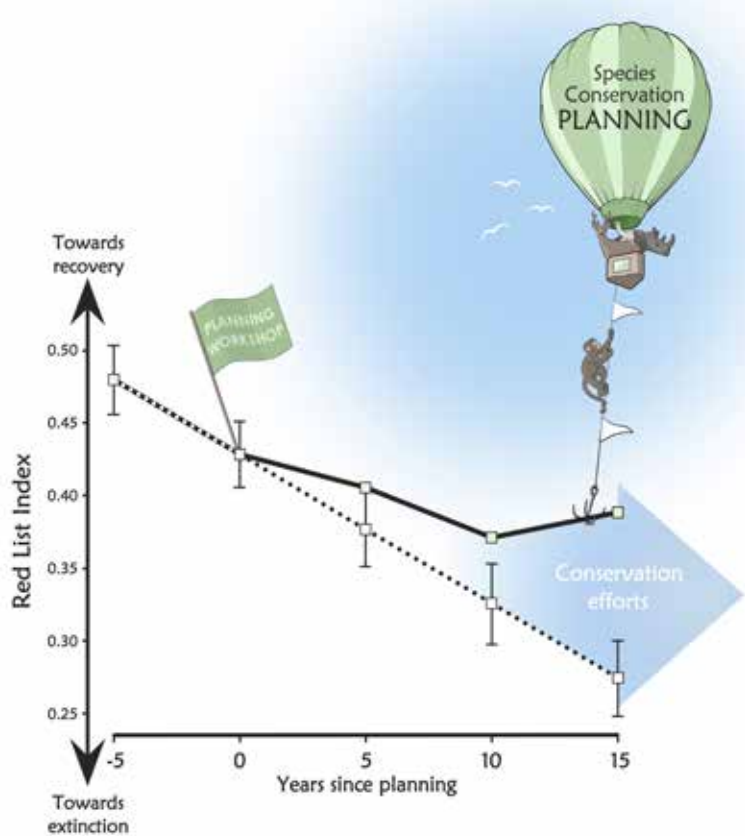


Figure 1. Summary graphic to illustrate the simulated trend towards extinction predicted by pre-planning changes in extinction risk (dotted line) and the reported trajectory of the species studied (solid line) showing a slowed aggregate decline followed by an up-turn 15 years after the first CPSG planning workshop.

CPSG Species Conservation Planning Facilitator, Karen Goodrowe-Beck outlines her experiences on the Development Path programme

I became involved with CPSG in the mid 1990s by participating in and facilitating workshops but did not receive formal training until I took the Facilitator's Training course in 2016. I was selected for CPSG's Development Path for Facilitating Species Conservation in 2018 and was provided a wonderful mentor in Dr Anne Baker (Executive Director of Amphibian Ark and Convenor of CPSG's North America Regional Resource Center). This rich experience enabled me to help facilitate conservation planning workshops for the Columbian white-tailed deer and the Javan leopard. I then worked with the SSC's Iguana Specialist Group on a conservation action plan workshop for two iguana species residing on the Honduran Bay Islands (see IUCN/SSC Iguana Specialist Group website for the final plans). This was a stretch for me because the two species reside on different islands, each with different local governments and partners, and the workshop was conducted in two different languages. I am now assisting the Species Conservation Toolkit Initiative to develop specific action steps for their strategic plan.

How does this all relate to my "real" job as a General Curator? Not only can the training be applied to facilitating in-house discussions, but participation in a variety of workshops further reinforces for me the benefit of the One Plan Approach and the role zoos and aquariums can play in conservation.

ALPZA's Certified Conservation Projects

Christian Olaciregui

ALPZA Conservation Committee coordinator

Biodiversity conservation is one of the Latin American Association of Zoos and Aquariums' (ALPZA) core focus areas. In 2010, the ALPZA Conservation Committee created the Conservation Projects Certification Process as an instrument to strengthen, recognise and communicate the conservation actions of the association's members.

The main objective of the Certification Process is to encourage the institutions to organise their conservation initiatives towards the facilitation of project management and to increase their impact. Achieving this has never been more important. In the most recent edition of the Living Planet Index, published at the end of 2020, Latin America is reported to be the region with the greatest decrease in populations of vertebrates, mainly fish, amphibians, and reptiles, due to habitat destruction and overexploitation.

ALPZA members receive ongoing support during the application process for the Conservation Project Certification. This process is viewed as an opportunity and a tool for members to review their projects using a standardised set of criteria. It is also a way to increase visibility of the efforts and achievements of the Latin American zoo and aquarium community in the pursuit of global conservation goals. To date, 17 projects have obtained the ALPZA certification and are being developed in eight Latin American countries.

These initiatives focus on the protection of 45 threatened species and strategic ecosystems, and advance *ex situ* breeding, translocation, rescue and

rehabilitation of wildlife, conservation medicine, management of protected areas, *in situ* monitoring and environmental education for species conservation.

Thirty-three species of amphibians are being conserved by five ALPZA-certified projects. ALPZA member, the Amaru Biopark, manages an Amphibian Conservation Center with the goal of conserving 28 threatened amphibian species in Ecuador, through *ex situ* breeding, field research and by educating local citizens. The Africam Safari, Mexico manages an *ex situ* breeding and translocation project for the large crested toad (*Incilius cristata*). While the National Zoo of Chile runs the Darwin's Frog Project to conserve two species of the genus *Rhinoderma* (*darwinii* and *rufum*) through the management of *ex situ* populations. Likewise, the Sao Paulo Zoo strives to recover the natural populations of *Scinax alcatraz*, an endemic frog, through *in situ* and *ex situ* actions, and the Cali Zoo monitors a population of the golden poison frog (*Phyllobates terribilis*) through a conservation programme for this species.

Ukumarí Biopark Wetlands Conservation
programme. © Ukumarí Biopark



Five of the seven species of sea turtles benefit from three certified projects: in Mexico, the Xcaret Park carries out the Sea Turtle Conservation Program and in the south of the continent, Mundo Marino Foundation implements the Sea Turtle Conservation Project in the Argentinian Sea. Finally, through the AGHN Marine Conservation Center, La Aurora National Zoological Park seeks to protect sea turtles that reach the Pacific coast in southern Guatemala. All three initiatives contribute to the protection of the species through education, on-site monitoring, and rescue and rehabilitation actions.

The three projects that promote the conservation of bird species integrate *in situ* and *ex situ* actions. In Argentina, the Buenos Aires Ecopark manages the Andean Condor Project, while the Mundo Marino Foundation monitors local beaches to identify birds contaminated with petrol to reduce the impact on the Magellanic penguin population. Nearby, in Paraguay, Itaipú Binacional runs the Canindeyú Project to restore a population of the critically endangered blue and yellow macaw (*Ara ararauna*) in the country, through breeding under human care, habitat assessment and education.

The four mammal projects focus on two carnivores and two primates. In the Atlantic Forest, Brazil, the Onças de Iguaçu Project, which is supported by ZooParc de Beauval, France, works to conserve jaguars (*Panthera onca*) through research, involvement of local communities and the promotion of coexistence between people and jaguars.



Darwin's fox. © Buin Zoo



A team from Cali Zoo monitoring a wild population of the golden poison frog. © Cali Zoo



The Mundo Marino Foundation monitors the beaches to identify birds contaminated with petrol and reduce the impact on the Magellanic penguin.
© Mundo Marino Foundation



White-footed tamarins are being conserved through ACOPAZOA's certified project. © ACOPAZOA

In Chile, Buin Zoo is studying the importance of diseases in wild populations of Darwin's fox (*Lycalopex fulvipes*) to reduce their impact on the survival of the species through preventive actions and training. And, in the north of South America, the two species of callitrichids endemic to Colombia are subject to conservation measures: Fundación Proyecto Tití promotes the conservation of the cotton-top tamarin (*Saguinus oedipus*) and its habitat through research, forest protection strategies, education and community development. Similarly, the White-footed Tamarin Project, managed by the Asociación Colombiana de Parques Zoológicos y Acuarios (ACOPAZOA) contributes to the conservation of the white-footed tamarin (*Saguinus leucopus*) through *ex situ* and *in situ* activities, education and training.

Finally, two projects focus on natural ecosystems. Fundación Temaikèn administers the Osununú Natural Reserve Project, which protects and maintains biological and cultural diversity in an area of the Paraná Forest, through the management and creation or expansion of natural protected areas. Likewise, the Ukumarí Biopark manages the Wetlands Conservation Program, which aims to recover and restore the ecosystems associated with the Consota river basin, in central Colombia, linking society with the conservation of these ecosystems that are home to many species of fauna and flora.

It is expected that the continued management of the ALPZA's Certified Conservation Projects, will link more initiatives to consolidate the Association's conservation network, considering the benefits of the process and its importance as a standard in the Association's Accreditation Process.

Certified Project

	ALPZA Certified Projects	Year
1	<i>Saguinus leucopus</i> International Conservation programme	2011
2	Andean Condor Conservation project	2012
3	Scinax alcatraz Conservation programme. Carried out within the framework of the National Action Plan for the Conservation of Endangered Island Herpetofauna.	2013
4	Cotton-top Tamarin (<i>Saguinus oedipus</i>) Conservation programme	2014
5	Osununú Natural Reserve programme	2014
6	Darwin's Frog (<i>Rhinoderma darwini</i>) Conservation project	2015
7	Marine Turtles Conservation Programme in Quintana Roo, Mexico	2016
8	Marine Turtles of the Argentinean Sea Conservation project	2017
9	Large-crested Toad (<i>Ollotis cristata</i>) Conservation project	2017
10	Magellanic Penguin (<i>Spheniscus magellanicus</i>) Conservation project	2017
11	Golden Poison Frog (<i>Phylllobates terribilis</i>) Conservation project	2018
12	Saving Darwin's fox Conservation project	2018
13	Amaru Biopark Amphibian Conservation Centre project	2019
14	Ukumarí Biopark Wetlands Conservation project	2020
15	Onças Do Iguaçu (<i>Jaguars of Iguazu</i>) Conservation project	2020
16	Marine Conservation Centre	2021
17	Canindeyú project	2021

Wellington Zoo's Happy Animals interpretive installation helps visitors understand the Five Domains Model and how it is applied across the zoo to ensure the animals are receiving high standards of care.

© Wellington Zoo



Happy Animals Interpreting the Five Domains Model of Animal Welfare at Wellington Zoo

Amy Hughes

Director Communication, Experience & Conservation, Wellington Zoo

The *kaupapa* (ethos) at Wellington Zoo, in New Zealand, is *Me Tiaki, Kia ora!* which means we must take care of our environment so all things will thrive. As a progressive zoo, animal welfare is a critical part of this *kaupapa*.

For a long time, Wellington Zoo, like many zoos and aquariums, relied on a 'show don't tell' way of engaging visitors with the animal care work of the zoo team, and the welfare of zoo animals. We also delivered ad hoc animal care engagement in animal talks, learning sessions, and through visitors experiencing the work of the veterinary team at The Nest Te Kōhanga, the zoo's animal hospital. This approach had some success with visitor research conducted in 2014, showing visitors were positive in their perceptions of the animals at Wellington Zoo being 'healthy and well cared for'. However, aside from the veterinary care and science on display to visitors in The Nest Te Kōhanga, the zoo wasn't communicating in-depth about the scientific and professional approach to animal welfare across the zoo.

In line with the Zoo and Aquarium Association Australasia's (ZAA) introduction of animal welfare accreditation in 2014 and the publication of WAZA's Caring for Wildlife 2015, there was a global shift to using the Five Domains Model of Animal Welfare to measure animal welfare in zoos and aquariums. As a zoo, we understand the internationally recognised science behind the Five Domains Model, and it was important that we interpret and share this science in an accessible way that our audience could easily understand. Recent research shows our Wellington community believes that good animal welfare is the single most important aspect that a zoo provides, ahead of conservation and education. We want to ensure visitors feel confident that the animals at Wellington Zoo are receiving excellent animal care and therefore experiencing positive welfare.

Our challenge was to take the science-based principles of the Five Domains Model and interpret them into a story that was both accessible and engaging for zoo visitors. In 2016 Wellington Zoo's Community Engagement team started to develop an interpretive project to engage Wellington Zoo

visitors with the Five Domains Model. This was initially focused on several monkey species that live in proximity at the zoo; previously, these species had standard species sign information label interpretation.

The first installation was completed in 2018. There is no reference to the Five Domains Model in the initial interpretive installation, instead highlighting each Domain under the banner of Happy Animals. The concept of a 'Happy Animal' is easily understood by zoo visitors of all ages and distils the essence of the scientific approach. The team designed brightly coloured three-dimensional cubes depicting each of the Five Domains, including animal photos, quotes and photos from our Animal Care and Science team, and questions that link to visitors' own experience with these domains, i.e. health, nutrition, and environment. These cubes are attractive, simple, and tactile. Children love to read them, climb on them, and answer the questions posed about their own health and wellbeing.

Rather than just install one interpretive element and have zoo visitors infer that this information related to all animals at the zoo, we decided to extend this project into a series of videos played in strategic locations across the zoo. It was important this information came from the people who are implementing it every day, so members of the zoo's Animal Care and Science team were filmed talking about the Five Domains Model and how it is applied across the zoo. The videos provide examples of habitat design, enrichment, diet and nutrition, health and how care at Wellington Zoo adds up to animals' experiencing positive welfare.

In addition to video installations, as the zoo has redeveloped animal habitats and signage, Happy Animals interpretive elements have been incorporated into new developments for some flagship species, most notably giraffe and chimpanzee. In these spaces, large interpretive panels detail the specificity of applying the Five Domains Model to these animals and are illustrated with photos of members of the Animal Care and Science team showcasing the work the people of the zoo do to ensure animals that live at the zoo receive the best possible care.

Good animal welfare is critical to positive community perceptions of Wellington Zoo. As mentioned above, the Wellington community believe that animal welfare is the most crucial aspect of a zoo. Therefore, it is vital that as a profession, zoos and aquariums tell these stories of animal welfare and care to our visitors and onward to our wider communities.



A close up of one of the Happy Animals interpretive installations
© Wellington Zoo

Research conducted in 2019 shows the impact of the Happy Animals project – a high proportion (81%) of Wellington residents understand that Wellington Zoo takes great care of its animals and 19% of Wellington locals are aware that we use the Five Domains Model of Animal Welfare to ensure the best care for Wellington zoo's animals. This is an excellent result for messaging that has been in the zoo for only three years and achieves the goal outlined in [Social Change for Conservation: The World Zoo and Aquarium Conservation Education Strategy \(2020\)](#) of our commitment to further positive audience perceptions of zoos and aquariums through quality conservation education.

As zoo and aquarium professionals, it is imperative that we take the lead in communicating the science of animal welfare to our visitors and communities to enhance audience perceptions of zoos and aquariums. At Wellington Zoo, there has been a rollout of integrated animal welfare messaging in a meaningful way highlighting the science behind the story and the professionalism of the zoo team. This work has given zoo staff across the organisation knowledge and confidence in interpreting the Five Domains Model in conversations with visitors.

The zoo will continue to expand its Happy Animals messaging in future developments.



Al Ain Zoo Offers Virtual Education Programmes for Students

Al Ain Zoo

Inspiring ideas and a passionate approach are usually the best fuel for great projects and brilliant endeavours, which thankfully have not disappeared, even under the constraints of the current global pandemic. Al Ain Zoo, in United Arab Emirates (UAE), has ensured this by cultivating and investing in the creation of several virtual youth programmes for students of all ages.

The virtual programmes are especially designed with an innovative mindset that makes them more attractive and engaging to new generations that have been affected by the implementation of mandatory remote learning. The main objective of these virtual programmes is to encourage students to continue their journey of seeking knowledge and education, regardless of their circumstances.

The school programmes team at Al Ain Zoo has made serious efforts to create multiple virtual programmes in non-traditional interactive ways that take students on a fascinating journey to discover natural wildlife and its treasures while learning rich and valuable information. These virtual trips are designed to provide students with various educational and cognitive skills through a range of nature conservation subjects and through direct interaction with a plethora of experienced scientific experts.

Interesting wildlife topics

The programmes cover exciting topics related to nature and wildlife, like Animal Body Coverings, which focuses on the different species of animals and what covers their bodies, as well as Animal Classification and Plant and Animal Life Cycles programmes, which include an interactive meeting or live online tour to meet new friends in the different animal areas within the zoo, while the Animal Teeth programme focuses on food groups and the difference between herbivores and carnivores in terms of tooth structure and shape.

In the same framework, the zoo's Sheikh Zayed Desert Learning Centre – the first sustainable environmental building in the United Arab Emirates dedicated to education – offers various programmes, such as the World of Fossils programme, which takes students on an exciting journey through time. The students learn about the different species found as fossils in the United Arab Emirates, how fossils are formed, and how they are used to excavate them. The programmes also cover rocks and geology.

The Centre also offers a sustainability programme that aims to teach students the difference between renewable and non-renewable energy and the meaning of a carbon footprint. The Centre also introduces them to the various achievements of the Founding Father, the late Sheikh Zayed bin Sultan Al Nahyan, through an audio narrative of history and an account of his vision and approach, as well as the many breakthroughs and efforts he made to preserve the environmental nature and historical heritage of the UAE.

The virtual programmes also address a range of awareness-raising programmes on wild animals and farm animals, where students learn about the differences between farm and wild animals. In addition, students learn about animals' natural habitats and the different adaptations of these species in their natural environments. Students also get to know the star occupants and the various professions within the zoo and their importance in providing the best care for animals, such as veterinarians, animal monitoring officers, and bird trainers.

Heritage and history programmes

Among the interesting heritage and history-oriented programs, there's the Following Zayed's Steps tour programme which focuses on the UAE's legacy when it comes to traditional dress and the way of life and shows the culture of the Emirati and the variables

of life in the desert environment in past times, the people's notion of sustainability, and how they were applied in the past. Students get acquainted with the importance of camels to the Arabs by learning about their characteristics and traits and their ability to adapt and function in the desert through the Camels programme.

Heritage arts and crafts are also given their fair share of the limelight. The Centre provides students with an introductory programme to the heritage crafts that characterise the UAE people living by the coast, in the desert, near oases and in the mountains, in an interactive educational format.

Raising community awareness

All educational programmes have been designed to suit students from kindergarten to high school, in both Arabic and English languages, and support existing educational curricula, adding more topics to broaden students' knowledge and awareness.

Through these programmes, the zoo seeks to raise awareness among the community, particularly among students, about the importance of nature conservation, wildlife and how to preserve endangered species, and to inform them about the zoo's efforts and achievements in promoting positive behaviour towards the environment and nature conservation.



Students are able to tune into a virtual educational programme from the comfort of home or school.

© Al Ain Zoo

Al Ain Zoo, in United Arab Emirates (UAE), has ensured this by cultivating and investing in the creation of several virtual youth programmes for students of all ages.

Looking Ahead Zoo Zürich's Masterplan 2050

Dr Severin Dressen

CEO Zoo Zürich

The challenges of our time are universal: biodiversity loss, habitat destruction, global change. How we face them may vary – but what matters is that we all take action. This is the path Zoo Zürich has chosen.

The matter at hand

At the core of it, there is a fundamental question: How do we contribute to the enormous societal task of putting the brakes on biodiversity loss and habitat destruction and mitigating the effects of global change? Like many zoos, we at Zoo Zürich, Switzerland, are asking ourselves this integral question. While all WAZA members share the same vision, we all differ in the way we approach this daunting, anthropogenic challenge.

For us in Zürich, last year – in the midst of the corona pandemic's first wave – we unveiled our Lewa Savanna exhibit: the last project of the Zoo's Master Plan 2020. This was the perfect moment for us to step back from daily business and look at what Zoo Zürich has achieved over the last decades and what we must do to maintain the innovative spirit that has shaped Zoo Zürich in the past.

Now, after a year of enlightening brainstorming, fruitful discussions, and a lot of hard work, Zoo Zürich has finally published its new Master Plan 2050. It is our roadmap for the upcoming years and decades and lays down how we aim to continue our work in education, research and both *in situ* and *ex situ* conservation. The following article provides a general overview of our roadmap. If you are interested in learning more about Zoo Zürich's Master Plan 2050, you can find a short video and more information on our website at zoo.ch/zukunft.

Less is more in education

Getting the message across to your audiences can be challenging. With many interesting things to see and explore in the zoo, our educational messages may get lost, especially if the main motivation for a visit to the zoo is to have a good time and not necessarily to learn something new.

Face-to-face interactions with our guests with our zoo guides and volunteers, especially during school trips and guided tours, allow for tailored communication and are the most efficient way to get our messages across. However, we do reach the largest number of our guests through our exhibitions. As the distractions

are plentiful in this setting, we need to prioritise our messages. And if we must prioritise, we choose that our guests need not necessarily learn how heavy an elephant is or how high a giraffe is, but instead how every single person can contribute to conservation. As such, we communicate three key messages repeatedly across the zoo:

Sketch of a golden lion tamarin.
© Susanne Weber/Zoo Zürich

- 1 How you can contribute to conservation by adapting your diet**
- 2 How you can support local biodiversity by altering the surroundings of your living space**
- 3 How you can support the *in situ* conservation projects of Zoo Zürich**

With just one example per message, these three key messages are phrased positively and are easy to implement by most of our guests. They allow our visitors to take home something achievable. And they will enable us to re-adjust the examples according to the most pressing needs of conservation and biodiversity policies.

While we will continue to provide biological knowledge, we want to be absolutely certain that most of our guests take home our three key messages. Periodically conducted impact studies will tell us if we are on the right track.

Walk the conservation talk

At Zoo Zürich, our local conservation efforts are mainly characterised by our sustainability work. For years, the zoo has been CO₂ neutral. Where we still produce CO₂, for example, through our building materials, food, or commuter traffic, we offset our footprint. In other areas, for example, our heating, we produce all our heat on-site, powered by locally sourced wood chips. In our gastronomy division, half of our menu is vegan or vegetarian, with all remaining fish and meat being sourced locally in Switzerland. We will continue to reduce our footprint and provide transparency about our efforts in our annual sustainability report. Globally, we continue our *in situ* conservation efforts in our eight focal projects. In addition, our conservation department will further expand our conservation work, both by adding additional projects as well as by increasing the number of resources allocated to our *in situ* conservation efforts.



A surge in research

We have great potential to contribute to important, cutting-edge research that we have not yet fully tapped into. For example, many of the species we keep in our collection are as of yet poorly studied. Understanding their behaviour, dietary needs, space use or social dynamics – among other topics – will not only improve our own husbandry but also allow us to improve the quality of our *in situ* conservation efforts. Another pressing issue, especially for the world's megafauna, is mitigating human-animal conflicts. We will contribute to these efforts by researching effective ways of reducing human-animal conflicts, trialling them with animals both in our *in situ* projects as well as in our collection. Our research department conducts its own research but also offers a framework for external collaborations. Zoos provide ideal platforms for long-term studies, something that can be challenging in modern university settings.

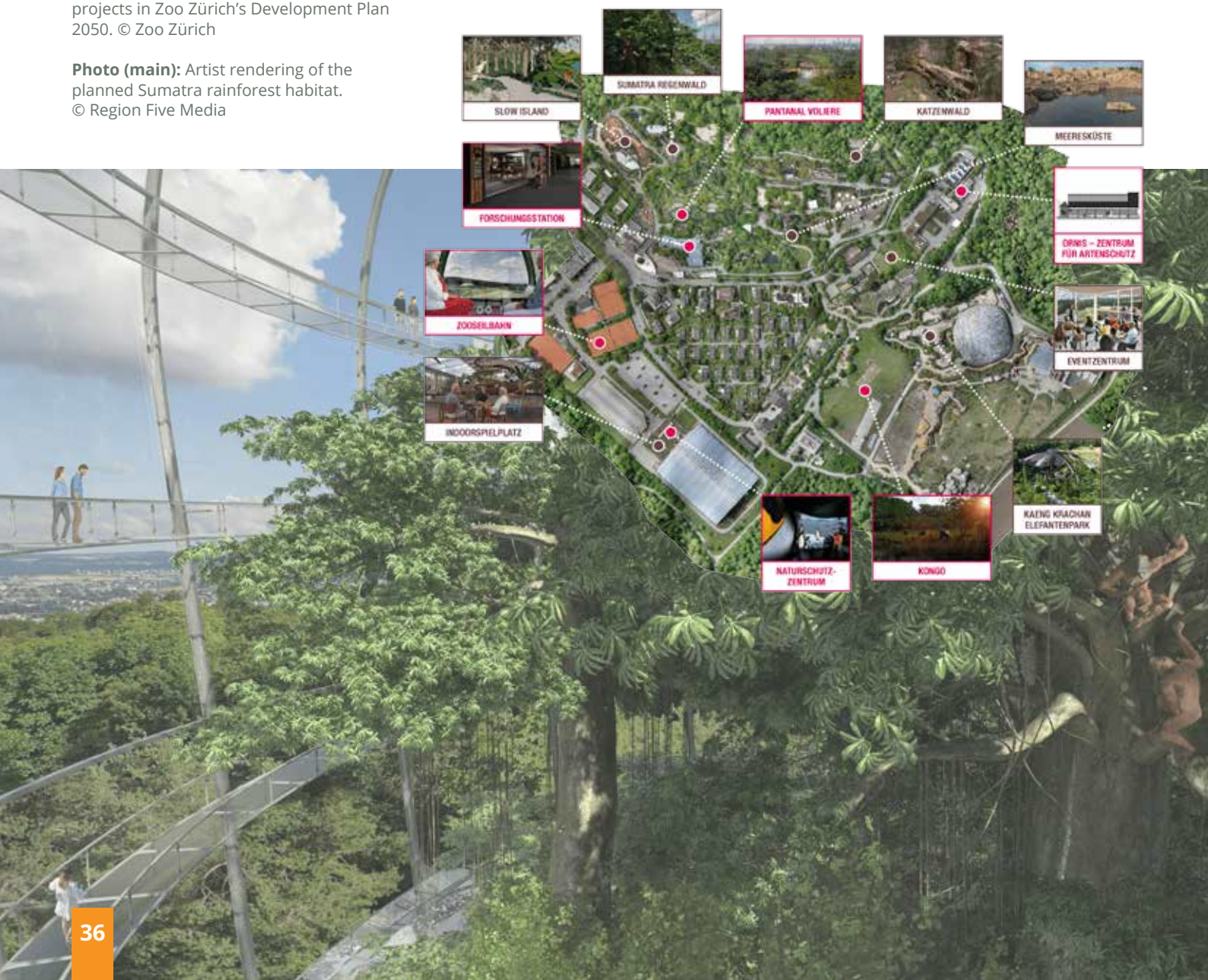
Photo (inset) General plan for construction projects in Zoo Zürich's Development Plan 2050. © Zoo Zürich

Photo (main): Artist rendering of the planned Sumatra rainforest habitat. © Region Five Media

Exploring new dimensions

Once all projects of the new Master Plan are completed, Zoo Zürich will consist of 11 habitats. Some of them already exist, such as the Masoala Rainforest and Lewa Savanna, while others have yet to be built. We gave the four upcoming lighthouse projects the working titles of Pantanal, Congo, Sumatra rainforest and Seacoast. All these new habitats will fulfil several requirements (see list on following page).

Besides our 11 habitats, other projects are as crucial for the successful future of our zoo. We recently completed construction on a high-end breeding facility for endangered birds that is not open to visitors. Other projects include a conservation information centre featuring a 360° cinema screen to promote our global conservation activities, a publicly visible laboratory and research facility, and a convention centre for conferences, seminars, and our school programmes.



- 1 We want to further improve our husbandry by implementing innovative features, namely two key elements. One is to provide access to the “third dimension”, e.g., creating large air spaces for birds, or canopies for arboreal primates. The other one is the constant alteration of the habitat provided, for example, by rotating a species through different enclosures or by simulating rainy and dry seasons, hence altering the structure of the exhibit.
- 2 We focus on establishing mixed-species exhibits wherever possible.
- 3 The complex structures of the habitats, technological features and the mixed-species approach provide a high degree of physical and mental stimulation and challenges for the animals.
- 4 The species kept should either be part of long-term research projects or of an insurance population, whenever possible.
- 5 Each habitat is linked to an *in situ* conservation project.
- 6 The exhibit is designed in a way that immerses our guests into the habitat. Wherever possible, we invite our guests into the same space as the animals, without any barriers, and let them experience the respective characteristics of the third dimension, both underwater and in the air.

It takes more than two

What we plan can only be achieved because Zoo Zürich is privileged to have a highly motivated and talented team and the solid support of the local society. This support is essential, and we cannot exist without it. We could never work against the zeitgeist, but we can do our best to shape its development. This happens on a geographical scale much larger than our own direct sphere of influence, making our work in national, continental, and global associations a key element. Because, whether we like it or not, all zoos are in the same boat. In an ever more interconnected global society, a sub-standard zoo with appalling animal welfare does affect all our reputations, even if this zoo is on the other side of the planet. And our complex breeding programmes may suffer an unrecoverable blow if just a single nation changes its legislation, e.g., forbidding the husbandry of a particular species.

If maintaining societal support as well as our ability to tackle global change depend on our success as a community of zoos, then we really need to play to win.

We need innovative ideas, pushing the boundaries of what can be done, even at the risk of failure.

We need more intensified cooperation, abandoning silo thinking and truly assisting each other, even at the risk of being exploited.

We need transparency, sharing our successes and, even more importantly, our failures, even at the risk of being falsely pilloried.

The risks may be intimidating, but it is worth taking them.

Because if we do succeed in our efforts, we will make great strides both for our animals and our visitors. We will strengthen our role in society, and most importantly, we will have the power to make a substantial contribution to stop global change.



Red-ruffed lemur at Zoo Zürich.
© Albert Schmidmeister/Zoo Zürich

The Los Angeles Zoo Unveils Five-Year Conservation Strategic Plan



Building a micro-forest.
© Los Angeles Zoo

Carl Meyers

Los Angeles Zoo

Earlier this year, the Los Angeles (L.A.) Zoo's Director of Conservation Dr Jake Owens launched the zoo's six-pronged five-year Conservation Strategic Plan in a live keynote address. "The world's biodiversity reservoir is being drained at breakneck speed," Dr Owens said as he opened the keynote. "The current extinction rate is up to 1,000 times higher than the natural background rate, potentially exceeding even the rapid loss of dinosaurs 65 million years ago."

Combatting the challenges facing conservation and our massive loss of biodiversity was not the only threat on the zoo's mind when designing its five-year Conservation Strategic Plan. The loud outcry from the world, which shed a light on the massive injustices and inequalities our communities face, could not go unnoticed. It was clear that the L.A. Zoo needed one unified response to these two urgent threats: rampant biodiversity loss and social inequality.

Six areas in five years

The Conservation Strategic Plan is the first in the Los Angeles Zoo's history solely dedicated to wildlife conservation and aligns with the zoo's renewed efforts to have a collective impact both in Los Angeles and around the world. The plan guides the zoo's efforts for the next five years by leveraging its knowledge,

expertise, partnerships, and engagement with its diverse communities to focus on changing the landscape of conservation.

"This is historic for both the Los Angeles Zoo and the City of Los Angeles," said Denise M. Verret, CEO and Zoo Director of the L.A. Zoo. "Our zoo is the city's treasured resource for connecting Angelenos with wildlife and nature, and we are doubling down on that promise with this comprehensive strategy that includes every person in our community in the action to save wildlife. It is important to recognise that conservation has historically failed the communities most affected by the degradation of our environment. This is our city. This is our world. It will take all of us working together to preserve it."

The zoo is focusing on six key areas over the next five years to expand its impact: social and environmental justice, California conservation, illegal wildlife trade, conservation translocations, human-wildlife co-existence, and evidence-based conservation.

1 Social and environmental justice

For conservation to be successful, all people must have opportunities to engage in ways that are just and equitable. We will shape a more just and sustainable future.

2 California conservation

California has one of the highest rates of endemism and biodiversity in the world, making conservation in this region critically important. We will be leaders in efforts to save California's native wildlife.

3 Illegal wildlife trade

Combating the trade that threatens many of the world's wildlife species and endangers human health taps into our core strengths. We will combat the illegal wildlife trade as a refuge, partner, and advocate.

4 Conservation translocations

As threats to habitats worldwide increase, translocations, reintroductions, and releases of threatened animals are important to halting extinction and recovering populations. We will expand, guide, and improve wildlife release programmes.

5 Human-wildlife co-existence

For wildlife to survive, humans must thrive; reducing negative interactions between the two is critical. We will co-create solutions that benefit both wildlife and people.

6 Evidence-based conservation

Basing conservation action on research is the only way to increase efficacy and ensure long-term success. We will conduct and support research to develop effective conservation action.



Los Angeles Zoo animal keeper Chandra David with hatching condor egg. © Jamie Pham



Denise Verret and Jake Owens at condor release. © Los Angeles Zoo



Californian condor. © Jamie Pham



Peninsular pronghorn calves.
© Jamie Pham

The L.A. Zoo started key new initiatives with departments and organisations in Los Angeles, such as L.A. Sanitation & Environment, the Department of Recreation and Parks, and Griffith Park. Spanning over 4,500 acres, Griffith Park is one of the largest municipal parks with urban wilderness areas in the United States and home to the L.A. Zoo. Current partnerships that the Zoo is expanding on include but are not limited to the Gorilla Rehabilitation and Conservation Education Center (GRACE) in the Democratic Republic of the Congo, the Peninsular Pronghorn Recovery Project in Baja California, Mexico, and Wildlife Trust of India, in India. The Zoo is also working with key stakeholders in conservation and community engagement within Griffith Park to increase collaboration and advance efforts therein.

“The conservation challenges facing our world are rapidly growing, and we have to improve the strength and speed of our response,” said Dr Owens. “The L.A. Zoo has a celebrated history of conservation successes, including the revolutionary founding partnership with the California Condor Recovery Program. If it weren’t for the expertise, trusted partnerships, dedicated staff, and critical resources of the L.A. Zoo, the California condor, L.A. native southern mountain-yellow legged frog, and other

species would likely be extinct today. But we have to do more and with more intention towards achieving measurable outcomes. This plan provides us with the tools and focus to make significant strides in our six focal areas over the next five years and beyond, and will help identify and create the partnerships needed to see it through.”

By 2026, with meaningful community engagement and the assistance and guidance from both current partnerships and future collaborators, the Los Angeles Zoo strives to:

- effectively remove barriers and increase accessibility to achieve lasting conservation success
- create innovative solutions to bridge the gap with wildlife technology, virtual volunteers, and range country partners
- leverage our expert resources and partnerships to combat the illegal wildlife trade
- promote human-wildlife co-existence, and
- create evidence-based solutions to conservation challenges.

Update on International Studbooks (ISBs)

Vicuña. © Zoo Zürich

Changes between 7 July 2021 and 19 November 2021.

ISBs published (11)

- **Greater one-horned rhino** (*Rhinoceros unicornis*), 2020 ed. – Beatrice Steck (Zoo Basel, Switzerland).
- **Yellow-backed duiker** (*Cephalophus silvicultor*), 2021 ed. – Jessica Biggins (Milwaukee County Zoo, US).
- **Aruba island rattlesnake** (*Crotalus durissus unicolor*), 2021 ed. – Stan Mays (Houston Zoo, US)
- **Goeldi's marmoset** (*Callimico goeldii*), 2020 ed. – Sheila Wojciechowski (Chicago Zoological Society, US).
- **Vicuña** (*Vicugna vicugna*), 2020 ed. – Christian R Schmidt (Zoo Zürich, Switzerland).

ISB Transfers

- **Bush dog** (*Speothos venaticus*) – Vacancy filled. Philipp Tumasian (Moscow Zoo, Russia) is the new International Studbook Keeper.
- **Turkmenian kulan** (*Equus hemionus onager*) – Inter-institutional transfer from Florian Sicks at Tierpark Berlin-Friedrichsfelde to Anna Mekarska at Zoo Wrocław.
- **Diana monkey** (*Cercopithecus diana*) – Inter-institutional transfer from Donald Gow (Edinburgh Zoo) to Andrea Dempsey at Artis Zoo (The Netherlands).

Vacant studbooks

- **Buff-crested bustard** (*Lophotis gindiana*)
- **Lesser bird-of-paradise** (*Paradisaea minor*)

Would you or someone in your team like to become an International Studbook Keeper? Please reach out to the email below to enquire about establishing new International Studbooks or to take on one of the current vacancies.

Get in touch with the WAZA Executive Office at conservation@waza.org to find out more.





WAZA
World Association
of Zoos and Aquariums

Diving in the Ambassador Lagoon.
© Atlantis, Dubai

WAZA is delighted to have recently welcomed six new members to the global zoo and aquarium community. Atlantis, Dubai and Zoologischer Garten Schwerin have been accepted as WAZA Institutional Members, and BoldMove Nation, St Laurent, Zoo Advisors, and Zoological Lighting Institute have been accepted as WAZA Corporate Members.

ATLANTIS

DUBAI

Located on the island of Palm Jumeirah in Dubai, United Arab Emirates (UAE), Atlantis, Dubai opened in 2008. The resort complex is home to two zoological departments: The Lost Chambers Aquarium and Marine Mammal Operations.

The Lost Chambers Aquarium is the UAE's largest open-air aquarium and is home to more than 65,000 marine animals and more than 250 marine species in 21 different exhibits. The aquarium brings the myth of the sunken city of Atlantis to life. Marine Mammal Operations comprises Dolphin Bay and Sea Lion Point, which make up a combined 4.5 hectares.

Atlantis, Dubai is inspired by the ocean and provides immersive experiences to connect people to nature and the ocean. The organisation's mission is to protect the ocean and its inhabitants by operating responsibly, driving conservation initiatives, and empowering people to act on behalf of nature. It focuses its operations in four key areas: responsible operations, marine conservation and animal welfare, education and awareness and corporate social responsibility.

Atlantis, Dubai was the first institution in the Middle East to be accredited by the Association of Zoos and Aquariums (AZA).

For more information, visit: atlantis.com/dubai

Visitors marvelling at the marine life at the aquarium. © Atlantis, Dubai





Zoologischer Garten Schwerin

The Zoologischer Garten Schwerin, also known as Zoo Schwerin, is located in the city of Schwerin in northern Germany. The zoo opened in 1956 with one keeper and only 17 animals but has expanded over the years to home over 1,700 animals of around 140 species. The 25-acre zoo is a scenic park idyllically framed by the Schwerin lakes. One of Zoo Schwerin's main highlights is a sizeable mixed-species habitat that includes white rhinos, Grévy's zebras, scimitar-horned oryx, guinea fowl and hornbills. The zoo has been designed so that it is also an urban refuge for local biodiversity.

Education plays a significant role within the zoo, and one of the core focus areas is on endangered species and international breeding programmes. In addition, Zoo Schwerin has its own zoo school, which welcomes around 10,000 school pupils every year.

In 2021 the zoo opened the Red List Centre, a new thematic concept based on the IUCN Red List of Threatened Species. The centre is located at the zoo entrance and is the first thing visitors encounter when they step into the zoo. The centre teaches visitors about the Red List, the different categories and how to use them as a tool for conservation.

Learn more: zoo-schwerin.de

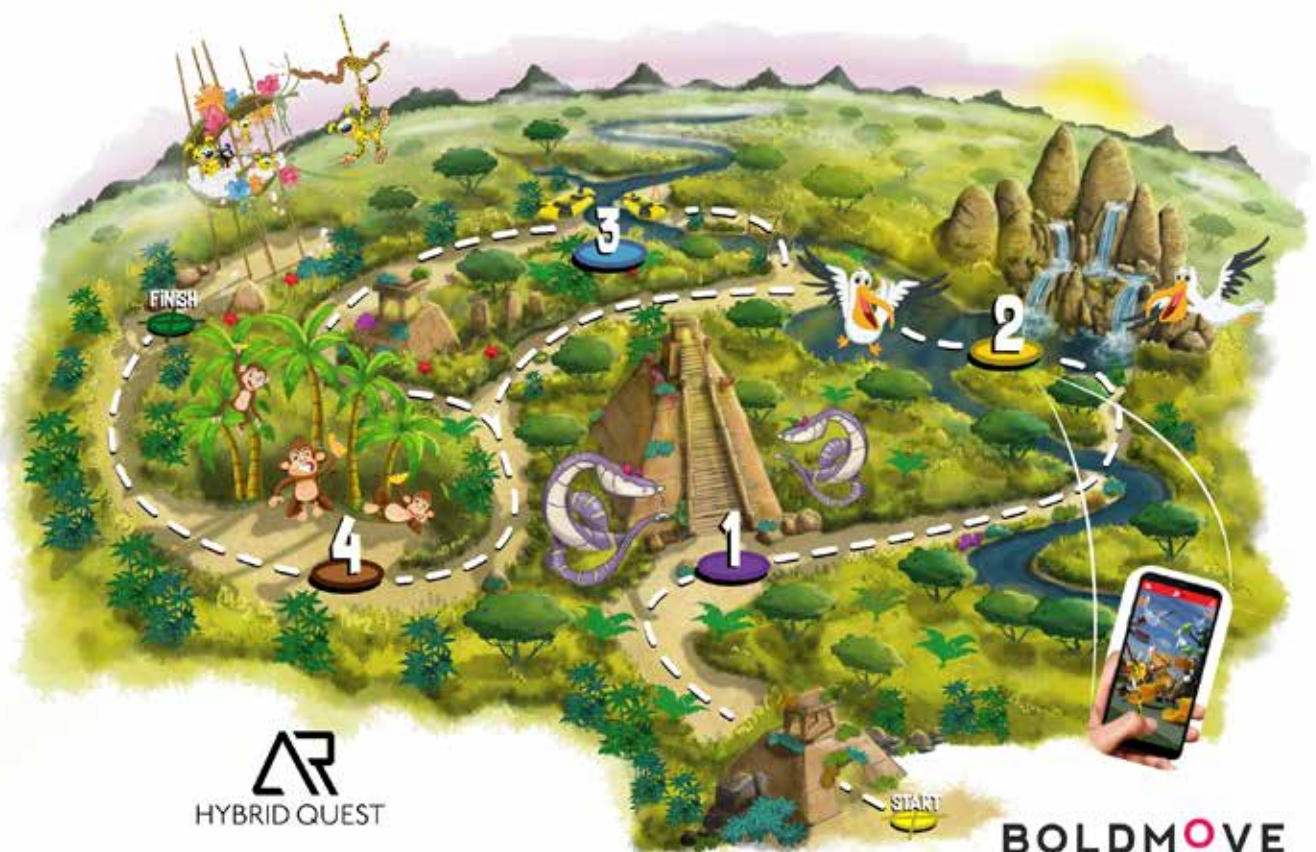
BOLD MOVE NATION

Launched in April 2020, BoldMove Nation based in Brussels, Belgium, is a young company with a mission to create happier worlds, offer memorable and immersive experiences with families and friends.

With a team of experts and global partners, the company is dedicated to leisure, tourism and retail venues. BoldMove Nation combines proven technologies, experience design and integrated storytelling to shape indoor rides and universes in leisure and retail environments. These can range from individual media-based attractions to smaller themed areas, entire dark rides up to destination experience centres.

Defined as high-energy and affordable digital attractions, the company presents a unique vendor-neutral service. BoldMove manages the development of attractions from start to finish.

Image below: BoldMove Nation's Houba City is designed to challenge visitors in improving personal and creative skills. © BoldMove Nation



AR
HYBRID QUEST



Houba World is designed by BoldMove for an all-family experience. The theming and media-based attractions are featuring the Marsupilami IP, but the park's mascot or custom designed characters can also be used.
© Marsupilami 2021. Dargaud-Lombard SA

The company adapts to your ideas and needs by taking on existing intellectual property (IP) such as a mascot or creating the IP. In addition, the company uses its exhibitions to engage, raise awareness and educate the public about species threats.

AR Hybrid Quest is BoldMove's mixed reality game taking place in a dedicated area which can be entered via a virtual gate at a physical location. With their own smartphone, players are guided to different stations with virtual assignments to fulfill their mission, individually or in squads. Besides an engaging and way to discover the venue, AR Hybrid Quest offers a lot of opportunities for social media outreach and loyalty or seasonal programmes, and helps to optimise visitor flows and existing infrastructure. Raise the bar and surprise your guests with this new digital dimension at your venue, and beyond. Learn more on www.boldmove-nation.com or contact Anja D'Hondt on anja@boldmove-nation.com



Photo: St Laurent head office. © St Laurent



Launched in 1946, St Laurent is a family company located in la Chapelle Saint Laurent, France, that operates internationally. The organisation offers an extensive range of frozen and dry food products and equipment for wild animals. Committed to constantly improving and developing its product range, St Laurent pays particular attention to the quality of its products and works in collaboration with a research and development department and zoo professionals.

St Laurent offers a set of complete feeds, dehydrated products, food supplements, frozen products for various animal species, and equipment for parks. In addition to its commitment to animal welfare, the company manufactures and delivers its different product ranges to favour short circuits and reduce carbon footprint. Initially working only in France, the company has expanded internationally and now works in several European countries, North Africa, Qatar, and is still developing.

Learn more: st-laurent.fr/en



Zoo Advisors, located in Pennsylvania in the United States of America, is a full-service planning and consulting firm focused on helping zoos, aquariums, and conservation organisations advance their missions, increase impact, and grow sustainably. The company offers a broad range of services such as strategic and business planning, executive search and leadership transition, DEAI planning, feasibility research, economic impact studies, governance evaluation, strategic master planning, education and conservation planning and much more.

With over 150 years of collective experience, the business management consulting and leadership advisory firm has worked with more than 150 institutions and numerous WAZA members. David Walsh founded the company with the aim of balancing the conservation and education missions of zoos and aquariums with financial sustainability and leadership excellence.

Zoo Advisors works with zoos and aquariums of all sizes around the world and has helped develop innovative plans for numerous institutions. Zoo Advisors' team consists of experts with extensive experience working in and with zoos, aquariums and conservation organisations globally.

Learn more: zooadvisors.com



The Zoological Lighting Institute (ZLI) is a non-profit organisation based in New York, United States of America. Its mission is "Supporting the Sciences of Life and Light through the Arts for Animal Welfare and Wildlife Conservation." The organisation aims to protect animals and the communities that depend upon them by engaging with the environmental challenges raised by the Photo Sciences. ZLI works on the critical but under-attended arena of light as it affects living things.

Some of ZLI's Initiatives include Zoo and Aquarium Lighting Assessment (ZALA) animal welfare monitoring stations, Animal Welfare Architectural Studio Hosting (AWASH) educational programmes and design consultations, as well as PhotoDiversity film production and services. These initiatives are intended to manage risks proactively for zoological institutions and the communities that depend upon them for education, responsible entertainment, and ecological sustainability.

ZLI and the ZALA metric focus on assessing physical light holistically. ZALA Stations are publicly visible data collection hubs that collect and collate a range of information to enable better decision-making regarding light, a central biological and ecological parameter with additional importance for exhibition, cultural engagement, and operations. ZLI's ZALA Stations are available either for hosting or as a franchise opportunity, providing technical resources useful for public programming and grant applications, in addition to their primary use to perpetually improve animal welfare through ongoing monitoring.

Learn more: zoolighting.org



Food and equipment for wild animals

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