



WAZA

World Association
of Zoos and Aquariums

2020

02

NEWS

Introducing New
WAZA CEO

Reverse
the Red

Australia
Bushfire Crisis



WAZA

*World Association
of Zoos and Aquariums*

Imprint

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This edition of WAZA News is
also available at:
www.waza.org

Printed on FSC-certified paper

Cover Photo: A koala receives treatment
for burns sustained in the Australian
bushfires. Credit: © Zoos Victoria

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WAZA Membership

WAZA members as of 14 April 2020

Affiliates	10
Associations	24
Corporates	18
Institutions	282

Future Events

- 2020:** Virtual Conference, October
2021: Moscow Zoo, Moscow, Russia
2022: Loro Parque, Tenerife, Spain

President's Letter

Prof Theo B. Pagel

President of WAZA

Dear colleagues,

The year so far has been incredibly challenging. We find ourselves in a surreal situation of continuing to operate institutions that are now closed to the public as a result of COVID-19. This places an enormous personal and organisational strain but our future potential is undiminished and we learn as we progress.

It is now clear to everyone that we live in one global and interconnected world and society. Current events show that climate change and biodiversity loss are also a global community challenge.

The crisis shows that if the world leaders and the global community work together, if the right measurements are taken, we can overcome this. We will have to pay our price, but we will succeed and emerge on the other side of this.

We, the members of WAZA, have to demonstrate to the world that there is hope, that there is a world outside which is worth living in. We need to make clear to the authorities that zoos and aquariums are core components of the larger society. Eventually, when this is all over, people will again need places to relax and our institutions are very well positioned to be those places for the general public to visit. There, on our grounds, we can again feed people with hope and with positive stories; our work to save species in the field and in the wild, to conduct research to better understand the complexity of life, to educate and sensitise people to nature. And not least, to give them a wonderful day they will never forget; that makes us – WAZA's zoos and aquariums – wholly unique.

The coming months will be incredibly challenging for all our members, but the WAZA Council and Executive Office are optimistic that once this crisis ends, we will be stronger than before. We would like to thank all of our members and your staff for your efforts in providing the highest standards of care for your animals, and for continuing your work as well as possible, under these difficult circumstances.

WAZA is aware of the challenges people, fauna and flora are facing in addition to the pandemic. We need only to look at the recent fires in Brazil and Australia which highlight the devastation that can be caused by



one natural disaster, and the sheer volume of wildlife that has been lost as a result. These catastrophes reinforce the importance of the role of zoological institutions in the rehabilitation and care of animals, as well as being crucial to repopulating wild populations with coordinated captive breeding programmes. Zoos and aquariums are a necessary and vital component in conserving and protecting endangered animals.

A note of good news, which I am sure you may have already seen, I am pleased to share that the WAZA Council has appointed Dr Martín Zordan as the WAZA CEO. Candidates who applied for this role were of an incredibly high calibre, but Martín emerged as the clear choice. During his time as Interim CEO, Martín distinguished himself through service and results and has proven to be a very effective Interim CEO. Effectively leading the association through some challenging times and circumstances, Martín has helped bring WAZA to a stable position. The WAZA Council is confident that he will be a strong and strategic leader for the association.

I look forward to one day, hopefully soon, seeing you all again in person.

Prof Theo B. Pagel

CEO's Letter

Martín Zordan

WAZA Chief Executive Officer

Dear WAZA Community,

This is quite a strange moment in time as I write my first WAZA editorial letter as the new CEO. Being based in Spain, and well into a strict lockdown during the pandemic, I have not left my house for more than a month and yet I know that the world has dramatically changed for all of us. We have no other choice, but to remain optimistic and prepare ourselves for a world post-pandemic. I am aware that our members are struggling through these difficult times. We are seeing projects which you have invested your hearts and minds into, in peril. Many of you have had to see valuable collaborators and colleagues leave their positions. My thoughts are with all of you.

In my six years of working with zoo and aquarium associations, I have worked for WAZA in two different capacities and have also represented WAZA on the Council as an association member observer.

During this time, I witnessed the work of the WAZA Council led by three different WAZA presidents and gained an understanding of the importance of national and regional zoo and aquarium associations. I have been very privileged to have worked alongside and learnt from the amazing Executive Directors of a number of associations.

From these experiences, engaging in conversations with many colleagues and coming from a region where not making an effective use of resources is almost immoral, I can come up with a long list of what many of our members and stakeholders want to see improved in WAZA. Together with a committed Council and passionate team at the Executive Office, we have been working on those changes during the past 12 months. This is only the beginning, and together we will shape WAZA to become the progressive and adaptable organisation we need.

You might suspect that I am a millennial (hopefully an atypical one from the types of millennials often stereotypically depicted in the media). I so often find myself explaining the importance of zoos and aquariums to people my age, that I find it strange when I don't have to explain their value to my



peers. People from this generation and the younger generations that come after them will decide how relevant we, as zoos and aquariums, are for society so it is important for them to understand the importance of our role in global conservation. During these conversations it is not difficult to find shared values around the importance of nature for our survival, and there, a door opens allowing for change in dissident perceptions.

Zoos and aquariums are essential organisations and will become even more so in the near future. With more than a million species at risk of extinction, we all have a vital role to play in safeguarding biodiversity, and driving transformative change for species and a sustainable planet. As we have witnessed with the pandemic, by not acknowledging the importance of our connection with nature, our lives are being challenged in an unprecedented way.

We know what needs to be done, we have the passion and energy to do it, we just need the world to know about it and to join us in this endeavour. As the collective voice of the global community of zoos and aquariums, WAZA is here for you, and ready to share the call.

Dr Martín Zordan

Introducing the new CEO: Martín Zordan

Interview by Gavrielle Kirk-Cohen

Director of Communications, WAZA



In April, the WAZA Council officially appointed Dr Martín Zordan as the new Chief Executive Officer of WAZA. Zordan served as the WAZA Interim CEO for 12 months before his appointment. Prior to that, Zordan was the WAZA Director of Conservation.

Tell us about the career path you have followed in the lead up to becoming WAZA CEO?

I became a volunteer at the Chile National Zoo at the age of 14, and worked there as a volunteer for nine years. This experience was unique and encouraged me to follow the career direction I did. During my time as a volunteer at the zoo, I was able to gain incredible and varied experience in many things, some of which – for good reasons – volunteers are no longer authorised to do.

After my volunteering period, I remained committed to zoos and decided to pursue study in Veterinary Medicine, specialising in animal health research in zoo settings in Chile and in the USA. I then worked for a small conservation NGO in the South of my home country, Chile, as well as for a mining company that was studying its impact on wild flamingos.

Following on from this I joined the Latin American Association of Zoos and Aquariums (ALPZA) as Executive Director for a number of years, before becoming the Conservation Director at WAZA and then stepping up as WAZA Interim CEO.

Did you always know that you wanted to work in a conservation-related field?

Yes, it all started at the age of 11, when I watched a documentary about rhinos being translocated to a protected area. I thought: “Wow, we are a species that can go out of our way to take care of other species, that is unique. I want to be a part of this!”

What has your biggest challenge been during your time as Interim CEO?

I think the biggest challenge was to bring credibility to and restore the member’s trust in WAZA during a difficult time for the organisation. This also involved maintaining the trust of the WAZA Council, as well as the team in the Executive Office. It was definitely a trying period, but it was also a remarkable learning opportunity.

You were previously Executive Director of the Latin American Association of Zoos and Aquariums (ALPZA), what have you found to be the biggest differences in leading both of these associations?

The scale and diversity in representation. WAZA is a global organisation and getting to know the identity and expectations of the members that we represent while acknowledging regional and cultural differences, is exciting. However, passion for wildlife is a global language and that is something everyone in this community has in common.

What does it mean to you to have been appointed as WAZA CEO?

It is an enormous honour and responsibility. WAZA is a community in which its identity is defined by its diversity, and being able to experience the joint endeavours, towards the large goals of species and biodiversity conservation, of such a diverse group gives me hope for our planet and the future. There are people who have invested and dedicated their whole lives to conservation, and it is humbling to be at their service.

What are your plans and goals for the future of WAZA?

Unity and consistency. Zoos and aquariums are becoming increasingly more important for future generations and their connection with animals and other forms of life on the planet. For that, we need better representation in different countries/regions, to establish common ground on animal welfare across associations, and to amplify our conservation impact – particularly within international forums. My hope is that the mark of a great zoo or aquarium is not just its standards of animal welfare and contributions to conservation, but also how those are perceived as positive elements by the broader community of which they are part of.

And to end off with a fun question, what is your favourite animal and why?

The Sumatran rhino, an orange, hairy, prehistorical rhino roaming a tropical forest beats any dinosaur or fictional creature, these animals are just astonishing and truly remarkable.



Photo: Martín Zordan sampling wetland bird faeces in Chile. © Pedro Jimenez

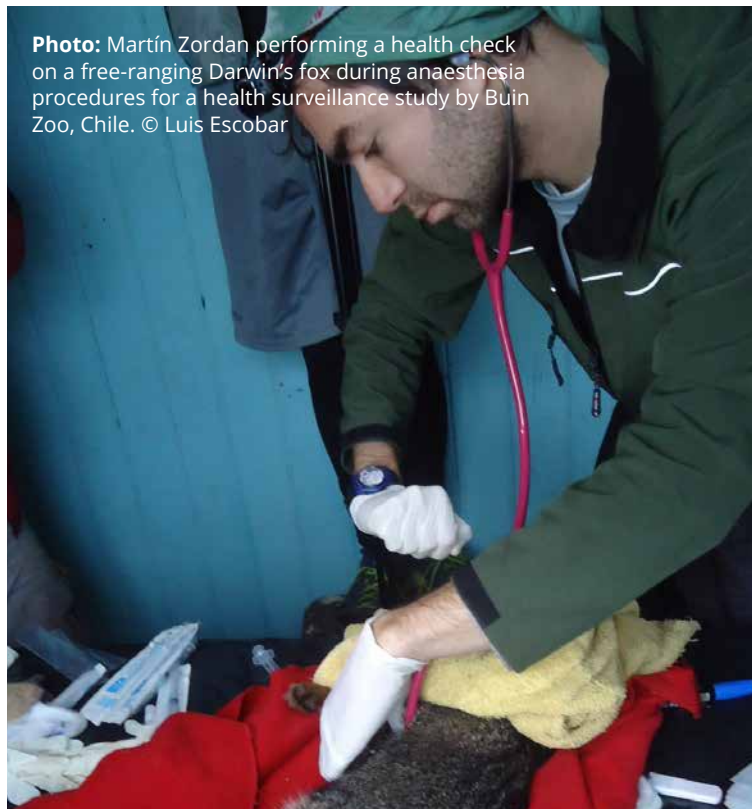


Photo: Martín Zordan performing a health check on a free-ranging Darwin's fox during anaesthesia procedures for a health surveillance study by Buin Zoo, Chile. © Luis Escobar



Photo: Martín Zordan poses for a photo with Anna Croukamp at the 72nd WAZA Annual Conference in Berlin. © WAZA

Reverse the Red



Dr Jenny Gray¹, Dr Kira Mileham², Dr Jon Paul Rodríguez², Dr Onnie Byers³ and Dr Martín Zordan⁴

1. Zoos Victoria, 2. IUCN Species Survival Commission, 3. IUCN Conservation Planning Specialist Group, 4. WAZA

You don't often hear good news stories about species conservation and there is an obvious reason for that: deforestation and land conversion, pollution and global warming, poaching and illegal wildlife trade, disease outbreaks, and the overriding threat of a growing human population and all that comes with it, continue unabated. Furthermore, conservation is often focused at a project level, rather than the system level and too often is plagued by competition for resources, lack of collaboration and reactionary approaches. The result is that increasingly more species and ecosystems are in peril, as has been laid out comprehensively in the United Nations' recent Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report, which identified that an estimated one million species are at risk of extinction.

However, we do not need an apocalyptic vision for the future. What we need is rational hope, motivated by a clear vision, strong partnerships and the desire to make strategic, successful conservation a global movement. We need a strategic model which guides us more clearly to where our efforts should be focused; helps us to roll up our sleeves and work together towards creating shared processes leading to shared successes.

We know that conservation can and does work, that communities and projects around the world are slowing or reversing trends in species or ecosystem loss. We know the focus must shift from problems to

solutions. What we need is urgent leadership and a system to inform and dramatically scale up successful, strategic, coordinated conservation. We need a unified global strategy to tie these efforts together and create a global movement.

You have a choice to make: will you be a bystander watching the gradual and relentless loss of biodiversity with the inevitable extinction of species we love, or will you join us to make a positive and meaningful change to the way we approach conservation? Every person and organisation on the planet has a vested interest in the ongoing survival of animals, plants and fungi. We also all have shared power and resources that can be pooled to contribute to the fight for the planet.

You have a choice to make: will you be a bystander watching the gradual and relentless loss of biodiversity with the inevitable extinction of species we love, or will you join us to make a positive and meaningful change to the way we approach conservation?

A strong partnership

The IUCN Species Survival Commission (SSC) and WAZA share a commitment to using rigorous science to inform and mobilise action aimed at solving complex conservation challenges. We also share an exceptional ability to unite and mobilise stakeholders across government, NGOs and the academic and private sectors, and connect with communities around the world. Together we have an unprecedented ability to unite the global conservation community, and other critical players around a strategy and effort to protect the world's ecosystems and species.

WAZA is the global alliance of more than 300 regional associations, national federations and zoo and aquarium institutions, dedicated to the care and conservation of animals and their habitats around the world. WAZA members represent large teams of managers, fundraisers, communication and education professionals and wildlife care and conservation experts working to manage populations of many of the world's most threatened species. Most WAZA zoos and aquariums collaborate extensively with field conservation partners, universities, botanic gardens, corporate partners and relevant local and national governments to advance the conservation of both species and ecosystems. WAZA members also provide world-leading, tangible opportunities to engage communities around the world with wildlife, nature and to publicise the actions that are vital for their survival.

IUCN is a membership union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together. IUCN has evolved into the world's largest and most diverse environmental network. It harnesses the experience, resources and reach of its 1,300-member organisations and has the input of 14,500 experts. IUCN is the global authority on the status of the natural world and the measures needed to safeguard it.



Photo: The Arabian oryx is a conservation success story and is making a come back from the brink of extinction. © Nimit Viridi

IUCN's Species Survival Commission and Commission on Ecosystem Management together make up a science-based network of around 10,000 volunteer experts from almost every country of the world. They are able to utilise this extensive collective experience to advise the IUCN and its members on the wide range of technical and scientific aspects of species and ecosystem conservation. They do this by driving a continual process of assessment, planning and action to inform and mobilise strategic efforts to conserve species and ecosystems.

The current trajectory for species survival and ecosystem health is negative; but through clear, intelligent planning, ambitious capacity building and increased collaborative action we can turn this trend around, we can *Reverse the Red*.

Reverse the Red – the Big Idea

Our goal is simple but ambitious, we need to turn around the trends that show we are pushing our environment to the brink – we need to Reverse the Red.

To reverse the trends in species and ecosystem loss we need systemic change. The *Reverse the Red* campaign is an umbrella initiative aimed at bringing together a diverse coalition of partners to collaborate, scale up aspirations and impact, and engage people from all walks of life to take action for species and ecosystems.

Reverse the Red calls on countries around the world to commit to demonstrating positive progress in their National Red List Index for the protection of both species and ecosystems, as the primary measure of species survival trajectory. The initiative is also a promise that the conservation community will all work together to make this a reality. The current trajectory for species survival and ecosystem health is negative; but through clear, intelligent planning, ambitious capacity building and increased collaborative action we can turn this trend around, we can *Reverse the Red*.

Next steps

Following discussions at the 74th WAZA Annual Conference, WAZA and the IUCN SSC had hoped to further engage our community with the concept of Reverse the Red through a pavilion at the IUCN World Conservation Congress this year, however due to current circumstances with COVID-19 the Congress has been postponed to January 2021.

In the meantime, we will continue working hard to develop a dynamic programme for the Reverse the Red Pavilion with many WAZA members, leading NGOs and key international platforms like CITES. We will increase discussions with key partners, including a number of governments, with the aim of adding several country delegations to the Reverse the Red partnership and develop a strong web presence and communication strategy to showcase stories of species conservation success, and begin progress towards the wider Reverse the Red partnership goals.

Please keep an eye on WAZA communications for more information and an invitation for you to join the campaign.

Reverse the Red Goals

- 1** Engage partners at national, regional and global levels to launch, grow and implement *Reverse the Red* as a global umbrella mechanism for species and ecosystem conservation.
- 2** Raise awareness and increase usability of the IUCN Red Lists (Threatened Species and Ecosystems) as an integrated educational, measurement and target setting tool.
- 3** Increase buy-in for the need for ambitious aspirations and action for species survival and ecosystem health nationally, regionally and globally.
- 4** Call for optimistic, clear, measurable 2020-2030 targets established at the United Nations Convention of Biological Diversity (CBD) Conference of the Parties, and push for species and ecosystem conservation on a national level which utilise a National Red List Index approach as a measurement, goal setting and reporting tool.
- 5** Drive an ambitious collaborative strategy to increase capacity at the national level (globally) for species and ecosystem assessments, planning and action. This strategy will focus on assisting countries in delivering on their post 2020 CBD targets for species.
- 6** Ensure people from all walks of life have the opportunity and tools to take action for species and ecosystems by building a compelling global movement to connect communities around the world with optimism for species survival and ecosystem health, interacting with a diverse suite of locally relevant, pro-biodiversity educational resources and experiences and behaviour change campaigns.

The Australian Bushfire Crisis



Photo: A dam that dried up at Tidbinbilla Nature reserve during the drought. Taronga Zoo rescued playpus from the drying rivers and dams as the bushfires loomed. © Taronga Conservation Society.

Maigan Thompson

Communications Manager, Zoo and Aquarium Association Australasia (ZAA)

The global community has been shocked by the magnitude of the long-lasting damage caused by the current and ongoing drought and bushfire crisis in Australia. Even when taking a short drive from the Zoo and Aquarium Association (ZAA) office here in Sydney, the charred landscape and the devastation caused by the fires at the start of the year is still visible three months after the initial crisis. Very few people in Australia have been left untouched by the economic, social and environmental impact of the bushfires, whether working directly on the frontline, or as a member of the community – the fires and the reconstruction that follows has an emotional effect on the psyche of the country as a whole.

The implications of this crisis for Australian biodiversity are significant and the recovery process will go on long after the fires have faded from the headlines. The Australian Department of Agriculture, Water and Environment has identified a preliminary list of 113 species as requiring emergency intervention at this stage. Priority species lists from Australian State governments are likely to include additional species which will require intervention.

Recognising the seriousness of the situation for our native wildlife, the ZAA Team activated a drought and bushfire response early in January along with an appeal for funds to support our work in this space.

The response from the global zoo and aquarium community has been overwhelming, with organisations from all corners of the world

contributing funds from their conservation allocation. Demonstrations of support included the channelling of donations from the proceeds of animal encounters, setting aside admission fees for a period of time to donate to the cause, and some zoo staff even took the decision to work free of charge for a day and donated their salaries to the ZAA Wildlife Conservation Fund (WCF).

Additionally, we have had several non-zoo organisations and general members of the community who recognise our ability to have a major impact on recovery and chose to support our organisation's appeal by donating funds.

The sense of Australian and global community support has been heart-warming and ZAA acknowledges the importance of treating these funds responsibly and ensuring they are used in the most efficient way possible to help Australian wildlife recover.

“The implications of this crisis for Australian biodiversity are significant and the recovery process will go on long after the fires have faded from the headlines.”

Maigan Thompson

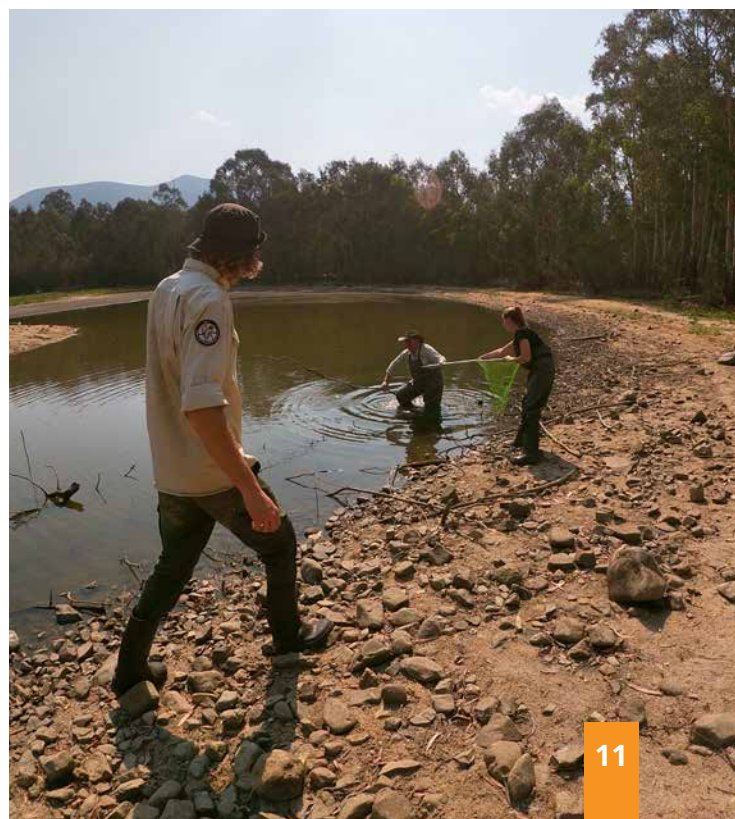
This support has allowed the ZAA fire and drought response to allocate funds for critical activities, allowing us to address them immediately in aiding wildlife rescue and rehabilitation. The funds have also enabled us to plan for the future as we assess our most threatened native species and develop medium- and long-term initiatives to give them the best possible chance of population recovery and ensure that we can return them to their habitats.

This approach aims to execute three key phases:

- **Phase one:** placing rescued native animals with appropriate facilities and expert care for treatment, ongoing rehabilitation and preparation to return to the wild.
- **Phase two:** assessing the impacts on wildlife and habitat to understand where rehabilitation efforts are most needed.
- **Phase three:** medium- and long-term recovery efforts to return healthy animals to regenerated habitats and revive and sustain populations of wildlife in affected areas.

Our organisation is already activating this response with funding applications open for wildlife rescue and rehabilitation support in phase one.

In addition, ZAA is working with the Minister of Environment and Threatened Species Expert Panel to assist with the significant work of species assessment and wildlife recovery in the medium and long term. ZAA recently held a multi-stakeholder workshop to develop a high-level strategic plan for zoo and aquarium leadership to manage affected species in the most efficient way possible. The group discussed future-planning, the capacity required for breeding and care of certain species, the links to formal species recovery initiatives, opportunities for conservation partnerships and rewilding, communication of the work being done and an action plan was developed for the next steps.



Top photo: A koala receives treatment for burns. © Zoos Victoria

Middle photo: A heat-affected, grey-headed flying fox receives a veterinary check up at Taronga Zoo's Wildlife Hospital. © Taronga Conservation Society

Bottom photo: A team from Taronga Zoo searches for platypus in a drought-stricken area. © Taronga Conservation Society



The next phase will be to formally assess the impacts on wildlife and habitat to understand where immediate efforts should be prioritised. ZAA has already connected with the government to explore an effective approach to the assessment challenge created by the drought and bushfire crisis. A portion of funding from the appeal will support these critical assessment activities during phase two of ZAA's response plan.

Funding for phase three will go towards supporting medium and long-term species recovery efforts; scaling up of existing insurance programmes or introducing new programmes based on updated assessment work. The long-term aim is to return healthy animals to regenerated habitats and revive and sustain populations of wildlife in affected areas. ZAA would like to sincerely thank everyone who has supported in any way, whether financially, by creating awareness of our response or providing in-kind support.

“While this event has been devastating, it has highlighted the important role zoos and aquariums play in protecting wildlife and wild places in Australia and around the world.”



COVID-19 and the Economy

Christina Morbin

Chief Operating Officer, WAZA

Although we experience these moments of uncertainty as a result of COVID-19 separately, we here at WAZA want to remain in close contact with you and keep you up to date with the latest market developments. If we pull together, we can overcome these difficult times and hopefully be stronger as a result.

It will be difficult to find an economic context comparable to the one we are going to experience in the coming months and years. Only in a period between wars, or at the end of the Second World War, can we locate a moment in history that represents such an absolute paralysis of the economic flow.

Here you have a short summary of the current situation and its immediate impact on the world economy:

The pandemic has fast become an economic crisis, and the sustained actions to reduce the rate of infection has meant that it is necessary to halt the majority of business activities, which will have long-lasting repercussions on the economy. Sectors like ours are the ones which are suffering the most. Other industries most affected by the crisis will be aviation, oil, tourism and leisure, restaurants and retail. Zoos and aquariums have an economic impact that rivals, and in many cases exceeds, for-profit industries.

The economy is going to slow down, but it is still too early to be able to gauge to what extent and when economic activity will contract. Activity will most likely contract in the next three months and then hopefully

pick up in the second half of the year. It should be borne in mind that many sectors continue to function: agriculture, food distribution, supermarkets, online commerce, electrical supplies, water, utilities, etc., and that part of consumption is simply postponed. The world economy is bigger and more resilient than we think – in the last forty years its volume has multiplied eight-fold and there have only been five negative years in that period.

It is natural for the stock markets to fall – currently investors are not able to value companies. The news, both positive and negative, is accompanied by large increases or decreases in share prices that also increase due to automatic sales orders. Since the beginning of the year, the market has fallen by around 30%.

Central banks and most governments are fully committed to ending the crisis and are launching stimulus packages that, albeit in an uncoordinated way, are sending a message to the markets that indicates they are all unified in fighting for a common goal. Now it remains to be seen how long it will take to control the pandemic, and this is the main uncertainty that remains to be clarified.

Central banks are acting fast and forcefully to ensure that companies and banks do not suffer as they did during the 2008 financial crisis. This time, they have reacted by cutting their interest rates, with the intention of ensuring money reaches the economy (with unlimited asset purchase programmes) or by reducing capital requirements for banks.

As a result, the companies and families struggling financially will be able to avail of the economic support provided more easily.

Governments are playing their part by introducing important fiscal support measures with instruments to soften the effect of the current crisis on companies and workers. For example, the Spanish government has launched a €100,000 million stimulus programme in guarantees to make it easier for small and medium-sized enterprises to obtain loans from banks. Facilities are being given to companies and the self-employed via the payment of contributions to Social Security and tax, lessening the requirements for collecting unemployment support payments and guaranteeing temporary layoffs are provided with the collection of a benefit and subsequent reinstatement scheme. Other governments have introduced measures such as providing assistance to companies that temporarily close to be able to continue to pay their workers or have announced substantial increases in public investment to create more jobs in the coming years.

These measures are going to have a very high fiscal cost for countries, and are going to cause spending limits to be breached (something that the European Commission has just approved), but there is a general consensus that it is better to use all available resources to reduce, as much as possible, the damage to the economy.

Confinement will not last all year (hopefully), governments will act, even if in some instances their actions are later than is desirable, but they will, because nobody wants this crisis to drag on, there is no country that wins, all lose, therefore the states and institutions will have to activate all the mechanisms and instruments necessary to cushion the business, economic and social cost that would prevent us from continuing to maintain the current welfare state.

In parallel, each one of us, responsible for large or small institutions, has in our hands and during this period of confinement, the responsibility to make the decisions that will mark the future of the institution and fear is never a good ally.

We hope to see zoos and aquariums recovering soon and developing new models that will help them remain sturdy through shifting paradigms.

What can we do?

- **Reduce unnecessary expenses or payments:** it will depend a lot on the entity, but you can prioritise your resources and reduce, defer or cancel things that you do not need for your daily activity.
- **Negotiate with your suppliers for a deferment of payments.**
- **Expand credit policies:** you can do this with the measures many governments are taking in light of the crisis.
- **Look at all potential sources of funding support, including low-interest loans.**
- **Pay attention to the financial aid that the government offers to employers.**
- **Consider other revenue generators.**
- **Don't just ask for financial donations:** also ask for items such as animal food or veterinary supplies. Many companies are willing to collaborate and/or donate goods.
- **Open up the discussions.** By opening up the discussion with your senior leadership teams, unexpected opportunities might surface. Additionally, by sharing the complexities of the decisions to be made and the options to consider, it will help to build community and buy-in for implementation.
- **Communicate consistently.** By expressing the hardships that our organisations are experiencing and the difficult choices that must be made, we invite others to participate in the process. Helping everyone understand that the organisation is maximising its impact and leading with its values, strengthens the connection and relationship that the public, governments and potential donors feel with the organisation's mission.

Successful ALPZA and ZAA Accreditation Workshop



Alexandra Guerra and Carmen Linares

ALPZA Executive Director and Coordinator of ALPZA's Accreditation and Ethics Committee

Between 24-26 February of this year, the Latin American Association of Zoological Parks and Aquariums (ALPZA) held a workshop at Africam Safari, Mexico, to review and update its animal welfare standards, within the framework of its accreditation process. The goal of the meeting was to strengthen ALPZA's animal welfare standards, as well as to learn from the experiences of the Zoo and Aquarium Association Australasia (ZAA) in the implementation of its accreditation process in animal welfare.

The workshop was attended by Frank Carlos Camacho, President of ALPZA and CEO of Africam Safari; Nicolas de Graaff, ZAA Accreditation Manager; Alexandra Guerra, Executive Director of ALPZA; Carmen Linares, Coordinator of ALPZA's Accreditation and Ethics Committee and Director of Conservation Education for Africam Safari, and Diana Vivas, member of ALPZA's Accreditation and Ethics Committee and Coordinator of Processes and Continuous Improvement at Cali Zoo, Colombia.

Following the workshop and consultation with ZAA, ALPZA added 12 new animal welfare standards to the 81 standards already in place, increasing their animal welfare representation from 35% to 41% of the total standards.

In addition to the thorough animal welfare evaluation process carried out by ZAA – utilising the Five Domains model focusing on good welfare – one of the greatest strengths in ZAA's accreditation system is its approach of examining all of its standards from the animals' perspective. ZAA explains the rationale behind the system is to give the utmost consideration as to whether the animal is leading a fulfilling life full of positive experiences, providing animals with choice in most of their daily activities.

This approach has proved to be invaluable, as it has enriched the ALPZA accreditation process and has meant that the inclusion of the animals' perspective is pivotal to the animal welfare standards and the overall evaluation process.

About the ALPZA Accreditation Process

During the workshop, the best practices of both associations' accreditation programmes were identified so as to strengthen the process that the Latin American Association has been working on since 2017, when it first launched its accreditation programme.

ALPZA's accreditation programme seeks to review the operation of zoos and aquariums using 229 standards focused in seven different fields: General, Safety, Welfare, Education, Conservation, Sustainability, and Research. These accreditation standards were initially created by professionals from member institutions from across 14 countries. They are annually reviewed and updated by animal welfare specialists from ALPZA committees to continually ensure the robustness of the accreditation process and the standards that comprise it.

The Accreditation process begins with a self-assessment to provide institutions with knowledge on their current level of compliance with the accreditation standards. Subsequently, an external evaluation is conducted by a team made up of three inspectors who evaluate the implementation of each of the standards over four days. Demonstrating compliance of this process provides zoos and aquariums with a seal of excellence which has to be re-evaluated and renewed every five years to retain their accreditation status. A multidisciplinary committee, consisting of seven people working voluntarily and in coordination with the Executive Director, is responsible for implementing ALPZA's accreditation process.

Each of the 229 standards is classified into three priority levels: Critical, Important and Desirable. The percentage of compliance with the standards in each of these priority levels indicates whether an institution can achieve accreditation status or not. The minimum level of compliance for a zoological institution to be accredited is:

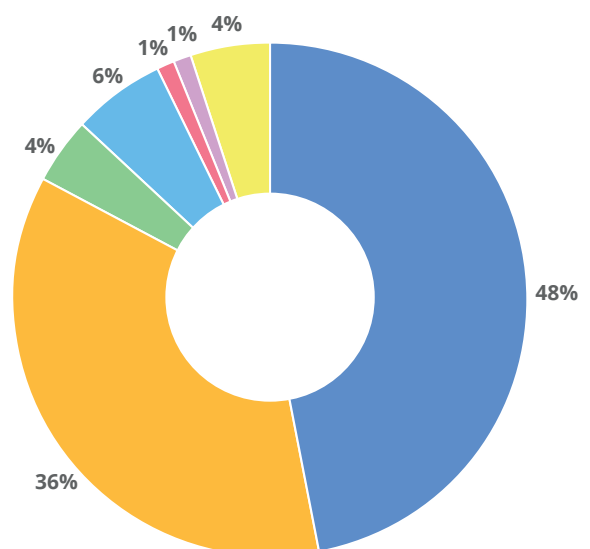
- 100% compliance with critical standards.
- 70% compliance with important standards.
- Minimum 50% compliance with desirable standards.

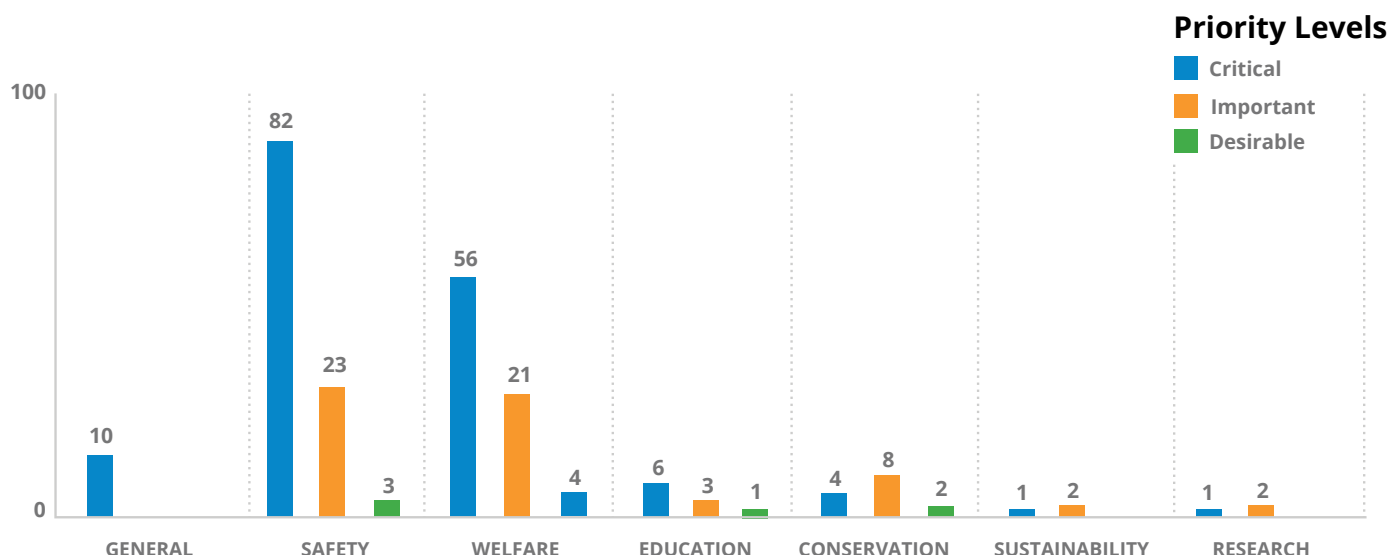


Photo: Frank Carlos Camacho giving a presentation at the workshop © ALPZA

Standards

General Safety Welfare Education
Conservation Sustainability Research





The accreditation process is carried out by 24 certified inspectors from six different countries, across a range of fields of specialisation who have an integral knowledge and proficiency in both the process and the standards required for the institution to achieve accreditation status. Each year the inspectors receive further training on any improvements to strengthen the accreditation process, as well as in the use of new tools that seek to ensure a more objective evaluation.

Currently, 36% of ALPZA's institutional members have gone through the accreditation process and 22% of its members have achieved accreditation status for a five year period. In each period, 15% of the members apply for the review and evaluation process, which strengthens the WAZA 2023 Animal Welfare Goal that has been proposed by WAZA which states that WAZA national and regional associations must have an animal welfare evaluation process in place by 2023 and all WAZA institutional members must be compliant with this process.

ALPZA would like to recognise and thank ZAA for all their assistance and input. ZAA have been incredibly generous in sharing their professional and specialised animal welfare working practices that they have developed in their region.

This is the beginning of a long and fruitful relationship between both regions and we look forward to our continued collaboration.

"The workshop with ALPZA was a very positive experience. ALPZA were very generous hosts and were very keen to understand more about ZAA's approach to animal welfare accreditation. ALPZA and ZAA discussed welfare and accreditation at length on a range of levels varying from overall approaches down to technical application of specifics. I enjoyed spending time with the ALPZA team, and I learned a lot from the discussions and gained a good understanding of the robustness of ALPZA's programme. It was an excellent experience and very valuable to be able to share in their accreditation programme development process."

Nicolas de Graaf, Accreditation Manager, Zoo and Aquarium Association (ZAA)

Wild Welfare Assists Regional Zoo Associations in Animal Welfare Improvements Through Certification



Dave Morgan

Field Director, Wild Welfare

Photo: David Morgan with the Indonesian zoo auditors.
© Wild Welfare

Wild Welfare has been very active in uplifting standards of animal welfare provision in zoos and aquariums around the world. Perhaps one of the more gratifying aspects of our work has been supporting regional and national zoo associations in the development of their respective welfare certification programmes.

Since 2014 we have been working with various association partners to develop these programmes that not only support national improvements but are also helping to ensure member associations have a formalised means of performing welfare assessments in line with the WAZA 2023 Animal Welfare Goal. Two of our active projects involve close partnerships with the Association of Zoos and Aquariums of Brazil (AZAB) and the Southeast Asian Zoos and Aquariums Association (SEAZA).

Our involvement with AZAB began in 2014, when we were invited to assist the association in developing a constitution and code of ethics and welfare. At the time, there were estimated to be approximately 120 zoos and aquariums in Brazil, of which approximately 40 were AZAB members. During a conference meeting, representatives of both Brazilian national conservation authorities, the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA) and Chico

Mendes Institute for Biodiversity Conservation (ICMbiol) gave a presentation on the development of a One Plan approach to conservation, for a number of species of Brazilian fauna. As the One Plan approach mandates an *ex situ* component, the authorities requested reassurance from the Brazilian zoo community that they had the welfare and husbandry capacity to be able to adequately hold such species in trust for the programme.

The result of this was that we were invited to share our internal welfare assessment methodology with AZAB, as a means of checking the welfare capacity of its members. Two zoos were nominated to pilot the animal welfare audits and the outcomes met with the Association's expectations. As a result, in 2016 AZAB announced its intention to follow the Wild Welfare methodology, and with our assistance, developed a welfare certification membership protocol, in line with the authorities requests. In the same year, the first auditor training course was conducted by Wild Welfare at Guarulhos Zoo, outside São Paulo. In 2017, the first zoos were audited subsequent to a collaborative plan developed by AZAB and Wild Welfare for future zoo audits with the intention of auditing 50 Brazilian zoos within the ensuing five years. Since then, Wild Welfare has visited Brazil twice per year, specifically to conduct zoo audits.

In 2018 at its annual conference, AZAB formally launched the document 'Norma, Procedimento e Formulário de auditoria para Certificação em Bem-estar animal da Associação de Zoológicos e Aquários do Brasil – AZAB', translated as 'The standard, procedure and audit form for animal welfare certification of the Association of Zoos and Aquariums of Brazil'. This document was based entirely upon the Wild Welfare assessment methodology. At the same meeting, an historic MoU was signed between AZAB, IBAMA and ICMBiol, committing to the development of *ex situ* breeding programmes for 22 endangered species of Brazilian fauna. By 2019, which was the third year of the programme, a total of 29 AZAB member zoos were audited in conjunction with AZAB trained auditors. Wild Welfare personnel were involved with all of these audits and we have helped to train 18 AZAB auditors in the process. Over the three-year period, a total of 10 facilities were granted certificates of compliance with AZAB's welfare standards. The next two years of the programme will target the outstanding AZAB members, as well as some of the potential members. Most importantly, as a result of this programme we are seeing tangible welfare improvements across the board. For example, an aquarium in São Paulo state completely remodified its penguin enclosure to meet species-specific needs as outlined in the standard, while a zoo in Santa Catarina State has embarked upon significant changes and the enlargement of its elephant enclosure following an AZAB audit.

Following on from our Brazilian partnership, in 2017 we were invited by SEAZA to support them in a similar exercise. The region covers Vietnam, Myanmar, Thailand, Indonesia, Malaysia, Taiwan, Singapore and the Philippines, and has a vast range of zoos and aquariums of considerably varying animal care and welfare standards. SEAZA is the region's zoo association and it represents approximately 100 zoos and aquariums. In April 2017, we facilitated a workshop in Vietnam on the development of a welfare certification framework and how to audit against it.

With our input, the SEAZA committee for Animal Welfare drew up their Association's Standard of Welfare. Following generous funding from Wildlife Reserves Singapore (WRS), the programme was rolled out in 2019 with a total of five zoo audits. The programme began in Thailand, and the first two Zoological Park Organization of Thailand (ZPO) zoos were audited against the SEAZA Standard of Welfare. We held an audit training course for five Thai trainees prior to the audits, and oversaw both audits to ensure everyone fully comprehended the implementation of the process.

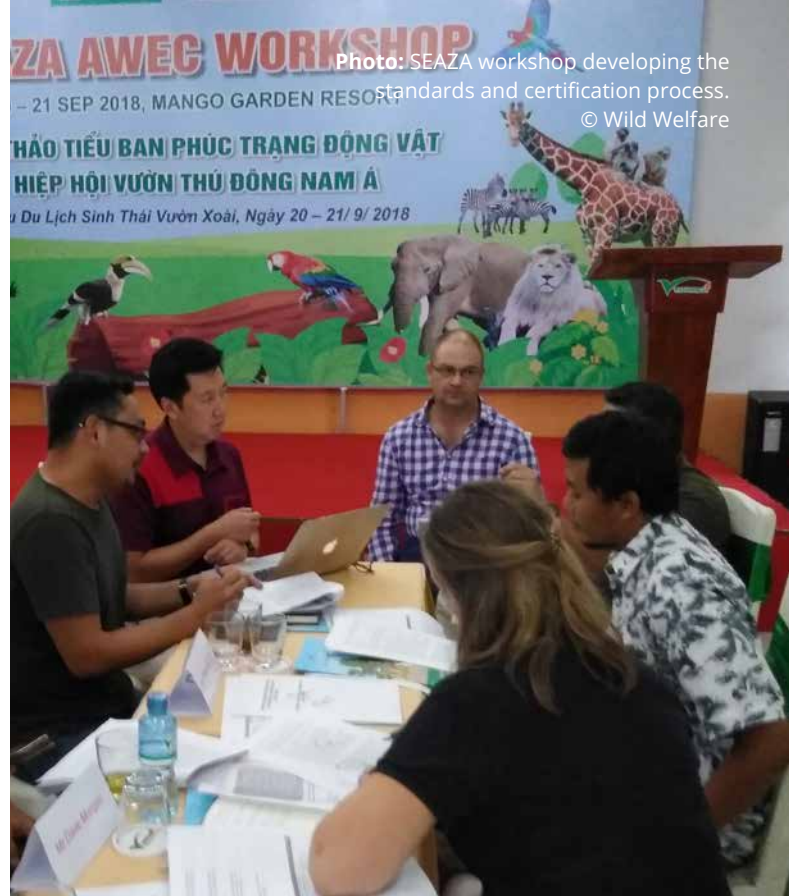


Photo: SEAZA workshop developing the standards and certification process.
© Wild Welfare



Photo: SEAZA programme meeting in Thailand.
© Wild Welfare



Photo: VinPearl Safari audit.
© Wild Welfare

This process involves raising findings (usually noncompliance with the Standard) and then working with the zoo to develop a timeline for corrective action with appropriate reporting to the SEAZA Animal Welfare Committee on progress. It should be noted that Wild Welfare had been working with ZPO within a separate capacity to the SEAZA programme, and as a result, ZPO has also set up its own internal welfare auditing programme. From behavioural recording, public feeding reviews and enrichment management, we have seen some tangible changes to animal practices within ZPO facilities. We continue to champion their efforts through an active partnership programme we facilitate between them and North Carolina Zoo.

The same approach was then followed in Vietnam and Indonesia which saw core groups of five to six auditors receiving training. On the basis of follow-up reports from each of the five audited zoos, the SEAZA Animal Welfare Committee then met at the 2019 SEAZA annual conference in Phú Quốc, Vietnam in November to deliberate the outcomes. Subsequent recommendations for certification were then passed on to the SEAZA Executive Board and Certificates of Compliance to the SEAZA Standard of Welfare were presented to three of the five audited zoos at the conference. The other two zoos were given extended deadlines to address their nonconformances in 2020.

Our involvement in the SEAZA Certification process will hopefully continue in 2020 (COVID-19 permitting), with similar training and audit missions to Taiwan, Philippines, Malaysia and Singapore. At least two zoos per country will undergo certification audits over this period. The programme thereafter calls for a minimum of two zoos per year per country to undergo the same audit process, however these will be carried out by local, in-country Wild Welfare trained auditors.

Overall, in just a few short years we have seen a positive change in approaches and attitude to animal welfare practice, and we can attribute a lot of this to these programmes which have provided member associations with a formalised means of performing welfare assessments in line with the WAZA 2023 Animal Welfare Goal.

“The countries and people we work with have not only embraced the processes, but have demonstrated leadership in the ongoing evaluation and effectiveness of the programmes, ensuring tangible animal welfare reform is achieved.”

Dave Morgan

WAZA Guidelines for Animal – Visitor Interactions

Photo: Giraffe feeding at Omaha's Henry Doorly Zoo
© Omaha's Henry Doorly Zoo.



Karen Fifield MNZM and Paula Cerdán

Chief Executive of Wellington Zoo and Chair of the WAZA Ethics and Animal Welfare Committee, WAZA

Zoos and aquariums have seen rapid growth in interactive experiences in recent years. The progression from simply displaying zoo and aquarium animals for visitors to observe, to presenting experiences that bring humans and animals into close proximity, has rapidly gained momentum as zoos and aquariums have evolved. From walk-through, swim-through or drive-through experiences to direct animal contact, such as touch pools, hands-on education with animals or petting areas/touch paddocks, the interactive experiences are plentiful and varied.

Some studies have shown that such interactions may contribute to an increase in pro-conservation behaviours and enhance conservation education (e.g. Skibins & Powell, 2013; Powell & Bullock, 2015) and they play an important role in reconnecting people with nature and inspiring them to care for the plight of animals. Although such animal-visitor interactions are popular, the effect of visitor presence or direct contact on the animal's well-being must also be considered. Assuring positive animal welfare at all times and guaranteeing that any animal that participates in an animal-visitor interaction has opportunities for positive welfare outcomes is of paramount importance.

Increasingly travel and tourism companies are responding to the steady increase of public interest in animal welfare issues by questioning whether the animal-visitor interactions they promote are ethical,

and are now considering what constitutes an ethical animal-visitor interaction.

WAZA has been in discussions with a number of travel companies to ensure that WAZA members are well represented and recognised in their animal welfare policies as centres for positive animal welfare and conservation outcomes, offering experiences that are both ethical and considerate of the welfare of the individual animals involved.



Photo: A family feeds rainbow lorikeets at Lory Landing, San Antonio Zoo.
© San Antonio Zoo



In light of this, and as part of WAZA's ongoing commitment to high standards of animal welfare, it is imperative that WAZA has clear guidelines for members to use in order to ensure best practice standards for the animals in our care. We have a responsibility to achieve high standards of animal welfare in support of our goals as modern conservation organisations, and this also includes animal welfare outcomes in the context of animal-visitor interactions.

After many months of tireless work by the members of the Ethics and Animal Welfare Committee, it is with great pleasure that we present the new WAZA Guidelines on Animal-Visitor Interactions to our WAZA members. These guidelines are based on the scientific evidence provided in the 2015 *World Zoo and Aquarium Animal Welfare Strategy*, *Caring for Wildlife* and the 2003 WAZA Code of Ethics and Animal Welfare, and the 2015 Resolution on Animal Interactions. The document contains both a theoretical framework and lists several recommendations to ease and assist with its implementation and to assure that whenever an animal-visitor interaction is held, the animal has the opportunity to experience positive animal welfare outcomes.

To read or download the WAZA Animal-Visitor Interaction Guidelines, please visit the WAZA website.

The guidelines are currently available in Spanish, Russian, and Portuguese. They will also be translated into Japanese, French and other languages in the SEAZA Region.

www.waza.org

The Future of WAZA – from the Perspective of WAZA Members

WAZA Membership Survey Results



Photo: WAZA Members at the 74th WAZA Annual Conference.
© WAZA

Janet Ho

Director of Membership, WAZA

WAZA's organisational structure, as a membership association, means that our members' viewpoints and perspectives are an integral component of the way in which we operate.

The most effective way of ensuring that we understand their expectations and meet their needs is to engage in a consultative process. In September of last year, the WAZA Council and the WAZA Membership Committee developed a survey to review and improve the services and support we provide to our members, and to allow us to gain a better understanding of the issues our members would like to see our global organisation focus on and achieve in the future.

The survey was sent out to all members, and the response rate was nearly 50% with 162 out of our 335 members completing it. The results were presented at the Future of WAZA session at the 74th WAZA Annual Conference in Buenos Aires, Argentina, led by WAZA President Prof Theo Pagel. The conference session provided an open platform for members attending the conference, allowing them to engage in discussions and share their point of view on WAZA as it currently stands, and what they consider the association should strive for in the future.

From the survey results, we gleaned that our members view WAZA as a valuable international organisation that offers great global networking opportunities with colleagues from a wide variety of global regions.

According to the survey results, WAZA provides guidance and leadership in conservation but needs to be linked more closely with forums such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), IUCN and the United Nations Convention on Biological Diversity (CBD).

The top five membership benefits that members value most include: being a part of the global community of influential zoos and aquariums, representation on a global level with international organisations such as CITES, IUCN Species Survival Commission (SSC), International Air Transport Association (IATA) and others; being a part of the Global Species Plan*, receiving support from WAZA in numerous areas such as animal welfare, conservation and communications, and collaborating with global institutions such as the International Zoo Educators Association (IZE) on various campaigns. Members also view the WAZA Conservation and Animal Welfare strategies as useful guidelines for developing their own policies. The majority of our members think that they are well-informed about WAZA news and events, and that the information from our publications is relevant to them. Most respondents consider WAZA to be a democratic association, and 76% of the respondents believe that WAZA meets their expectations with regards to the service provided in relation to the value of the membership fee.

A number of key points from the survey were covered at the Future of WAZA session, with members stating that they would like to see WAZA build closer relationships with the organisations mentioned above but also to extend these relationships to further strengthen collaborations with Species360 and the IUCN Conservation Planning Special Group (CPSG). Another element that was discussed was the need to enhance WAZA's work with the regional and national associations and to ensure that the efforts of all the associations are not duplicated.

At the session, a few members expressed concerns over whether WAZA is a global association providing membership for institutions with high standards in animal welfare, or simply an association in which any institution can join. Pagel reaffirmed that WAZA is an association designed for leading zoos and aquariums and that WAZA is on track to achieve this standardisation with the introduction of the WAZA 2023 Animal Welfare Goal. The Goal states that the national and regional association members must have an animal welfare evaluation process in place, and all WAZA Institutional Members – which primarily have to be a member of a WAZA recognised regional or national association – must be compliant with this process. Members raised concerns about the feasibility of achieving this goal in time, and suggested that WAZA should perform a gap analysis to see how many associations already have evaluation processes in place, and what work will need to be done in order for all members to meet the goal's requirements. The need to increase the responsibility of those nominating potential members was also highlighted to ensure that new members adhere to the WAZA 2023 Animal Welfare Goal standards and have some form of evaluation process already in place.

Members also identified the need to explore opportunities for WAZA to be more inclusive to all institutions by considering the diversity of languages amongst members, as well as the size and budget constraints of smaller organisations. Members suggested that efforts to reduce WAZA's Annual Conference fee would be appreciated and a good start in ensuring that WAZA is more affordable and accessible.

Overall, we were able to gather a great deal of valuable information and feedback from both the survey and the session held at the conference. It is encouraging to see our members playing an active role in WAZA and helping to shape the future of the association. The WAZA Council and committees have

taken the feedback into consideration, and remain committed to further development, to ensure that WAZA is an international association that best serves our members and acts on a global scale.

“It is very exciting to take part in shaping WAZA to its members' needs and at the same time strengthening WAZA as the global voice of zoos and aquariums”

Thomas Kauffels, Chair of the WAZA Membership Committee.

We are heartened to see that some of the initiatives we are working on are aligned with the expectations of WAZA's role which were laid out by our members in the consultation process. For example, WAZA is collaborating with IUCN-SSC on the exciting *Reverse the Red* initiative, and WAZA is also representing our members' best interests by communicating and collaborating closely with partners within the travel and tourism industry. In collaboration with AZA, BIAZA, EAZA and ZAA, we worked closely with Expedia on the development of its new Animal Welfare Policy which will only promote zoos and aquariums which are members of WAZA and/or of WAZA's recognised regional and national association members.

We would once again like to thank our members for taking part in the survey and conference discussion session, and we would like to encourage all of our members to play an active role in the future of our association and let their voices be heard.

If you would like to share your thoughts with the WAZA Council and our committees, please feel free to contact **membership@waza.org**.

* The Global Species Plan is a resolution adopted at the 73rd WAZA Annual Conference, which will see WAZA in a leading role in organising a Global Species Congress to highlight the status of the planet's species, articulate and review the consequences of the threats that they face, and chart their future conservation.

WAZA Nature Connect Grants Programme

Photo: Exploring the Sebangau Forest in Indonesia on one of the field trips as part of Twycross Zoo's Nature Connect project. © Duncan Murrell/Twycross Zoo

Paula Cerdán

Animal Welfare and Conservation Department, WAZA

In a study from 1984, Roger S. Ulrich described the effects on post-surgical patients assigned to rooms with a window view of a natural setting. His results showed shorter postoperative hospital stays, fewer negative evaluative comments in nurses' notes, and less intake of potent analgesics.

Thanks to bounteous research in this field, the intrinsic relationship between human wellbeing and nature and its multiple benefits is currently indisputable. Paradoxically, there is growing evidence that people, and particularly children, are steadily disconnecting from nature.

The WAZA Nature Connect Programme, which started in 2017, aims to reverse this trend and reconnect children and their families to nature, while inspiring them to take action to conserve the natural world. The programme is funded by the Disney Conservation Fund (DCF) and is managed by WAZA in collaboration with the International Zoo Educators Association (IZE).

Recently, the third and fourth rounds of the WAZA Nature Connect Grants Programme came to an end in August 2019 and March 2020 respectively. The two rounds funded a total of 21 projects across 19 countries, connecting over 1,500 families and 7,000 individuals with nature through the 466 conservation actions delivered by the grantees. The funded projects took place either at the grantees' zoo or aquarium, or as part of other projects delivered in conjunction with their field conservation partners in other regions.

2 rounds

19 countries

21 projects

466 conservation actions

1,586 families

7,085 individuals

The two rounds of grants saw a diverse variety of programmes receiving funding, from building 'bug hotels' in Chester, in the UK, to creating a 'Family Ecoclub' in Prague, Czechia, or the involvement of community stakeholders in Humboldt Penguin Reserve in Santiago, Chile. Every project from the WAZA Nature Connect Grants Programme has created unique experiences and memorable moments not only for the children involved, but also for their parents and even the zoo educators.



Photo: Participants of the Achimota community posed for a group photo with their new pencil cases made out of plastic bottles after a Nature Connect activity.
© Bright Senanu/ Heidelberg Zoo

Learning about the importance of pollinators on the ecosystems was part of Dublin Zoo's Nature Connect programme, 'Families Connecting with Nature in the Wild Space'. Participants were taught about the important role pollinators play, and how to identify bumblebees while inspiring pro-conservation behaviours around pollinators in the local community. Days after the workshop was delivered, the team of educators at Dublin Zoo received an email from one of the participating families with the subject labelled, "Bee Rescue Team". A family explained in detail how they had rescued a bumblebee they had found trapped between a curtain and a window, and how after providing some intensive care to the bumblebee, they were able to release him safely back into nature.

"We think it was a *Bombus terrestris* or *lucorum*" – they added in their email.

Zoo Liberec, in Czechia, ran a field conservation programme in the Banyak archipelago in Indonesia, with several zoologists, conservationists and educators in the field. Their programme delivered different activities to the local community, such as talks by coral reef ex-poachers or solutions to address plastic pollution on the islands, with the common theme of conserving the archipelago's coral reefs. 562 coral fragments were grown at the nurseries and moved to

Panjang island. The project has been so successful that families who participated in the coral reef restoration activity have now created two new artificial reefs in two other islands on Pulau Banyak.

Through West African Primate Conservation Action (WAPCA), Heidelberg Zoo developed 'My City My Forest', a community engagement project that involved four communities and 306 participants in 80 families in the city of Accra, Ghana. Their main goal was to provide a space for people living in Accra to learn about the importance of the forest and its environs through four different activities: building a nursery of fruit tree seedlings, a home recycling workshop, a visit to WAPCA and Accra Zoo and finally, a beach clean-up that assembled the four communities together. All of these activities not only provided the participants with the planned new skills and learnings about sustainable practices and emphasised the importance of the forest, but also provided a platform for the communities to come together to discuss environmental issues affecting their communities, ensuring the long-term conservation and preservation of the forest and its surroundings.

Oklahoma Zoo's Nature Connect project, saw the zoo working with its conservation partners overseas to deliver field conservation programmes focused on protecting, extending and reconnecting the habitat available for a critically endangered reptile species, *Abronia campbelli*, Campbell's alligator lizard, by creating biological corridors on privately owned small family landholdings in Guatemala. They teamed up with 100 Guatemalan families, planted 18,000 trees of key native forest species, shifting the use of 500,000 square metres of land from agriculture to habitat restoration, and participated in further related activities that allowed families to develop pro-conservation behaviours. One of the programme participants said:

“That tree is now reserved to reintroduce Escorpion neonates (local common name for *A. campbelli*), and all the trees we will plant here are also going to be their home.”

While another participant echoed the sentiment, saying:

“On my land they [*A. campbelli*] will be safe, nobody can disturb them there because my family and I will always take care of them.”

These are just some examples that show how every programme, from small to large, from within the parameters of zoos or aquariums or from further afield, will eventually have a positive impact on nature and will inspire future generations to care about conservation and protection. We are delighted that our members are driving such notable efforts in raising awareness, conserving and strengthening our connection with the natural world.

Top photo: Families receive a reforestation kit as part of Oklahoma Zoo's Nature Connect project.
© Mónica Torres/Oklahoma Zoo.

Middle photo: Anak Sebangau planting in the Community Seedling Nursery.
© Borneo Nature Foundation (BNC)/Twycross Zoo

Bottom photo: Getting up close to the animals during the 'Ornithology in practice' activity in Prague's Zoo Nature Connect Project. © Petr Hamernik, Prague Zoo



The role of the future zoo

Jan Møller

Aratag/Pangea Rocks

It is becoming increasingly more obvious, that the anti-zoo and aquarium movement has been a growing presence over the past five to 10 years, which is why we need to become better at communicating the ways in which animals can benefit from being kept in zoos and aquariums.

We have to explain to our visitors what we can learn from animals, how we can help their counterparts in the wild, what we can do in order to better understand their needs, and what and why it is that this particular species is so special that we have to care for it in a zoological institution.

I think it is safe to say that we would all love it if there was sufficient space for all animals in the wild, which was free from all threats such as pollution, climate change, human harm, habitat loss, poaching and more. The reality is that the majority of the animals we keep in zoos and aquariums would be under constant threat from all of these things if they were in the wild.

We need to educate people so that if they raise their voice, they do so in an informed manner instead of as a result of unreliable information they have read on the internet. As a zoo and aquarium community we already have a wealth of valuable information available, but the problem is how to effectively and

innovatively relay this information to our visitors, not only when they are in the zoo or aquarium, but also after their visit ends.

In the past, zoo educational experiences often consisted of a picture of an elephant, accompanied by very minimal text. We have so many opportunities to convey information to our visitors, the possibilities are endless. However, our biggest problem in this day and age is that the majority of visitors are unable to devote much time to having a full, immersive experience.

We need to extend the length of the guest's visit from merely being physically located in the park, to spanning from the moment they decide that they are going to visit, with the experience lasting for days after they have left. We can only do this by providing relevant information to the visitor that triggers their curiosity by giving interesting facts, videos and graphics to explain why these animals are kept in human care.

We have developed Aratag as a tool for exactly this reason. Ideally, when a visitor approaches an exhibit, the relevant information pops up onto his or her smart phone with just one or two basic sentences, followed by a video or audio guide. The video could even feature one of the zoo guides standing in front of the

exhibit explaining what it is that the visitor can see in this particular exhibit. The video could also be longer than the visitor has time for to be able to watch on the spot, but would be perceived as being interesting enough so that when they get home, they will start up the zoo app again, and continue to watch the video. It could contain an abundance of additional information, such as why the species is in the zoo or aquarium, interesting stories about the animals, breeding programme information, dietary information etc.

It could also feature an audio guide, so that the visitor can still view the animal during their visit or from the comfort of their own home, while at the same time being able to listen to a zoo guide providing more information about the animal. This would help the visitor to decide how much time they want to dedicate to staying in front of the exhibit by the length of the audio guide.

An audio guide would also provide a unique opportunity for zoos and aquariums to open up their backstage facilities to the public so they can see or hear what is happening behind the scenes of each exhibit, and witness the volume of work that goes on every day to provide the animals with an authentic experience where they are cared for in protected surroundings.

Visitors will gain an understanding of the benefits zoos and aquariums can bring to preserving species when they witness for themselves the genuine experience of zoo keepers describing their daily routines and giving details of the animals' natural behaviours.

Based on visitor internet viewing habits, there is a good chance the visitor will continue his or her visit at home – if they have seen something they found interesting during the day they will Google it. With the Aratag mobile application, we can extend people's visits to the zoo and aquarium and present them with relevant and interesting information long after their visit has ended. This virtual experience could heighten their understanding of the important role zoos and aquariums can play in the modern world.

For more information, please visit: aratag.com



Special Subscription Offer for WAZA Members

WAZA members receive a **20% discount** on the first year of Aratag subscription. WAZA will also receive a 10% donation for every subscription.

Given the current situation with COVID-19, the Aratag team is also offering the option of applying for the Aratag license now, but only paying from 2021.

Access for all – How Accessible are our Facilities to People with Special Needs?



Photo: The fence structure has been adapted to ensure that visitors in wheelchairs can view the exhibit at the Yokohama Zoological Gardens.
© Yokohama Zoological Garden

Dr Judy Mann-Lang

South African Association for Marine Biological Research (SAAMBR), uShaka

Around the world zoos and aquariums welcome millions of visitors each year, providing them with an opportunity to connect with animals, learn, have fun, and perhaps reflect on their role in ensuring our planet continues to sustain nature and humanity.

However, increasingly visitors with special needs are visiting, or wanting to visit our facilities. This presents us with a wonderful opportunity to connect with many more people, but also brings some challenges, as we work to accommodate their needs. Ensuring that people with special needs can participate in all aspects of life is even highlighted in the United Nations Sustainable Development Goals.

When we consider visitors with special needs, we usually think about a disability which is visible to the eye. We envisage people who use a wheelchair, or people with sight or hearing difficulties. In fact, the definition is much broader. According to the Merriam-Webster dictionary, disability is 'a physical, mental, cognitive, or developmental condition that impairs, interferes with, or limits a person's ability to engage in certain tasks or actions or participate in typical daily activities and interactions.'

Some definitions include temporary conditions such as pregnancy, in addition to permanent conditions, while others include the elderly, and in some definitions even people travelling with children in prams. The term special needs thus includes speech, hearing, sight, cognitive and mobility issues. Defined in this way Professor Buhalis, from Bournemouth University in the United Kingdom (UK), suggests that there are more than 600 million people living with disabilities globally and this figure will increase with an ageing population, especially in Western countries. The question that this article attempts to answer is, 'How are WAZA facilities making sure that this sector of the market is catered for in our facilities?'

Methods

To answer this question, we prepared a short survey, comprised of free response questions, that was sent to 15 colleagues in different zoos and aquariums around the world. These colleagues then distributed the survey to a cross section of facilities. In total, representatives from over 40 facilities took the time to respond, with 36 completing the full survey. Responses were received from Japan, Latin America, United States of America (USA), Africa, UK, Asia, Australia, New Zealand and the Middle East. The results were analysed both qualitatively and quantitatively.

Results

What emerged from the research is that many zoos and aquariums are working towards making their facilities more accessible. Some are doing an excellent job, while others stated that they could do more. If this work has stimulated just a few senior staff members to consider how they can make their facilities more accessible and strive to do so, then it has already achieved something. "The survey was an eye opener for me on how little we provide for those who have disabilities that are not just wheelchair related. This has got me thinking on how do I help a blind person to experience an environment that is mostly visual at a small facility like ours...food for thought," anonymous (and honest) Zoo Director.

Physical access

At least half of all respondents noted that they had in some way adapted their facilities to physically accommodate people with special needs. All respondents stated that their facilities are partly or fully wheelchair accessible. The majority have accessible washrooms/toilets. Interestingly, although wheelchair access was what almost all respondents commented on first in their responses, less than 20% provide wheelchairs for people to use onsite. When providing equal services for people with disabilities as for general visitors, it appears that our view does not yet include the wider definition of disabilities as described above (Fig. 1).

Interestingly, the provision of free access for visitors with special needs, or free access for carers was mentioned particularly by facilities in the East. Surprisingly, some facilities do not allow guide dogs to enter their premises, while others, such as Bristol Zoo in the UK, welcome visitors with guide dogs and they have created a guide dog-friendly map so animals that may be spooked by a guide dog can be avoided. Disney Animal Kingdom in the USA offers disability service cards designed to accommodate visitors who are not able to wait for long periods in queues.

Eleven respondents noted that they have programmes that specifically cater for people with sight impairments. The Cango Wildlife Ranch in South Africa offers sight-impaired tourists specially arranged descriptive tours, where the focus is on narrative storytelling to heighten their experience. The selection of colours used in signage to accommodate those with colour blindness was also noted in a few responses.

Despite this, many facilities, especially aquariums, have difficulty in making their exhibits accessible to people who are visually impaired. Aquariums are primarily visual experiences. The challenge is how to more effectively include sounds and touch, for all visitors, not just for special groups. Interestingly Georgia Aquarium in the USA is experimenting with sonification in their aquarium – using sounds to guide visitors through the facility, while in the North Carolina Aquarium, USA, 3D models connected to audio guides instruct visitors where to place their hands to feel the mouth, eyes, fins and body shapes of a particular animal. A few zoos offer interpretation in braille and some offer audio tours for visually impaired people. Much of the audio-visual material at New Zealand's Wellington Zoo has subtitles for those with hearing difficulties.

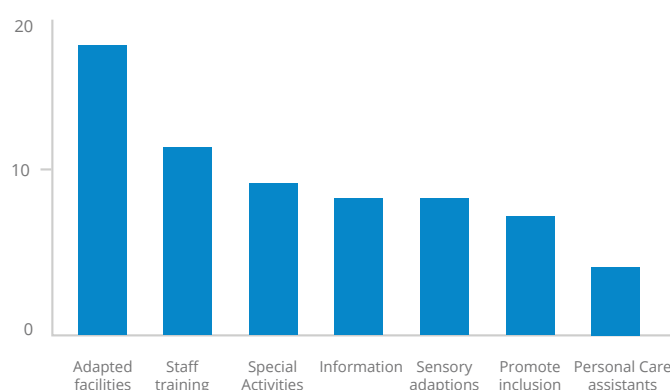


Figure 1. Special steps taken by respondents to welcome people with disabilities. (N=36 responding organisations)

For those who have hearing impairments, several facilities have staff trained in sign language. In fact, hundreds of staff members at Ocean Park in Hong Kong have signed up to learn sign language, training that is also provided by Parque das Aves zoo in Brazil. Melbourne Zoo in Australia has introduced a programme called 'Changing Places' which provides larger than standard accessible toilets and other facilities to meet the needs of people with a disability.

Schools

When it comes to special needs groups, zoos and aquariums are doing much more than other organisations. Most respondents noted that they run special programmes for children with disabilities – in fact, over half of all the respondents described a school programme that they ran. These programmes are often designed and run by trained teachers and are focussed on ensuring the children have a unique experience tailored to their abilities. Some facilities offer special camps run specifically for children with different disabilities, while the Zoological Society of London's Special Children's Day attracts over 8,000 children each year. Some organisations have staff with disabilities or specially trained educators who have the skills to train other staff and to facilitate school group experiences. Zoos Victoria's work with the 'Yellow Ladybugs' is an example of a school programme where zoo educators run workshops and help to host picnics for females (and their carers) with Autism Spectrum Disorder.

Special days and nights

'Dream Night at the Zoo' is a private event run by many facilities around the world for families with children who have disabilities or significant health care needs. Fourteen of the respondents mentioned the Dream Nights event. It appears that these events were initiated independently, often by a passionate staff member who knew someone with special needs. Staff usually volunteer their time for these events, and they can be wonderful opportunities for team members from across the facility to work together during an often emotional and rewarding activity. Other examples of special, inclusive events include the 'Sensory Friendly Wildlights' event held at the St Louis Zoo in the US, and 'Zoos Go Blue' at Central Park Zoo which both take place every year. Fundación TEMAikèn in Argentina, hosts a 'We are Diversity' festival where differences as well as similarities are celebrated. Many other facilities have special programmes of this nature. Alternatively, some facilities provide visitors with special needs different opening times. For example, Wellington Zoo offers personalised morning and evening tours with tactile encounters, including animal sounds and smells, tailoring the tours to specific learning needs and interests.

Top photo: In Guatemala blind children have the opportunity to touch artefacts. This tactile experience is mediated by a skilled staff member. © La Aurora Zoo

Middle photo: Animal hospital at Taipei Zoo © Taipei Zoo

Bottom photo: Meeting a seal is always a special experience for visually impaired children at uShaka Sea World. © SAAMBR



Making dreams come true

Many zoos and aquariums offer special programmes for people who are terminally ill. These encounters are usually organised on a personalised basis and can be very emotional for the individual, their families and for the staff members involved. However, they can also prove to be days of immense joy for the families involved who are able to forget their situation for a short time and simply experience a unique connection with the animals. This was expressed in a response from a 'Make A Wish' participant at the Monterey Bay Aquarium, USA: "We had the BEST time with you at the Aquarium last Friday and I cannot properly express how grateful I am for all you did for us. For the first time in months I was not consumed with thinking about her cancer treatment, but I just got to enjoy her experiencing the Aquarium. It was wonderful."

For children who are sick, visiting a zoo hospital can be a positive experience, such as the one at Taipei Zoo. While for those who are not physically able to visit the facility, many zoos organise programmes where they visit hospitals with specially selected animals.

Animal selection

When asked which animals were the most effective in connecting with visitors, the responses varied among the nine facilities that offer animal encounters (Fig. 2). Animals with a strong smell – such as the maned wolf were mentioned, as were animals with an identifiable texture, such as a reptile or a hedgehog. Reptiles and amphibians including toads, snakes, skinks, turtles and tortoises were identified by 28% of the respondents as being the best animals to touch. Some noted that animals that make a noise such as an otter, or small animals such as guinea pigs were good candidates for touch programmes, while for aquariums wet animals such as sea anemones or urchins were commonly mentioned. Interestingly, giraffes were noted in several responses. Several facilities noted that working with animals that have disabilities or long-term injuries to be especially effective as the participants can connect to the animals in a very real way. Congo Wildlife Ranch noted the importance of training the animals to prepare them for objects such as wheelchairs or potentially unpredictable movements. This helps to ensure that the animals are also comfortable and relaxed with the interactions. Almost 20% of respondents noted the importance of matching the animal to the person where possible.

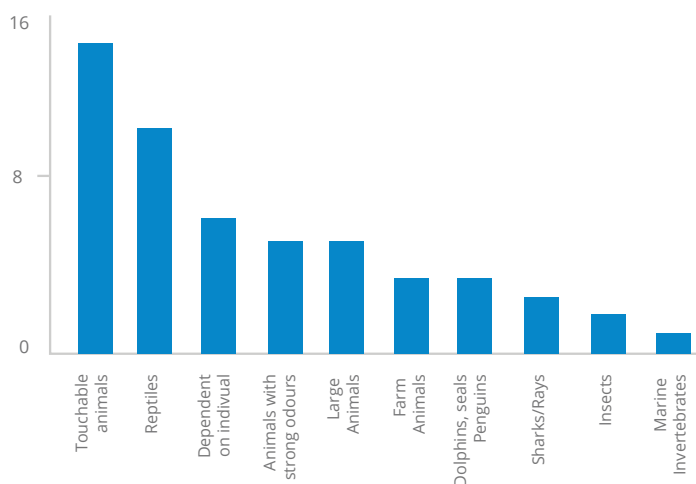


Figure 2. Animal types suggested by respondents as being most appropriate for interactions with special needs visitors (N=36).

A word of caution echoed by a South African Association for Marine Biological Research (SAAMBR) staff member "I have seen parents forcing their children to interact with a 400kg dolphin because they feel the dolphin will help them in some way, whereas a small rabbit might be a better choice."

Suggestions for more action

While the results show that some respondents were actively trying to ensure that their facilities were accessible to a wider audience base, a few suggestions for improvement were noted. 'Respect' and 'dignity' were two words that came up frequently during the research. People with disabilities asked us to listen and understand their needs to enable us to provide them with a chance to connect with the animals on a personal level. Based on this research, here are some simple suggestions for how we can make our facilities more accessible to all.

Staff training

Training all staff to understand universal accessibility and assess how they can help visitors with a range of disabilities will have the greatest impact on making our facilities more accessible, while being the most cost-effective approach. Despite the importance of staff training, only 30% of respondents noted that they had undertaken such training. Having a specialist that can advise, train and support staff to provide an inclusive visitor experience is an excellent investment. Paignton Zoo elaborated: "For staff delivering the sessions – hugely rewarding, although it can be challenging for new staff who may not have encountered a particular disability before. We do all we can to provide training for staff – there's certainly an element of confidence building".



Photo: During training, staff at the Congo Wildlife Ranch visit the facility in a wheelchair. © Congo Wildlife Ranch

“A quick survey of zoo and aquarium websites revealed that while many do provide clear information, most do not provide some information on accessibility.”

One suggestion was to take senior managers and team leaders through the facility in a wheelchair or wearing blind-out glasses or earplugs. This would enable them to experience the venue from a different sensory perspective and provide senior staff with a chance to better understand how others may experience the facility.

Provide information

Something that many people noted was a lack of reliable information about a specific attraction's level of accessibility. Common enquiries include the accessibility of parking, whether guide dogs are permitted inside the facility, the cost of the entrance fee for disabled visitors, recommended times to visit the facility with an autistic child, and questions relating to dietary requirements to eat at the onsite restaurants.

Fundación Temaikèn in Argentina noted that they have gastronomic menus for celiac and diabetic people. Only 22% of respondents noted that they provide special information for visitors with special needs on their websites or brochures. A quick survey of zoo and aquarium websites revealed that while many do provide clear information, most do not provide some information on accessibility. The Cerebral Palsy Organisation in the USA has an extensive overview of accessibility at almost 100 facilities in the USA.

Use more effective signage

Onsite clear signage should denote as to which ramps are suitable for wheelchairs, prams and the elderly. It is recommended to provide some extra seating for elderly/slow walkers, so that they can rest. Be creative in your signage and its placement; i.e. “For Granny and Grandpa while the kids explore”.

Think before you start making changes

Have you thought about including a person with a disability during the design of a new exhibit or facility? What about inviting the parents of children with special needs to provide suggestions on how you can improve your facility's accessibility? Several organisations already have community advisory groups to advise on future directions. It is always advisable and more cost effective to design with universal access in mind. Most facilities have maintenance plans which can and should include budgets and plans to improve on universal accessibility.

Share your experiences

As we all journey towards greater accessibility for all our visitors, it is important for us to share our experiences, successes and failures. What may seem a simple idea, could change the experiences for visitors in another facility. By sharing our failures, we can help to save the money and time of our colleagues. The (IZE) Journal and website are the perfect place to share stories and experiences. In addition, further research on this topic is needed.

Benefits for all

Although most survey respondents noted the joy and happiness that these programmes brought to the participants, without exception all noted that interacting with people with special needs also has a very positive impact on the staff involved. The following quotes reflect these sentiments. From Minnesota Zoo: "These connections enrich the lives of everyone involved."; from Parque das Aves: "It is very emotional, we learn how they overcome the challenges of each day, and it is a lesson in life and thankfulness"; from Zoos Victoria: "Staff get great satisfaction and reward from seeing people make a connection with an animal, the joy on their faces and feel like they are making a difference when a carer will report a positive change in a person with a disability as a result of meeting an animal".

The last quote is from a wheelchair user who really opened my eyes and helped me to understand this topic:

"Only YOU, with a change of attitude and heart, can promote inclusiveness in your establishment – all everyone and every animal wants, is to be treated with respect, love and above all, dignity."

Acknowledgements

A big thank you to everyone who distributed and completed the survey. The response was amazing, it is seldom that you receive more responses than you send out. A special thank you to Eric Tsao from Taipei Zoo and Natalia Maruscak from Argentina. They facilitated many responses and even had them translated into English. It was humbling to see just how much people care about visitors who have different needs. Kim Ngcobo from SAAMBR is thanked for her assistance with some of the data analysis.

Photo: Animals to touch - Visitors to the Bronx Zoo have the opportunity to interact with a hedgehog.

© Bronx Zoo



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Global Integrated Collection Assessment and Planning (ICAP) Workshop for Callitrichidae

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In order to help zoos and aquariums reach their full potential for *ex situ* conservation by carefully selecting the species to be held, and managing these in a way that best addresses their conservation needs, and prioritises their human, institutional and financial resources; regional zoo associations European Association of Zoos and Aquaria (EAZA) and the Association of Zoos and Aquariums (AZA), and the IUCN SSC Conservation Planning Specialist Group (CPSG) jointly developed the Integrated Collection Assessment and Planning (ICAP) process (Traylor-Holzer et al., 2019a,b).

While an ICAP can also be performed at a local, national or regional level, during a global ICAP workshop *in situ* experts and national/regional zoo associations from around the world come together in the spirit of the One Plan Approach to species conservation. Together they engage in a multi-species, rapid, *ex situ* conservation assessment based on the decision process of the IUCN Guidelines on the Use of *Ex situ* Management for Conservation. An earlier contribution to WAZA News (Issue 01, 2019) provided a more detailed description of the ICAP methodology (Traylor-Holzer et al., 2019b).

For the Callitrichid global ICAP workshop, twenty-two participants representing six zoo associations – AZA, EAZA, Latin American Zoo and Aquarium Association (ALPZA), Associação de Zoológicos e Aquários do Brasil (AZAB), the Colombian Association of Zoological Parks and Aquariums (ACOPAZOA) and Zoo and Aquarium Association (ZAA) (who attended via Skype), and

representatives from range states, and field projects gathered in Amsterdam, the Netherlands from 2-4 April 2019. This was only the second global ICAP meeting following the first for canids and hyaenids, held in 2016 in Omaha, Nebraska, USA (Traylor-Holzer et al., 2018). For all of the 49 callitrichid species, workshop participants evaluated how zoo associations worldwide can best contribute to their conservation in a way that is complementary to, and not in conflict with, existing *in situ* or *ex situ* activities in the range countries and in collaboration with local authorities.

- Out of 49 callitrichid species a total of 22 (45%) are currently listed on the IUCN Red List as critically endangered, endangered, vulnerable, near threatened or data deficient – for the purposes of this workshop, they were grouped under the label 'threatened' (Table 1). Thirteen of these are already held in zoos and aquariums. Seven among those were assigned with at least one direct *ex situ* conservation role, which always included, but was not necessarily limited to, the role of 'insurance'. The latter often came in combination with making use of *ex situ* expertise with, or potential for, research, education, conservation planning, fundraising or capacity building/training (Table 2). As illustrated by the case example of the cotton-top tamarin (*Saguinus oedipus*), for both threatened and non-threatened species, the different zoo associations also discussed potentially varying emphases for different regions, or certain divisions of tasks and responsibilities.

Case example on mountain marmosets

The buffy-tufted-ear marmoset (*Callithrix aurita*) and the buffy-headed marmoset (*Callithrix flaviceps*) are endemic to the montane rainforests of the Brazilian southeastern Atlantic forest. Both species are listed as endangered on the IUCN Red List and threatened with extinction, due to habitat fragmentation and hybridisation which is caused by the rising populations of introduced species of other marmosets (*Callithrix jacchus*, *Callithrix penicillata* and *Callithrix geoffroyi*). The Mountain Marmosets Conservation Program was formed to prevent both species from becoming extinct. Because of the small, fragmented nature of the remaining populations and the perceived degree and speed of hybridisation, one of the core activities the global ICAP identified for the *ex situ* community is building up a captive insurance population of pure individuals, within the planning and approval structure of, and in close collaboration with, the relevant government authorities.



Photo: Buffy-tufted-ear marmoset (*Callithrix aurita*)
© Rodrigo Bramili/Mountain Marmoset Conservation Program.

More information on the Mountain Marmosets Conservation Program can be found on

www.mountainmarmosetsconservation.com

Of the nine threatened taxa without *ex situ* holdings, two (the buffy-headed marmoset *Callithrix flaviceps* and black-faced lion tamarin *Leontopithecus caissara*) received recommendations to establish range country *ex situ* populations for among others reasons, insurance, and in the case of the buffy-headed marmoset, as a source for population restoration (Table 2 and mountain marmoset case example). These recommendations are pending confirmation from a more in-depth *ex situ* needs assessment workshop for primates of the Atlantic Forest organised by the Brazilian government (the Primate Centre (CPB) of the Chico Mendes Institute for Biodiversity Conservation (ICMBio) in 2020. In addition to direct conservation roles, many of these species, as well as the pygmy marmoset *Cebuella pygmaea*, were assigned indirect conservation roles, which, in contrast to direct conservation roles, are less critical to the overall conservation strategy of a species, but nevertheless bring added benefit. In summary, the main focal point for zoo based callitrichid conservation currently lies in Brazil and Colombia, which is reflected in the intense collaboration and partnership that has developed over the years between individual zoos as well as zoo associations and the *in situ* projects, in country NGOs and government entities.

While it is strongly recommended to dedicate available resources to *ex situ* conservation actions for threatened species of callitrichids, it should not be

ignored that a total of 27 out of 49 callitrichid species (55%) are currently listed as least concern on the IUCN Red List, from which a total of seven species are held in relatively large numbers within zoos (Table 1). There were also two threatened species with large *ex situ* populations (the pygmy marmoset and Goeldi's monkey *Callimico goeldii*) that were not assigned direct conservation roles. This presents the *ex situ* community with the opportunity of using these species as ambassadors for their threatened counterparts by presenting the public with well formulated educational messages, as well as marking some of these *ex situ* populations as potential candidates for reduction or elimination and replacement with higher priority species when space for these is required. For all species of callitrichids it was agreed to keep a close eye on the status of the wild population to adapt current recommendations where needed.

Following the global ICAP workshop, each representative was tasked with bringing formulated recommendations to the relevant bodies within their respective regional zoo and aquarium associations for discussion, ideally for incorporation within the regions' structures and processes for regional collection planning and *ex situ* programme management. EAZA immediately took this to heart and held its Regional Collection Planning (RCP) workshop directly after the global ICAP. EAZA's new population management structure inspired and contributed to the development

Case example on cotton-top tamarin

The cotton-top tamarin (*Saguinus oedipus*) is endemic to northwestern Colombia and is currently listed as critically endangered on the IUCN Red List of Threatened Species. It has suffered from extensive historical habitat loss and fragmentation and is currently threatened through continued deforestation for agriculture, fuel, and housing, as well as collection for the local pet trade in Colombia. In the past, individuals were exported in the tens of thousands for the international biomedical laboratory trade – descendants of which often ended up in the zoo populations. This makes it possible that the current global zoo population contains genetic diversity that is no longer represented in the wild. One of the global ICAP workshop recommendations, was to introduce a global genetic and demographic *ex situ* insurance population for the species. The core of this will be formed by the largest EAZA population, working with AZA, ZAA and ACOPA ZOA. The smaller regional populations will be helped with their population needs so that they can fulfil the other direct and indirect conservation roles defined by the ICAP, where relevant.

Individuals will be exchanged with and between other regions as needed. A regional captive programme for the species in Colombia was also recommended.

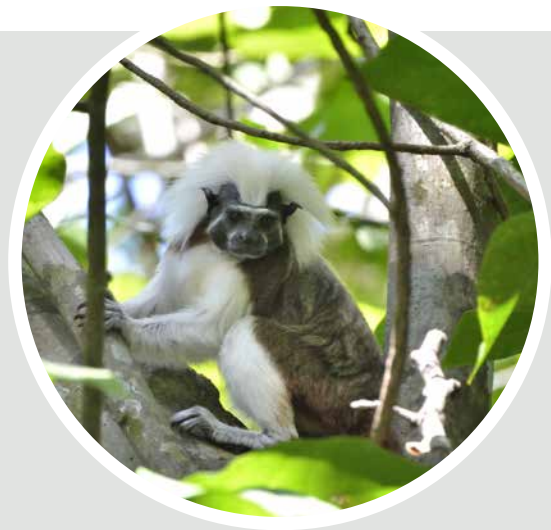


Photo: Cotton-top tamarin (*Saguinus oedipus*)
© Chirs Morris

Furthermore, the regions will discuss with each other, their regional zoo associations and Species360 how to best deal with the migration of the regional and global studbook data to ZIMS for Studbooks, in order to most efficiently meet the needs of the global *ex situ* population.

of the ICAP process, and the development of the latter in turn contributed towards finetuning of the new EAZA structure (de Man and Leus, 2018). The EAZA RCP resulted in six new EAZA *Ex situ* Programmes (EEPs), including four species that are currently not held in EAZA (two of which are not yet held *ex situ* globally). The EAZA Callitrichid TAG intends to be intimately involved in helping to set out and implement the overall conservation strategy for the two species which are not currently held *ex situ*, as well as advising and aiding with the establishment of *ex situ* populations when this becomes range country recommended. Because this takes proactive management and activity by a dedicated person, an EEP was created. The TAG also established EEPs for seven non-threatened species with large populations *ex situ* that were assigned non-conservation roles. Among these is a single EEP for the phasing out of common marmosets (*Callithrix jacchus*) and black tufted-ear marmosets (*Callithrix penicillata*).

Other follow up steps from the global ICAP include a joint meeting of the global Callitrichid/New World Primate TAGs (and equivalent structures) on the

occasion of the Joint TAG chairs (which has now been indefinitely postponed due to COVID-19). Furthermore, the global ICAP results can contribute to the more detailed *ex situ* needs assessment as part of the Brazilian National Action Plan (NAP) for Primates of the Atlantic Forest. Any *ex situ* recommendations agreed upon can thus become a formal part of the NAP. The global ICAP workshop provided guidance to zoos and aquariums on conservation priorities for collection planning, conservation-education messaging, research, *in situ* field support, and integration of *in situ* and *ex situ* efforts; and led to a better understanding among all stakeholders of the spectrum of possible *ex situ* contributions to conservation. In addition, while many of the regions already worked with each other at some level, the global ICAP workshop nurtured friendship, trust and understanding among all the *in situ* and *ex situ* stakeholders involved.

We extend a special thank you to EAZA, WAZA, Beauval Nature and Copenhagen Zoo for their financial contribution to realising the workshop.

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Photo: Buffy-tufted-ear marmoset (*Callithrix aurita*)
© Rodrigo Bramili/Mountain Marmoset Conservation Program.

	Large population (>100)	Small population (<100)	Not in <i>ex situ</i> collections	#Total taxa
'Threatened' (for this workshop: CR, EN, VU, NT, DD)	<i>Saguinus oedipus</i> (CR) <i>Saguinus bicolor</i> (CR) <i>Leontopithecus rosalia</i> (EN) <i>Leontopithecus chrysomelas</i> (EN) <i>Cebuella pygmaea</i> (VU) <i>Callimico goeldii</i> (VU)	<i>Leontopithecus chrysopygus</i> (EN) <i>Callithrix aurita</i> (EN) <i>Saguinus leucopus</i> (VU) <i>Saguinus niger</i> (VU) <i>Saguinus geoffroyi</i> (NT) <i>Mico melanurus</i> (NT) <i>Callithrix kuhlii</i> (NT)	<i>Callithrix flaviceps</i> (EN) <i>Leontopithecus caissara</i> (EN) <i>Saguinus ursulus</i> (VU) <i>Mico nigriceps</i> (VU) <i>Mico rondoni</i> (VU) <i>Leontocebus tripartitus</i> (NT) <i>Leontocebus illigeri</i> (NT) <i>Mico marcai</i> (DD) <i>Mico munduruki</i> (DD)	22
Non-threatened (LC)	<i>Saguinus imperator</i> (LC) <i>Saguinus midas</i> (LC) <i>Saguinus labiatus</i> (LC) <i>Callithrix geoffroyi</i> (LC) <i>Mico argentatus</i> (LC) <i>Callithrix jacchus</i> (LC) <i>Callithrix penicillate</i> (LC)	<i>Leontocebus nigricollis</i> (LC) <i>Saguinus mystax</i> (LC) <i>Mico humeralifer</i> (LC) <i>Mico chrysoleucus</i> (LC) <i>Mico mauesi</i> (LC) <i>Leontocebus fuscicollis</i> (LC) <i>Leontocebus lagonotus</i> (LC) <i>Leontocebus weddelli</i> (LC) <i>Leontocebus leucogenys</i> (LC) <i>Leontocebus fuscus</i> (LC)	<i>Saguinus martinsi</i> (LC) <i>Leontocebus cruzlimai</i> (LC) <i>Leontocebus nigrifrons</i> (LC) <i>Saguinus inustus</i> (LC) <i>Mico humilis</i> (LC) <i>Mico leucippe</i> (LC) <i>Mico acariensis</i> (LC) <i>Mico intermedius</i> (LC) <i>Mico saterei</i> (LC) <i>Mico emiliae</i> (LC)	27
#Total taxa	13	17	19	49

Table 1. Number of assessed threatened and non-threatened callitrichid taxa sorted by global population size in zoos and aquariums. CR: critically endangered; EN: endangered; VU: vulnerable, NT: near threatened; DD: data deficient; LC: least concern. The IUCN Red List categories of threat used were those assigned during the IUCN SSC Primate Specialist Group Neotropical Primates Red List Assessment Workshop (26-30 January 2015, Houston, Texas, USA), before this was approved and made official by the IUCN Red List Programme.

Scientific name Common name	RL	N Global	# Assoc.	Conservation Roles (D) Direct (I) Indirect	Supported Field projects
<i>Saguinus oedipus</i> Cotton-top tamarin	CR	953	5	(D) Insurance (D) Expertise/ research (genetics research) (D) <i>Ex situ</i> Training (working with rescue centres and zoos in range) (D) <i>Ex situ</i> expertise (education/ behavioural change) (I) <i>Ex situ</i> expertise/ training for in situ/range ex situ (I) Fundraising for in situ conservation	Proyecto Tití
<i>Saguinus bicolor</i> Pied tamarin	CR	198	3	(D) Insurance (D) Expertise (contribute to planning) (D) Fundraising (D) Training/ capacity building (I) Education (outside range) (I) Advocacy (in and outside range) (I) Research	Projeto Sauim-de-Coleira
<i>Leontopithecus rosalia</i> Golden lion tamarin	EN	560	5	(D) Insurance (I) Education/ awareness (I) Develop tools/methods (I) Political support/ advocacy (I) Financial support (I) Conservation research knowledge	Associação Mico-leão Dourado (AMLD)
<i>Leontopithecus chrysomelas</i> Golden-headed lion tamarin	EN	439	4	(D) Insurance (I) Education/ awareness (I) Develop tools/methods (I) Political support/ advocacy (I) Financial support (I) Conservation research knowledge	Bahian Lion Tamarin Conservation Initiative
<i>Leontopithecus chrysopygus</i> Black lion tamarin	EN	57	2	(D) Insurance (I) Education/ awareness (I) Develop tools/methods (I) Political support/ advocacy (I) Financial support (I) Conservation research knowledge	Programa de Conservação do Mico-Leão-Preto (IPÊ)
<i>Callithrix aurita</i> Buffy-tufted-ear marmoset	EN	34	1	(D) Insurance (D) Source (D) Fundraising (D) Expertise/ lobbying (D) <i>Ex situ</i> training/ expertise	Mountain Marmosets Conservation Program
<i>Saguinus leucopus</i> White-footed tamarin	VU	82	1	(D) Insurance (D) <i>Ex situ</i> and <i>in situ</i> research (in range) (D) <i>Ex situ</i> expertise in education (D) Fundraising (D) Training (in range) (D) <i>Ex situ</i> community to act as catalyst for additional <i>in situ</i> conservation planning and implementation (I) Advocacy (to allow insurance role to happen)	Programa de Conservación del Tití Gris
<i>Callithrix flaviceps</i> Buffy-headed marmoset	EN	0	0	(D) Insurance (D) Source (D) Fundraising (D) Expertise/ lobbying (D) <i>Ex situ</i> training/ expertise	Mountain Marmosets Conservation Program
<i>Leontopithecus caissara</i> Black-faced lion tamarin	EN	0	0	(D) Insurance (D) Advocacy (D) Fundraising	Black-faced Lion Tamarin programme (SPVS)

Table 2. Threatened (CR, EN, VU, NT, DD) callitrichid species for which the Global ICAP assigned direct *ex situ* conservation roles. The *in situ* projects mentioned are those currently supported in any way by members of at least one zoo association. D: direct role for *ex situ* conservation; I: indirect role for *ex situ* conservation.

Update on International Studbooks (ISBs)

Changes between 22 January and 4 May 2020

Published ISBs (9)

- **Addax** (*Addax nasomaculatus*) (2019 ed.) – Wendy Enright (The Living Desert Zoo and Gardens, USA)
- **Buffon's macaw** (*Ara ambiguus*) (2018 ed.)
– Sandrine Silhol and Nadège Sanzillon (Zoo des Sables d'Olonne, France)
- **Clouded leopard** (*Neofelis nebulosa*) (2019 ed.)
– Jilian Fazio (Smithsonian's National Zoo and Conservation Biology Institute, USA)
- **Greater one-horned rhinoceros** (*Rhinoceros unicornis*) (2019 ed.) – Friederike von Houwald (Zoo Basel, Switzerland)
- **Pygmy hippopotamus** (*Choeropsis liberiensis*) (2019 ed.) – Beatrice Steck (Basel Zoo, Switzerland)
- **Scimitar-horned oryx** (*Oryx dammah*) (2019 ed.)
– Tania Gilbert (Marwell Zoo, UK)
- **Somali wild ass** (*Equus africanus somalicus*) (2019 ed.) – Beatrice Steck (Basel Zoo, Switzerland)
- **Tiger** (*Panthera tigris*) (2019 ed.) – Peter Müller (Leipzig Zoo, Germany)
- **Wattled crane** (*Bugeranus carunculatus*) (2019 ed.)
– Frederick Beall (Zoo New England, USA)

ISBs archived (0)

- None

New ISBs approved (0)

- None

Inter-institutional ISB transfers (3)

- **Snow leopard ISB** from Leif Blomqvist to Emma Nygren (Nordens Ark, Sweden)
- **Oriental white stork ISB** from Naoya Ohashi to Ami Nakajima (Tokyo Zoological Park Society, Japan)
- **Gorilla ISB** from Miguel Casares to Sabrina Linn (Frankfurt Zoo, Germany).

WAZA thanks the three ISB keepers stepping down for their contributions to the WAZA community.



Photo: Somali wild ass.
© Zoo Basel.

Photo: A guest walks through the underwater tunnel at AquaRio. © AquaRio.

Inset photo: Aerial view of AquaRio and the solar panels on the roof of the aquarium building. © AquaRio



WAZA is pleased to have welcomed *Aquário Marinho do Rio de Janeiro (AquaRio)* as a new institutional member at the beginning of this year.



AquaRio is located in Rio de Janeiro, Brazil, and is the largest aquarium in South America. The aquarium is home to over 5,000 animals of 350 species, and has a built area of 26,000 square metres and contains 4.5 million litres of saltwater. It was officially opened to the public in 2016 and is the first marine aquarium in the city of Rio de Janeiro. One of AquaRio's main goals is to provide a space for fun and conservation, alongside educational activities – instilling in visitors a respect for marine animals and ecosystems. The aquarium conducts extensive research through the AquaRio Scientific Research Centre and partners with universities and research

centres, like the Department of Marine Biology of the Federal University of Rio de Janeiro (UFRJ) to further research in captive breeding of endangered species and marine life.

The aquarium is also committed to sustainability and environmental protection, and in 2017, launched the largest solar powered project in the state of Rio de Janeiro. More than 2,000 photovoltaic solar panels have been installed on AquaRio's roof, occupying a surface area of 6,000 square metres (equivalent to a football pitch) which produces about 77,000 kWh of clean electricity each month. The electricity generated from the solar panels is equivalent to the monthly consumption of 500 Brazilian households and has resulted in a decrease of 320 tonnes of CO₂ per year.

AquaRio is also a member of the Association of Zoos and Aquariums of Brazil (AZAB) and the Latin American Zoo and Aquarium Association (ALPZA).

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For every edition of WAZA NEWS, the magazine printer, Gràfiques Ferpala, gives WAZA five oak trees to plant, as part of their sustainability initiative.