

QUARTERLY PUBLICATION OF THE EUROPEAN ASSOCIATION OF ZOOS AND AQUARIA

ZOOQUARIA

SPRING 2024

ISSUE 121



Sea change

New directions for marine conservation



IMMERSED IN NATURE

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THE EXTINCTION EEP

A NEW APPROACH FOR DISAPPEARING SPECIES



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KEY: a quick guide to frequently used acronyms

CITES: Convention on International Trade in Endangered Species
EEP: EAZA Ex situ Programme
IUCN SSC: International Union for Conservation of Nature Species Survival Commission
LTMP: Long-term Management Plan
RCP: Regional Collection Plan
TAG: Taxon Advisory Group
ZIMS: Zoological Information Management System

Zooquaria

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FROM THE DIRECTOR'S CHAIR

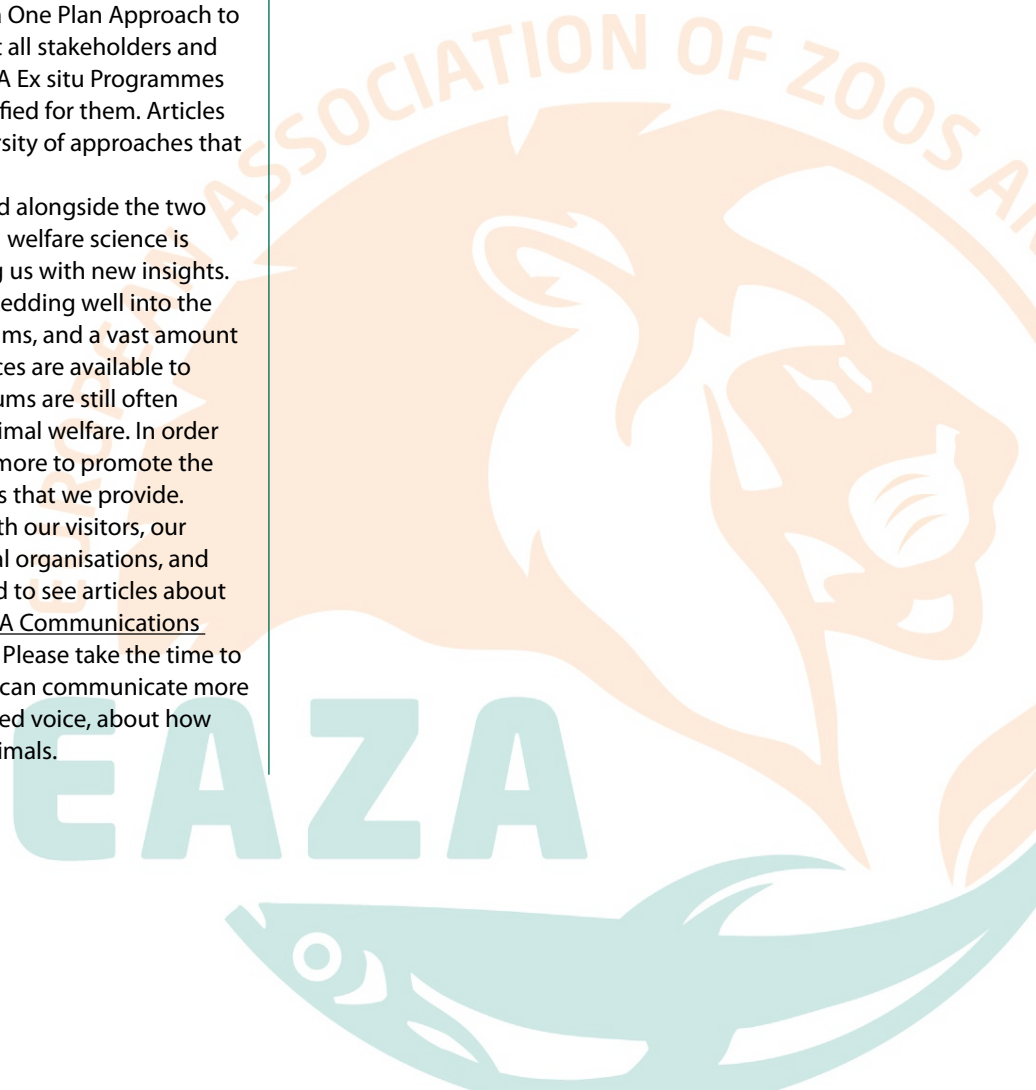
I was honoured to be invited to speak at the Association of Zoos and Aquariums (AZA) Directors' Policy Conference in January as part of a panel on global trends. It was fascinating to hear about the similarities and differences that we are all experiencing. As communications expand and the world shrinks, we see more and more connectivity and influence between regions. Key trends discussed were successful models of conservation and the ongoing need to evaluate effectiveness; to borrow from the EAZA population management discussions, success is achieved by recognising that 'one size does not fit all'. See the introduction to the Vietnamazing campaign on page 14 to find out how EAZA is meeting the 'saving species' part of our vision and continuing the clear trend of successful EAZA conservation campaigns.

Ways to increase the sustainability of populations at an international level, including involving non-zoo/aquarium partners and overcoming barriers to transports was also seen to be an evolving trend. Regular readers of *Zooquaria* will know that this is an area that EAZA takes seriously. I've already mentioned our 'one size does not fit all' mantra, which emphasises the need to take a One Plan Approach to population management and look at all stakeholders and opportunities to make sure that EAZA Ex situ Programmes (EEPs) fulfil the roles and goals identified for them. Articles in this issue aptly showcase the diversity of approaches that can be taken.

Animal welfare was also considered alongside the two key areas already mentioned. Animal welfare science is constantly developing and providing us with new insights. Animal welfare assessments are embedding well into the daily routine of our zoos and aquariums, and a vast amount of training opportunities and resources are available to our community. Yet zoos and aquariums are still often mistakenly seen as places of poor animal welfare. In order to reverse this trend, we need to do more to promote the positive animal welfare opportunities that we provide. This needs to happen at all levels; with our visitors, our governing bodies, non-governmental organisations, and legislators. To this end, I am delighted to see articles about animal welfare assessments and [EAZA Communications Guidelines](#) in this issue of *Zooquaria*. Please take the time to read them and think about how you can communicate more often and effectively, and with a united voice, about how zoos and aquariums care for their animals.

Some of you may have noticed by now my trend to link each trending topic with articles in this issue of *Zooquaria* – congratulations! We make every effort to have every issue contain information that reflects the trends in our community and provides you with a way to understand and apply them to your individual situation. In this way, we truly remain a strong community of progressive zoos and aquariums. I wish everyone the best for a happy and successful 2024. Long may we continue to lead and adapt to the trends and ever-changing world around us.

Myfanwy Griffith
Executive Director, EAZA



NOTICEBOARD

UKRAINE FUNDRAISERS

We would like to give a shout out to EAZA Members who donated funds for zoos in Ukraine!

Helsinki and Ähtäri Zoos took part in our joint campaign in November and promoted it on their social media. They each raised €5,000 for the EAZA Ukraine Zoos Emergency Fund by donating €1 from each ticket purchased during a weekend and via Ähtäri's non-profit NGO Vieraile ja Välität. A big thank you to their visitors and supporters!

We also want to thank the Kolmården Foundation, Wrocław Zoo, Wilhelma Zoo, Bergen Aquarium and Erfurt Zoo for their donations in November and December 2023.

If you would like to help our Ukrainian colleagues get through the winter, please find all the information on our website: www.eaza.net/emergency-appeal-for-ukrainian-zoos

NUTRITION FUND AND CONFERENCE

In 2024 the EAZA Nutrition Group (ENG) celebrates its 25th anniversary, and to mark the occasion they started the year by opening the application period for the ENG Funding. The fund aims to improve communication and coordination among all those engaged in research, education or the application of best practice zoo and aquarium animal nutrition and feeding. The ENG funding is available to any European or West Asian non-profit parties. Priority will be given to projects with potential for the greatest impact, and those benefiting multiple EAZA Member institutions. For more details, please visit the [nutrition page on the EAZA website](#). The deadline to apply is 29 April 2024.

Nutrition professionals are also invited to save the date for the next European Zoo Nutrition Conference, which will take place at Apenheul (the Netherlands) from 23–26 January 2025.

JOIN THE FIRST WORLD SPECIES CONGRESS

Reverse the Red is hosting the first 24-hour long online World Species Congress on 15 May 2024. Using

live and pre-recorded presentations, the event will 'showcase evidence-based conservation strategies, invite organisations and governments to accelerate their commitments to saving species, and inspire conservationists to amplify success'. There will be a special focus on efforts to deliver commitments under the Kunming-Montreal Global Biodiversity Framework, as well as on opportunities for individuals and organisations to help reduce extinction risk. Find out how to get involved or how to register on www.reversethered.org/worldspecies-congress-2024.

PROFESSIONAL DEVELOPMENT

The EAZA Academy delivers a wide range of high-quality applied courses taught by knowledgeable professionals working within the zoo and aquarium community. Whether you are a keeper, curator, educator, horticulturalist or working in any other department of an EAZA organisation, the Academy aims to provide relevant training opportunities for you and support your professional growth. For details about our face-to face courses and self-paced online training, please go to the [Courses webpage on our website](#).

To teach a course or suggest a training need that is not yet available, please contact our new EAZA Academy Manager Carolina Collinge at carolina.collinge@eaza.net

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NEW ARRIVALS

LONG LIVE THE KING VULTURE!

IN JUNE 2023, LAGOS ZOO (Portugal) celebrated the hatching of a king vulture (*Sarcoramphus papa*) chick. The breeding pair arrived at the zoo, from Cologne Zoo (Germany), just two and a half months before they bred.

This species can be found in Central and South America, generally preferring to live in undisturbed forests in the lowland tropics. They nest on the ground, in hollow tree trunks or other natural cavities. The birds are monogamous and generally lay one egg per breeding season and incubate it for 57 days on average. Both parents participate in incubating and caring for the chick. The chicks begin to acquire their adult plumage at around 18 months, which takes around four years to fully grow. Until then, they remain with their parents.

According to the IUCN Red List, the king vulture has a conservation status assessed as Least Concern; however, its population is in decline in the wild. The conservation status may worsen, in part due to habitat loss caused by human activities and because they reproduce more slowly – sexual maturity is only reached between four and eight years of age. According to data present in ZIMS, only three king vulture offspring were born in Europe in 2023.

Although we provided two types of nest, one at a higher level and one at ground level, our couple preferred the ground level nest. We were not used to the reproduction behaviours of the species, which meant that at first we thought it was strange that the female would leave the egg and go to the male for grooming. We even thought that the egg might be infertile, but after a short time, the female returned to the nest. After about 56 days, we saw a chick underneath its mother. Two days after birth, the female would leave several times for short periods to join the male. The development of the chick is very slow and we noticed that from a very early age they are autonomous in feeding and wander away from the nest as they grow, which may be a defence against predation.

We are delighted that the couple proved to be compatible and believe that this hatching is an important contribution to increasing the number of individuals within this EEP.



ALL PICS © FILIPA FRANCO



CHINESE ALLIGATORS REARED AT JIHLAVA ZOO

© DANIELA OBERREITEROVÁ



THE FIRST CHINESE ALLIGATOR (*Alligator sinensis*) – a Critically Endangered species – was brought to Jihlava Zoo (Czechia) from Emmen Zoo (the Netherlands) in 2017. Assumed to be around eight years old, this female was a confiscated individual. In 2018, a six-year-old male from China arrived at the zoo and became the female's breeding partner. We started putting the animals together in the summer of 2019, but the alligators were aggressive towards each other.

Wintering is necessary for this species to reproduce. As this is not possible in our breeding facility – the alligators are kept at the Tropical House where the temperature can't be reduced for long periods of time – we decided to cut the time of light exposure from 13 hours (summer daylight) to 10 hours (winter daylight) in the 2022–2023 winter season. As a result, the alligator exhibit was completely dark for a considerable part of the day. The alligators stayed active throughout the winter; they also showed interest in feeding. During the nights, sounds recorded during a Chinese alligator mating season were played in the exhibit,

which began to stimulate mating behaviours in the male.

In early April 2023, the female's behaviour changed and she tried to get access to the male placed behind a barrier. This time the pairing process went without any aggression and repeated mating was observed on cameras. In mid-May, the female began to build a nest from plant material, such as straw, peat moss, sand, horticultural substrate, dead leaves and coconut fibre substrate ('Lignocel' brand). We did not separate the alligators, but the female prevented the male from accessing the nest.

On 25 July, movements were noticed in the nest. After opening the nest, we found four live young alligators, one egg with a dead, deformed foetus and eight more eggs, none of them impregnated. The temperature probe installed inside the nest showed a temperature of 26°C. The offspring were moved behind the scenes immediately where they were measured and weighed: the young weighed between 29 g and 31 g and measured 21 to 23 cm. They were placed in a tank (120 x 50 x 40 cm with a water level of approximately 5 cm

and a water temperature of 28°C) with two drainage pipes, an aquatic plant and a flat stone for the animals to bask. Lighting was ensured by a 150W lamp with UVB lamp and a fluorescent lamp with 12% UVB. In the first weeks of the young alligators' lives, we did not use any filtration and changed the water twice a week. We continued as such for several months until the alligators were moved to a larger tank with an external filtration system. We started feeding a week after hatching; the animals mostly enjoyed small fish (big-scale sand smelts), cut into pieces of around 1 cm and offered with tweezers.

As of the beginning of January 2024, the young alligators' diet is as diverse as their parents', i.e. fish (both frozen and fresh), aquarium fish, snails, frog meat, crayfish, shrimp, mussels and crabs. The young are fed three times per week. They are still kept together; no aggression has yet emerged within the group. They even often communicate with each other using specific deep humming sounds. However, two of the young alligators are beginning to noticeably outgrow their siblings, who struggle to be the first to get to the food.

Maximum impact

A RECENT SURVEY HIGHLIGHTS THE INCREASING AND POSITIVE SOCIO-ECONOMIC IMPACT THAT EAZA MEMBERS CAN HAVE ON THEIR LOCAL COMMUNITY

Myfanwy Griffith, Executive Director, EAZA Executive Office

EAZA represents more than 400 Member institutions in 47 countries and territories; the largest proportion of these Members are zoos or aquariums, which experience some 144 million visits annually. These figures and the others that follow were the result of a Socio-Economic Impact Assessment (SEIA) study carried out by the company Steward Redqueen on behalf of EAZA. The SEIA was initiated in 2019 to enable us to reflect on a previous study completed 10 years before. The COVID-19 pandemic, the war in Ukraine and the energy crisis have all had impacts on EAZA Members and delayed the sharing of the results. We are only now seeing a return to a level of activity similar to that prior to the crises, and thus the timing is appropriate to reflect on the varied and vital socio-economic impacts of EAZA Members.

As the name suggests, socio-economic impact assessments use systematic analysis to identify and evaluate the socio-economic and cultural impacts of an organisation or activity on the lives and circumstances of people, communities and associated economic infrastructures. The results presented here have been obtained by using an economic model that is based on input-output analysis and distinguishes *direct* impacts (related to EAZA Members) and *indirect* impacts (related to EAZA Members' partners and suppliers and household spending). Note that when 'EAZA Members' is used throughout this article it refers to the zoo and aquarium Members of EAZA and does not include the other membership types.

EAZA Members were asked to complete a questionnaire relating to various aspects and outputs of their activities in 2019. This included not only financial aspects, but also questions about staffing, visitors, conservation, research and education. The results of detailed analyses were derived for:

- Value added (household income, tax revenues and company profits and savings)
- Employment generated
- The contribution to conservation of species, the education of society and research

Modelling of the submitted data was then upscaled to fill the gaps for the non-respondents.



The data they derived, representative of 2019, shows that EAZA Members:

Experienced some 144 million visits annually, with approximately 25 million visits from abroad, bringing additional value to support the region and local community.



Jointly generated a value of more than €3,003 million for the economy. This value-added lands in the hands of either households (in the form of salaries and savings), governments (in the form of taxes) or other companies (in the form of profits).



In addition to the direct employment of 31,571 people, due to multiplier effects a further 15,101 jobs are created in the wider economy bringing the total of jobs supported by EAZA Members to 46,672.



Around 65% of all EAZA Members are in an urban environment, which highlights the importance of the opportunity to connect with nature for the increasing number of people living in urban environments.



On average, each individual Member participated in 10 *in situ* conservation projects, with some taking part in as many as 52 projects. See the infographics in issue 119 of *Zooquaria* for more detail on the €31.3 million that EAZA Members spent on conservation in 2019; although this dipped slightly during the COVID-19 pandemic, it rose again to reach €23.7 million for 2022.



Of the population of about 500 million in the European Union, about 1% experienced formal educational activities, on top of the informal education that took place during visits to EAZA Member zoos and aquariums.



Almost 5% of EAZA's workforce is involved in research, which produced almost 1,000 identified papers in 2019. Around 90% of the institutions have a relationship with one or more research institutions. Please see the Zoo Science Library (www.zoosciencelibrary.org) for an ever-expanding searchable database of publications of international peer-reviewed journals to which modern zoos and aquariums have contributed.



In addition to the main economic impacts, it is clear that EAZA Members dedicate substantial amounts of effort and money to conservation, education and research activities. Most Members consider their activities regarding conservation and education as the core of their societal role. Vision statements often mention that visitors' awareness of biodiversity and respect for nature should be increased. There is also the recreational aspect for citizens that are



offered a place for relaxation and inspiration for wildlife.

For this study, the countries in which EAZA has a presence were divided into eight regions according to the United Nations Statistic Division (UNSD). Within each region, three different types of zoo and aquarium could be distinguished:

- privately-owned/commercial – 46% of EAZA Members
- supported by a municipal body (government) – 36% of EAZA Members
- supported by a charity or foundation – 18% of EAZA Members

The regional distribution of zoo and aquarium types is rather different in the different regions. In eastern Europe the majority of institutions are municipality zoos, whereas in southern, northern and western Europe, privately owned zoos and aquariums are dominant (see graph).

An interactive dashboard will be made available to Members whereby they can see the summary data from

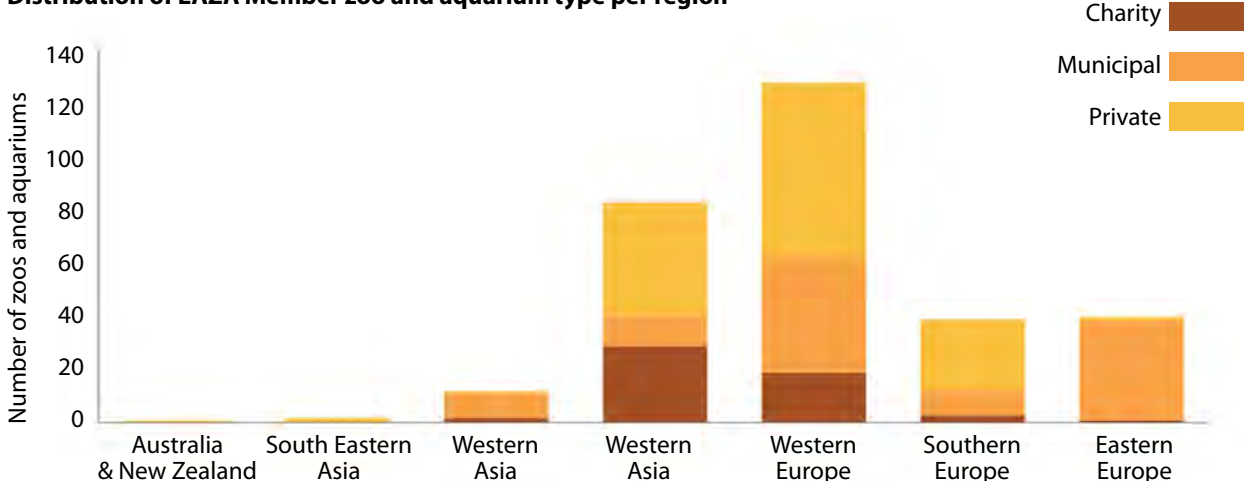
the SEIA for all EAZA Members, arranged by region and by country.

In comparison with the 2010 SEIA, EAZA Members' socio-economic impact has expanded across all areas:

- we are providing opportunities for millions more visitors to learn about and connect with nature;
- we bring more jobs, tourism and overall income generation into communities;
- our research activities continue to expand;
- we substantially increased our conservation activities and range of reporting.

Many might consider visiting a zoo or aquarium as just an opportunity for a good day out; however, EAZA zoos and aquariums offer so much more than this. The results of this study clearly show that EAZA Members are diverse and play vital roles in the economic and societal growth of their communities.

Distribution of EAZA Member zoo and aquarium type per region



A new global vision

NEW GOALS FOR ANIMAL WELFARE AND POPULATION MANAGEMENT ARE SETTING THE STANDARD FOR PROGRESSIVE ZOOS AND AQUARIUMS AROUND THE WORLD

Paula Cerdán, Head of Conservation and Animal Welfare, World Association of Zoos and Aquariums (WAZA)

In 2023, WAZA members approved the new vision and strategic priorities for the global association, which will pave the way for it to become a recognised and trusted leader advancing conservation and animal welfare.

This new strategic direction, a culmination of WAZA's efforts over recent years, builds on WAZA's niche and has enabled us to establish and formalise clear priorities in order to realise this ambitious vision.

The work towards this new vision started in 2019, when the WAZA Council approved the WAZA 2023 Animal Welfare Goal (23AWG). This goal aims to confirm that the Animal Welfare Evaluation Processes used by the WAZA member national and regional associations include specific principles of animal welfare. By achieving this, we will be able to see these key principles consistently across WAZA's global membership.

The 23AWG establishes that by 31 December 2023:

- WAZA National and Regional Associations must have an animal welfare evaluation process in place and such a process must include specific elements approved by WAZA
- All WAZA institutional members must be compliant with this process

PANDEMIC DELAY

Unfortunately, COVID-19 disrupted our plans, and many national and regional associations had to redirect their time, effort and resources to mitigate the impact of the pandemic on their member zoos and aquariums. Recently, the WAZA Council approved an extension of the deadline for the 23AWG. The new target is for national and regional associations to have an animal welfare evaluation process in place by the end of 2024.

After a few years of developing the 23AWG, we are approaching the final stage of implementation for this goal. WAZA concluded the first set of



reviews of its member national and regional associations' Animal Welfare Evaluation Processes in October 2023, and saw six national and regional associations meet the 23AWG. It is working to complete the second set of reviews by mid-2024.

The WAZA members' associations that met the goal in 2023 are the Latin American Association of Zoos and Aquariums (ALPZA), the Association of Zoos and Aquariums (AZA), Canada's Accredited Zoos and Aquariums (CAZA), the European Association of Zoos and Aquaria (EAZA), the Pan African Association of Zoos and Aquaria (PAAZA) and the Zoo and Aquarium Association Australasia (ZAA).

The many associations that have been involved in the process all share a sense of the value of the process and the importance of assessing and positioning their animal welfare evaluation systems on a global scale.



MEMBERS OF THE WAZA COMMITTEE FOR POPULATION MANAGEMENT AFTER THE WORKSHOP TO DISCUSS A POPULATION MANAGEMENT GOAL FOR WAZA © WAZA

'The 2023 Animal Welfare Goal is a tremendous achievement. I am pleased that six member associations have already met this goal and I am confident that other membership associations will meet it in the coming months. This goal is in keeping with WAZA's strategy to be a globally recognised and trusted leader advancing conservation and animal welfare.' MARTÍN ZORDAN, WAZA CEO



‘EAZA is delighted that our EAZA Accreditation Programme (EAP) is amongst the first to meet the World Association of Zoos and Aquariums’ global benchmark for Animal Welfare Evaluation Processes. It provides additional validation that the EAP is effective in assessing EAZA Members against a global standard of offering positive animal welfare experiences to the individuals in their care and recognising the importance of evaluating such experiences.’ ENDRE PAPP, EAZA CHAIR

NEW POPULATION GOALS

And just as WAZA members are advancing towards the achievement of the WAZA 23AWG, the WAZA Committee for Population Management (CPM) has declared its ambition to develop the WAZA 2027 Population Management Goal (27PMG), a goal that will seek to find common ground across national and regional frameworks for effective, professional and impactful population management.

During the 4th Joint TAG Chairs meeting that took place in Long Beach (USA) in 2021, delegates discussed the potential impact of the 23AWG across various regions. The room envisioned a similar goal that would set global benchmarks for regional population management frameworks and build consensus on what constitutes a professional and effective system for managing populations regionally.

This initiative is in line with the WAZA Strategy and its four strategic pillars. Considering our members’ discussions and willingness to move this forward, the WAZA Council tasked the WAZA CPM to explore this goal for WAZA and workshop the specific elements of what professional and effective population management means in the context of national and regional associations.

In a workshop held in March 2023, at the EAZA Executive Office in Amsterdam, population management experts from seven regions convened and identified six key elements of professional and effective population management:

- **Goal-driven species selection**

Population management activities are prioritised following a robust species assessment and selection process that identifies specific roles and goals for the population,

and which considers the needs, feasibilities and risks associated with managing the population.

- **Sourcing, transfer, and destination policy**

Population management activities are based on and support legal, sustainable and ethical sourcing and placement of animals.

- **Data, tools, and science**

Population management activities are data-driven, science-based and use appropriate record-keeping and analytical tools to inform decision-making.

- **Animal welfare**

Population management activities seek to maximise opportunities for positive welfare experiences, and these opportunities must be considered during decision-making processes at both the regional and institutional levels.

- **Engagement and participation by the members**

Population management activities are in accordance with rules and procedures set by the Regional Association, which contribute to achieving set goals and which assume cooperation and participation by members and other relevant stakeholders for these activities. These rules and procedures should also define the process for the coordination and collaboration of these activities and how these are implemented and evaluated.

- **Capacity building and staff**

Population management activities are appropriately resourced and supported by trained, capable staff.

The WAZA CPM also established a set of criteria under each of these six elements that will function as the requirements for population management frameworks, aligning with the implementation of the 27PMG. These requirements will play a crucial role in shaping existing and upcoming frameworks developed by national and regional associations as part of their plans to achieve this goal by 2027.

By working towards these strategic goals, WAZA has taken a significant step towards positioning itself as a global leader advancing conservation and animal welfare in zoos and aquariums.

One community, one voice

HOW TO INCREASE YOUR AUDIENCE'S UNDERSTANDING OF NOT ONLY WHAT YOU DO, BUT ALSO WHAT IT MEANS TO BE AN EAZA MEMBER

Sandrine Camus, Communications Coordinator, EAZA Executive Office

One of the aims of the EAZA Strategic Plan 2021–2025 is to strengthen our communication of the values and work of accredited zoos and aquariums, both internally and externally. As a key step towards achieving this aim, the [EAZA Communications Guidelines](#) were published in September 2023 and are available to all on our website.

This document, compiled by the EAZA Communications Committee and EAZA Executive Office and approved by EAZA Council, is intended for anyone responsible for their institution's advocacy and outreach activities: communications, PR, marketing staff and educators, but also CEOs and directors. It aims to help you improve your audience's understanding of what you do and what it means to be an EAZA Member.

Improving the understanding of what the EAZA community stands for in conservation, animal care, welfare, public education, research, lobby and other domains of our work will help to improve the public's perception of EAZA zoos and aquariums. In turn, it can help you increase the trust of the general public and of your key stakeholders. The Guidelines encourage promoting the work of good zoos and aquariums and talking about your place within this like-minded community by celebrating collaborations and successes.

All EAZA Members can benefit greatly by working together, using similar messages and language, and seeking opportunities to deliver these messages in effective ways. Implementing these good practices in 'good times' as part of your strategic communications plan will also make you more resilient in crisis situations.

BUILDING MESSAGES

The first part of the Guidelines addresses the importance of harmonising our messages about

the EAZA community and its work, both in the vocabulary we use – to ensure our stakeholders recognise in all our communications the complex concepts we are dealing with – and in our values. Messages are more effective when they reflect key values such as transparency (to build trust), breadth (to present the wide scope of activities you undertake) and depth (to show your staff's scientific and professional expertise).

As our Members are located in nearly 50 countries, which have different cultures and varying levels of sensitivity, we don't expect all of them to take the exact same approach in their communications. However, respecting the agreed scientific consensus, especially in relation to particularly sensitive topics, is as important as respecting these differences. We thus encourage communicators to discuss with colleagues from other EAZA organisations within their own country common terms to better explain EAZA processes such as EAZA Ex situ Programmes (EEPs), Regional Collection Plans (RCPs) or Long-term Management Plans (LTMPs), and which approach they think is most appropriate for discussing issues that might be seen as controversial. Even if you don't proactively communicate about those things, having a common ready-to-use reply about EAZA's position in case of media enquiries will make your job easier.

REACHING AUDIENCES

The second part focuses on your various audiences. Starting with... your colleagues! While not everyone has to be an 'ambassador' for your institutions, giving them the tools to be able to talk about their work, the work of your institution and the missions of our community is key to building a common culture across EAZA and to seeing the 'bigger picture'. Among other things, we recommend breaking

down silos by sharing updates with all the departments at your zoo or aquarium, as well as fostering connections with peers from other institutions through collaborative projects, joint campaigns (are you part of the [EAZA Communicators' Network?](#)) or EAZA events. We then suggest digital and in-person ways to engage your different external stakeholders, with an emphasis on the contacts you already have: the NGOs and other partners you collaborate with regularly. We encourage positive mutual mentions to strengthen the relationships and enhance the credibility and reputation of each participating partner and the networks they are part of.

HOT TOPICS AND OTHER CONSIDERATIONS

The last part of the document addresses communication challenges. Of course, we would like you to always receive only positive interest and praise. But facing crises is part of our job too, and being prepared for these stressful situations makes it easier to get through them. In this section, along with links to useful resources, you will also find guidance on several specific topics that should be appropriately communicated, such as naming of animals, animal interactions and celebrating of human occasions with animals.

As a final point, the Guidelines underline the importance of investing in qualified staff to carry out your institution's work in communication, advocacy and policy influencing, to maximise your positive impact.

The EAZA Communications Committee encourages every member of staff responsible for communications activities to read these new Communications Guidelines. Please contact press@eaza.net for any questions.



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EAZA launches its 2024-2025 campaign raising awareness and funds for the conservation of threatened species in Vietnam!

Six Campaign goals

1. Highlighting the uniqueness of the biodiversity hotspot Vietnam

2. Living the One Plan Approach

3. Building bridges between the EAZA community, Vietnamese and international conservation and research partners

4. Contributing to the conservation goals of flagship projects for 9 species

5. Providing financial and technical support for conservation partners in Vietnam

6. Strengthening the **ex situ** conservation efforts for highly threatened species by EAZA institutions and beyond



Hillstream loach
(*Sewellia lineolata*)



Vietnamese pond turtle
(*Mauremys annamensis*)



Vietnamese crocodile lizard
(*Shinisaurus crocodilurus vietnamensis*)



Vietnamese crocodile newt
(*Tylototriton vietnamensis*)



Mossy frog
(*Theloderma albopunctatum*)



Vietnam pheasant
(*Lophura edwardsi*)



Nuichua stick insect
(*Nuichua rabaeyae*)



Giant magnolia snail
(*Bertia cambojiensis*)



White-cheeked gibbon
(*Nomascus leucogenys*)

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Cocoa, community and conservation

HOW SUPPORTING COCOA FARMERS IS JUST ONE OF THE WAYS IN WHICH CONSERVATION ORGANISATION PROYECTO WASHU IS PROTECTING THE ECUADORIAN BROWN-HEADED SPIDER MONKEY

Tatiana Beuchat, In Situ Conservation Officer, Bioparc Doué-la-Fontaine; Pierre Gay, President of Bioparc Conservation; and Christine Morrier, former Director of Amiens Zoo

The brown-headed spider monkey (*Ateles fusciceps*) is one of the 25 most endangered species of primates in the world (Mittermeier, R.A., et al. 2022). These monkeys can be found from Central America to northern South America. They live in the rainforests and spend the majority of their time in the uppermost branches of trees, foraging for food. Most climates allow them to live year-round in the same area. However, in drier habitats they must travel up to 18 km each day in search of food.

These primates, which are active during the day and sleep at night, associate in loose groups of about 20 individuals, but it is rare to find them gathered in one place. Individuals drift between subgroups of varying sizes. They move through the forest using their hands and feet to swing between trees and walk in an upright position along branches. Brown-headed spider monkeys can leap more than nine metres from branch to branch.

The main objective of conservation

organisation Proyecto Washu is to protect the primates of the Ecuadorian coast and their habitat – with the spider monkey as the flagship species – while helping the local community to develop and become the first protectors of this ecosystem.

Since its launch 10 years ago, the project has created a community-led development programme linked to the local cocoa crop, begun a programme of environmental education with local schools, established diverse investigatory projects to study the primates of the Ecuadorian Chocó (the name for this special region) at different levels (ecosystem, landscape and population level, across different taxonomic groups) and taken over an *ex situ* conservation programme, known as the Jambeli Ecological Rescue Foundation.

THE WAY AHEAD

However, more new challenges lie ahead for the NGO. First, they need to create a new sanctuary for the

monkeys in rehabilitation, because the institution that is taking care of them is due to become a zoo and can no longer keep them. Secondly, they want to continue their scientific study in order to collect more data about the different species to optimise the conservation actions and plan for the species in the area, such as the Ecuadorian white-fronted capuchin (*Cebus aequatorialis*), the great green macaw (*Ara ambiguus*), both Critically Endangered, or the Ecuadorian mantled howler monkey (*Alouatta palliata aequatorialis*), listed as Vulnerable. The help of local farmers to protect the forest and the natural resources is a crucial part of saving the species from extinction. Therefore, the third challenge for Proyecto Washu is to involve as many families as possible in their programme, which is called Sustainable Matrix Model. Finally, after the discovery of a sub-population in Manabí Province in 2016 (Cervera, L. and Griffith, D. M. 2016), Proyecto Washu wants to secure the forest by

purchasing the lands and creating a new reserve in this area – one of the most deforested in Ecuador and where the brown-headed spider monkey could be locally extinct.

A monitoring study showed that 375 types of tree are consumed by spider monkeys as part of their diet. This highlights the ecological role the monkeys play in the ecosystem, as these trees depend on them to disperse their seeds. This allows the forest to regenerate naturally, in addition to artificial reforestation.

Since 2014, the NGO has been working on the rehabilitation and welfare of the spider monkey victims of illegal wildlife trafficking. They take in and manage a population of at least 38 individuals. In 2021, they purchased 33 ha of land in the province of Esmeraldas, in the Cristobál Colón area, near the community-led development programme where the sanctuary is under construction. In 2024 they hope to build the naturalised enclosures needed to provide a home for the spider monkeys and maybe, in the future, primates of the other species that are also victims of the illegal wildlife trade.

WORKING WITH FARMERS

Nine years after the implementation of the programme with the local farmers' families, the project can say that it has reached a milestone, with 558 acres (225 ha) of forest protected and 361 acres (146 ha) of agricultural lands maintained using the best practices to improve the landscape conditions for wildlife and biodiversity. Seventeen families participate in this programme in two farmers' associations: ASOPROTESCO and ASOCONCANANDE. Proyecto Washu provides training sessions to help the farmers increase the quality of their products, supports their organic certification process and links with ethical buyers, and, thanks to Bioparc Doué-la-Fontaine (France), implements infrastructure funds to help eight of the families develop suitable areas for post-harvest processes. The programme ensures a minimum price for cocoa of around US\$4/kg instead of the national average price of US\$1.8/kg.

PROTECTED HABITATS

Following its discovery in 2016, the



direct presence of the brown-headed spider monkey was confirmed in 2019 in nine fragments of the forest in Manabí province, in two cantons (Flavio Alfaro and El Carmen). In 2020 and 2021, Proyecto Washu implemented a study in 19 more fragments and registered 56 spider monkeys. With this result, we can increase the estimated preliminary population to around 350 individuals distributed in 22 of the 32 forest fragments they have surveyed. With the help of two Ecuadorian organisations – Fondation Condor Andino and Florsani SA – of IUCN Netherlands and Bioparc Doué-la-Fontaine, Proyecto Washu purchased 300 ha of land. This is the beginning of the first protected area of Chocó rainforest focusing on primate species in the Manabí province. The old house that was within the purchased land, was improved and will serve as the Manabí research station. With it, Proyecto Washu also establishes a permanent presence in the area. In the future, the team will use it to strengthen its links with the local community, promoting their participation in the biodiversity conservation process along with their involvement in the community-led development programme.

JOIN THE PROJECT!

Since 2016, Amiens Zoo (France) has also been supporting Proyecto Washu financially, and in 2022, Mulhouse Zoo (France) joined the effort, providing €10,000 to support the creation of this reserve. Will you be the next to

join us? Proyecto Washu needs you to implement and develop these projects! We at the Bioparc will be their intermediary and we will help you to better understand their needs and the different types of support that you could provide.

You can financially support one of these four projects:

- **Ex situ conservation programme:** provide funds to create the sanctuary and purchase the spider monkey feed
- **Scientific research programme:** help them to obtain the equipment necessary for wildlife observation and logistics and to maintain the research station. For example, they will need funds to buy binoculars, GPS, field books, watches, flagging tape, cell phones and to implement and develop primate ecology research in Manabí
- **Community-led development programme:** supply the means for the community to become the first actors and protectors of the local biodiversity and obtain the equipment necessary for the families (as above, plus camera traps, drybags and laptops) and for the logistics behind the training
- **Environmental education programme:** provide funds for the radio messages campaign and for the development of six workshops for the farmers' families

You can also choose to help them by buying chocolate bars produced by the farmers' families involved in the programme! Get in touch with Tatiana Beuchat (tbeuchat@bioparc-zoo.fr) to gather orders from different institutions and facilitate a shipment and delivery, and for more information about the project.

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Introducing the new-style Marine Teleost RCP

Attila Varga, EAZA Marine Teleost TAG Chair, Sóstó Zoo



LONG-SNOUDED SEAHORSE © CHRIS BROWN

The Marine Teleost TAG has been developing its Regional Collection Plan (RCP), initiated by a two-day workshop in Vienna Zoo (Austria) in 2018. The COVID-19 pandemic slowed down the process, but many online meetings then allowed the assessment of more than 4,000 species in 16 families. Of these, 22 species were pre-selected and discussed at the RCP workshop hosted by Nausicaá (France) during the International Aquarium Congress in October 2022.

The 15 workshop participants from nine European countries recommended three species to be managed as EEPs (see table). They also endorsed family management through working groups to distribute the workload and encourage collaborative discussions. The new-style EAZA Marine Teleost RCP was officially approved by the EEP Committee in October 2023.

Several other species will be monitored by the TAG (Mon-Ts), each having a dedicated species champion to aid the TAG, such as the

elegant firefish (*Nemateleotris decora*), bluestreak cleaner wrasse (*Labroides dimidiatus*), Napoleon wrasse (*Cheilinus undulatus*) and green wrasse (*Labrus viridis*).

Meanwhile, the TAG is still looking for support to monitor the status of many selected species and define their potential future roles in EAZA aquariums. That's the case for the palette surgeonfish (*Paracanthurus hepatus*), yellow tang (*Zebrasoma flavescens*), blue green damselfish (*Chromis viridis*), king angelfish (*Holacanthus passer*), Arabian angelfish (*Pomacanthus asfur*), yellowbar angelfish (*Pomacanthus maculosus*), French angelfish (*Pomacanthus paru*), mandarinfish (*Synchiropus splendidus*), banded longsnout butterflyfish (*Chelmon rostratus*), threadfin butterflyfish (*Chaetodon auriga*), Klein's butterflyfish (*Chaetodon kleinii*), and longnose butterflyfish (*Forcipiger flavissimus*).

Currently, little is known about husbandry needs, survival rate, longevity and best practice related

to marine teleost species. The EEPs and Mon-Ts aim to collect basic information about the situations in European collections. Another one of their goals is to collect *ex situ* and *in situ* conservation research data and create a database that may be helpful to the community for future developments. Questionnaires will soon be sent out to every zoo and aquarium holding the above-mentioned species.

The TAG aims to encourage communication and knowledge-sharing to increase breeding and egg-fry sharing activity among public aquariums and zoos. To this end, in November 2023, the first 'Marine Teleost Acquisition and Breeding Working Group online meeting' was held. Several important and interesting questions arose. Most of the aquariums do not have a sufficient workforce or financial background to set up their own breeding facility, but most of them are interested in a joint breeding activity. Public aquariums are encouraged to focus on the sustainable breeding of the aforementioned species, as it is the most reliable way to be useful and actively contribute to saving marine teleost species and their habitats. Cooperation with relevant European partners in the fields of education, egg-sharing and fry-sharing could increase the sustainability and public acceptance of our aquariums. Please contact the TAG if you have suggestions that you'd like to share.

The Banggai cardinalfish

Riaan Boshoff, member of the Marine Teleost TAG

In the vast tapestry of marine life, the Banggai cardinalfish stands out as a jewel of the seas. This stunning species has captivated the hearts of aquarists and conservationists alike. Sadly, with the increasing threats of overexploitation and habitat degradation, it faces a difficult future. Recognising the need for coordinated efforts to ensure the survival of this species, the Marine Teleost RCP recommends an EEP for the Banggai cardinalfish (which still needs approval by the EEP Committee). This new programme is proof of our commitment to the conservation of biodiversity and

Three EEPs proposed in the EAZA Marine Teleost RCP

Common name	Latin name	EEP Coordinator	Institution
Banggai cardinalfish	<i>Pterapogon kauderni</i>	Riaan Boshoff	Chessington World of Adventures
Short-snouted seahorse	<i>Hippocampus hippocampus</i>	vacant	
Long-snouted seahorse	<i>Hippocampus guttulatus</i>	Chris Brown	SEA LIFE Weymouth

Marine Fish of the Year 2024 – the Banggai cardinalfish

Marie Bournonville, Educational Adviser to the EAZA Marine Teleost TAG, Aquarium-Muséum Universitaire de Liège

Over the last two years, the Marine Teleost TAG has focused strongly on developing its educational strategy. As a result, it is launching the first Marine Fish of the Year campaign, a year-long campaign aiming to raise awareness, promote sustainable practices and engage citizens throughout Europe in marine fish conservation. In 2024, the Banggai cardinalfish (*Pterapogon kauderni*) is in the spotlight!

This beautiful fish, which is endemic to the Banggai Islands off Sulawesi in Indonesia, is very popular in public aquariums but also in the pet trade. As human activities continue to impact the reefs where it lives, the population faces unprecedented threats. Recognising the urgency of the situation and the ambassadorial role that this species can play, it is a perfect candidate for this first campaign.

JOIN THE CAMPAIGN

The campaign will offer various opportunities for participation.

Zoos and aquariums with little time or capacity can still play an essential role by **displaying campaign posters**. Visually compelling posters conveying key messages about the species and



the threats it faces will be provided by the TAG. The poster templates can be used as they are or can be customised using the free online software Canva, with the help of the tutorial available on the [EAZA YouTube page](#).

The centrepiece of the campaign is the **International Marine Fish Day**, a global event dedicated to marine fish conservation, which is taking place for the first time on 6 August 2024. Participants wanting to take a more active role in the campaign can mark the day by organising events at their aquarium and creating educational activities that raise awareness for marine fish conservation. Ideas for activities will be proposed by the TAG in early spring to help you organise this day within your institution.

For those who want to make a lasting impact, actively participating

in creating educational activities for the Marine Fish of the Year campaign is an opportunity to get involved with the TAG and meet other wonderful and passionate people. Do not hesitate to contact the TAG Chair Attila Varga to express your interest. We look forward to hearing about your ideas! You can also help us by translating the posters and activities in your native language.

WE NEED YOU!

Whether it's simply displaying a campaign poster, participating in the International Marine Fish Day, or investing time in educational initiatives, each contribution matters and we can't wait to see everything you do this year to raise awareness for the Banggai cardinalfish and the reefs where it lives.

cardinalfish EEP: a new chapter in conservation

and (proposed) Banggai cardinalfish EEP Studbook keeper, Chessington World of Adventures

of delicate marine ecosystems.

A cornerstone of our approach is the launch of a dedicated Studbook. This record will serve as a vital base of information, tracing the lineage, genetic diversity and health status of the Banggai cardinalfish within the EAZA community and beyond, as well as empower our collective efforts in breeding, research and conservation.

By strategically pairing individuals to maintain a healthy and diverse gene pool, the programme aims to reduce the risks associated with inbreeding and ensure the long-term viability of the population in human care.

Through research and continuous monitoring, the EEP seeks to deepen our understanding of the behaviour, physiology and reproductive biology of this species. This knowledge will help improve *ex situ* breeding practices and inform *in situ* conservation efforts.

The success of any conservation programme hinges on fostering awareness and understanding in communities. The EEP could actively engage with aquariums and the public to promote responsible stewardship of marine environments and of the Banggai cardinalfish's natural habitat.

As we start this journey, we invite

zoos, aquariums, scientists and enthusiasts to join us: together, through collective knowledge, passion and dedication, we can ensure that the Banggai cardinalfish continues to thrive. The EEP for this fish is not just a programme, but also a shared commitment to conservation, a promise to protect the oceans and an invitation for all to be part of the solution.

The Marine Teleost TAG is excited about a busy 2024 and needs your help. If you are interested in any of its activities, please contact the team at marineteleosttag@gmail.com or curator.ocenarium@sostozoo.hu.

Managing the meerkat

SHRINKING SURICATES AND BOOSTING MALAGASY CARNIVORES: A NOVEL MANAGEMENT APPROACH FOR THE MEERKAT EEP

Jessie Boylan, Meerkat EEP Coordinator, Hertfordshire Zoo, and María Paula Balcázar-Vargas, Lead Population Biologist, EAZA Executive Office

The meerkat (*Suricata suricatta*), a Least Concern species according to the IUCN Red List, holds a prominent place in zoos as it is a popular exhibit species, playing a crucial role in education. This article explores the Long-term Management Plan (LTMP)¹ for the Meerkat EAZA Ex situ Programme (EEP). It focuses on its innovative goals, management strategies and conservation approaches, departing from conventional practices and highlighting the balance between conservation, education and exhibit priorities. The Meerkat EEP stands out for its forward-thinking emphasis on collaboration, data-driven decision-making and the preservation of threatened small carnivores.

COMPREHENSIVE POPULATION MANAGEMENT PLAN

Global mass extinction significantly impacts small carnivore species (SCS), of which 22% are classified as threatened. Euplerids, in particular, face a high threat level (90%). Illegal wildlife trafficking poses a threat to 84% of SCS, mainly in the Indo-Malayan and Afrotropical regions².

The EAZA Small Carnivores TAG (SCTAG) proposes a paradigm shift by suggesting managing meerkats as an EEP, focusing on demographic management. Aligning goals with broader conservation efforts, the Meerkat EEP aims to replace meerkats where possible with threatened small carnivores, especially those facing higher conservation risks, emphasising a long-term, gradual change³.

This innovative initiative seeks to redefine the approach to conserving and managing species in human care. Unlike traditional EEPs, which typically offer specific breeding and transfer recommendations, the Meerkat EEP places the responsibility on individual zoos. This decentralisation aligns with the programme's core objectives, emphasising collaboration, experience exchange and effective population management.

To manage its large population – 1,871 individuals as of February 2024 – and prevent inbreeding, the EEP advocates for low-intensity group management. This includes institutions exchanging animals with different EEP participants each time. Reproductive planning and management involve additional strategies such as single-sex groups, fewer transfers to non-EAZA institutions (always in consultation with the EEP Coordinator), culling and contraception. However, the latter must be implemented cautiously due to potential adverse effects on social dynamics.

DATA-DRIVEN DECISION-MAKING AND CONTRACEPTION STRATEGIES

Recognising the scarcity of data on contraceptive methods and their effects on social group dynamics, the *ex situ* population should continue to be used to gain valuable experience in contraception methods. The EEP urges holders to share data on contraception methods in the yearly survey and to input their contraception information in ZIMS for Husbandry or ZIMS for Medical and EAZA Reproductive Management Group (<https://eazarmg.org>). The quality of contraception guidelines is only as good as the underlying data. The more data that institutions can share, the more valuable they will be. The goal is to enhance understanding of contraception effectiveness, contributing to the management of meerkat populations.

To achieve the goals of this unique EEP, the programme requests all information on social introductions regarding merging of pre-existing groups, both successful and unsuccessful. The aim is to better facilitate and maintain displays of larger groups for holders in non-breeding situations in the future.

Finally, a comprehensive husbandry survey is in the pipeline to assess the diverse facilities and substrates used across EAZA institutions and successful methods of merging existing non-



breeding groups, ensuring future improvements in animal welfare and population management.

CONCLUSION

The Meerkat EEP introduces a novel approach to *ex situ* management, focusing on collaboration, responsible decision-making and a commitment to broader conservation goals to save other small carnivore species. The comprehensive plan and the emphasis on data-driven strategies showcase the programme's dedication to ensuring meerkat populations' welfare and long-term sustainability. As the EEP enters a decisive phase in the coming years, its innovative practices are expected to influence and shape the future of conservation efforts for species in human care.

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Fighting extinction with an EEP

A NEW-STYLE EEP CREATES NEW INSIGHT INTO THE MECHANISMS OF PAST EXTINCTIONS AND THE LESSONS THAT CAN BE LEARNED



Frank Brandstätter, Extinct Pigeons and Doves EEP Coordinator, Dortmund Zoo

DODO © JEBULON

Originally, EEPs were established to coordinate the management and breeding of sustaining populations of animal species in European zoos. Over the years, the focus of an ordinary EEP has shifted to a more conservation-related approach. Today, conservation is one of the main issues in collection planning. EEPs play a key role not only in coordinating breeding and population management, but also in educating about and advocating for conservation, both *ex situ* and *in situ*.

Extinctions have always happened. But only recently has humankind been one of their main drivers. Welcome to the Anthropocene – a geological period highly formed by human activities. Modern extinctions have been defined as those that happened later than 1500 (Fisher & Blomberg 2011) – a time when colonialism and scientific exploration began to have an influence on local faunas all over the world.

Two of the most iconic animal species that died out in historical times are columbiform birds: the dodo (*Raphus cucullatus*) and the passenger pigeon (*Ectopistes migratorius*).

The extinction of the dodo was the first remarkable and documented extinction. Its widely accepted extinction date (1681) even stands as the landmark for designating an animal that died out 'in historical times' (Shuker 2012). The passenger pigeon, once one of the most numerous bird species in the world (Pearson 1936), died out in 1914. In both cases, mankind played at least a dishonourable, if not the key, role. What lessons can we learn from these extinctions, one of which happened only a century ago?

The Extinct Pigeons and Doves EEP is designed to be an advocate for

threatened species, raising awareness and educating so that similar extinctions don't happen again. Since the dodo died out, approximately 20 other species of pigeon and dove have been driven to extinction by humans, a percentage higher than in any other bird order. Approximately 20% of all pigeon and dove species are threatened or are even at the brink of extinction (Wood & Cerbini, 2021). Some of these species are managed as EEPs, established to coordinate the breeding and conservation activities that will help to save them. One of them, the Socorro dove (*Zenaida graysoni*), is even Extinct in the Wild and thrives only in zoos.

It is understood that pigeons and doves are highly adaptive and therefore predestined to form endemic species. Hence, a great number of endemic species of columbiform birds thrive on islands. And, like many other species of island endemics, these species face extinction or are at least threatened in the wild. Besides the fragmentation or even destruction of habitats, many birds face problems related to illegal wildlife trade and hunting. Pigeons and doves have always had a close cultural connection with humans all around the world and are sought after not only as food sources, but also for the pet market and by bird enthusiasts. Ecologically, they are important seed dispersers and even a 'keystone species in tropical forests' (Wood & Cerbini 2021).

With regard to the cultural and ecological importance of these species, the Extinct Pigeons and Doves EEP aims to help us understand the lessons from the past, advocating self-sustaining populations of those species that are still around, encouraging

and raising awareness of *in situ* conservation projects and helping to build a strong defence against illegal wildlife trade.

The extinctions of the dodo and passenger pigeon were declared 'the greatest tragedy in the history of ornithology' (Baptista et al. 1997) and 'a war of annihilation' (Mauersberger, 1974) respectively. Sadly, this could happen again. The Extinct Pigeons and Doves EEP will work closely with other EEPs and other stakeholders in the conservation of columbiform species to understand better the complexity of extinction processes and avoid a future scenario that repeats the past.

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Saving our galliformes

A RECENT RCP FOCUSED ON THE CONSERVATION OPPORTUNITIES WITHIN THE EAZA GALLIFORMES TAG

Jan Dams, EAZA Galliformes TAG Chair, Antwerp Zoo



MALAY CRESTLESS FIREBACK © JONATHAN BEILBY

The order galliformes includes megapodes (Megapodiidae), turkeys (Meleagrididae), New World quails (Odontophoridae), pheasants and partridges (Phasianidae), guineafowl (Numididae) and chachalacas, guans and curassows (Cracidae). The domesticated chicken is so popular within galliformes that its supremacy will be recorded in the fossils formed during the current geological age. It will be riddled with the remains of the billions of chickens that humanity consumes on a yearly basis. Their great value as a protein source is sadly one of the curses of non-domesticated Galliformes species, and many of them are threatened with extinction. Increased hunting pressure and the loss of suitable habitat are the main drivers for their decline.

In June 2022, a Regional Collection Plan (RCP) workshop was held to ensure that the zoo community helps to save these wonderful species and that their memory isn't lost in a cooking pot. Representatives from many countries and organisations attended, including colleagues from EAZA, from other regional zoo communities as well as from non-zoo *ex situ* and *in situ* conservation organisations, very much in line with the IUCN's One Plan Approach principles.

To reach the goals set by the RCP, a focused effort from our community will be necessary. It will be important to phase out non-priority species and

focus on EEP species (see table, right). We ask each institution to assess their current collection and see if they could replace non-EEP species with recommended species. The list of species that are recommended within the RCP provides suitable candidates for all exhibits that are arranged by continent and habitat (not covering Antarctica – please stick to penguins for those exhibits). It also provides variation in the expertise needed to successfully work with the respective species. The Galliformes TAG is available to guide you in selecting the best fit for your institution. More holders and EEP Coordinators are needed for many species. To get involved or for more information, please contact the TAG (jan.dams@kmda.org).

VIETNAM PHEASANT

The Vietnam pheasant (*Lophura edwardsi*) remains one of the highest

priorities for the TAG. Through close cooperations with partners both *in situ* (Viet Nature, Vietnam, and Birdlife International) and *ex situ* (AZA Galliformes TAG, World Pheasant Association WPA and several EAZA zoos) an action plan was created for the species in which EAZA zoos play a vital role. In addition to financial support to bring the species back to its native range, EAZA institutions are helping on several fronts, including: genetic research, population management, conservation breeding, community engagement, site preparation and all aspects relating to reintroduction. Most importantly, we are maintaining a healthy population of birds that can be sent back to Vietnam. There, they will breed in specialised breeding centres and their offspring will be prepared for reintroduction into the wild.

MALAY CRESTLESS FIREBACK

The Malay crestless fireback (*Lophura erythrophthalma*) was uplisted on the IUCN Red List from Vulnerable to Critically Endangered in 2022, making it another conservation priority. Due to its dependence on plain-level forests, which are rapidly being destroyed, and hunting in the remaining forest patches, the species is now thought to be declining extremely rapidly and is at great risk of extinction. Unfortunately, these birds are not as well represented in aviculture as the Vietnam pheasant, and keeping and breeding them is more challenging. Thanks to collaborative work with WPA, the EEP population is slowly growing. To help expand the population in Europe, specialised breeding centres within our community will be necessary. Genetic work, in cooperation with the



GREEN PEAFOWL © JONATHAN BEILBY

Species recommended as EEPs in the RCP

Entries in orange are vacant EEPs in need of a Coordinator

Common name	Scientific Name	RCP category
Vietnam pheasant	<i>Lophura edwardsi</i>	EEP
Green peafowl	<i>Pavo muticus</i>	EEP
Palawan peacock pheasant	<i>Polyplectron napoleonis</i>	EEP
Rothschild's peacock pheasant	<i>Polyplectron inopinatum</i>	EEP
Malay peacock pheasant	<i>Polyplectron malacense</i>	EEP
Great argus	<i>Argusianus argus</i>	EEP
Cabot's tragopan	<i>Tragopan caboti</i>	EEP
Congo peacock	<i>Afropavo congensis</i>	EEP
Bornean crested fireback	<i>Lophura ignita</i>	EEP
Malay crestless fireback	<i>Lophura erythrophthalma</i>	EEP
Grey partridge	<i>Perdix perdix</i>	EEP
Collared hill partridge	<i>Arborophila gingica</i>	EEP
Ocellated turkey	<i>Meleagris ocellata</i>	EEP
Western capercaillie	<i>Tetrao urogallus</i>	EEP for all European grouse species
Northern helmeted curassow	<i>Pauxi pauxi</i>	EEP
Red-billed curassow	<i>Crax blumenbachii</i>	EEP
Blue-billed curassow	<i>Crax alberti</i>	[EEP]

EAZA Biobank, has already started to try and maintain as much genetic diversity as possible within the small population that exists in Europe. Hopefully we can still change the tide for the Malay crestless fireback.

GREEN PEAFOWL

An EEP Coordinator is needed for the green peafowl (*Pavo muticus*). Its population in Europe consists mainly of crosses between subspecies and a small population of pure *P. m. imperator*. The challenge for the new EEP Coordinator is to reduce the number of crossbred birds and enlarge the pure population. However, the most important work lies in the birds' native range. For *P. m. imperator*, there are ongoing reintroduction efforts being conducted by Angkor Center for Conservation of Biodiversity (Cambodia). Another subspecies, *P. m. muticus*, native to Java (Indonesia), has a wild population estimated to comprise fewer than 1,000 individuals. Opportunities to cooperate with ongoing conservation activities in Cambodia and Indonesia exist, making this a great opportunity for someone to get directly involved with important conservation work.

THREE THREATENED CURASSOWS

With three new cracids EEPs, we would like to place extra attention on this fascinating and threatened group of birds, which have incredible temperaments. With the red-billed curassow (*Crax blumenbachii*), an amazing conservation achievement can be showcased to our visitors. The species was downgraded from Critically Endangered to Endangered, according to the IUCN Red List, thanks to ongoing reintroduction efforts heavily supported and guided by the EAZA Member Cracid Breeding and Conservation Center (Belgium). EEPs for Helmeted curassows (*Pauxi pauxi*) and Blue-billed curassows (*Crax alberti*) will also be established. Little is known about the state of the wild population of helmeted curassows, so the insurance role of this EEP could be even more important than we think. This programme is still in need of a Coordinator. For the blue-billed curassows, we will be working together with the successful Species Survival Plan (SSP) run within AZA. This programme is linked to an exciting project in Columbia, the species' native area, that aims to repopulate suitable areas where the species has disappeared.

EUROPEAN EFFORTS

In Europe too, our community has the potential to help conserve galliformes. The grey partridge (*Perdix perdix*) populations on our continent have declined in most of its range. Local efforts from nature conservation organisations are working to safeguard remaining populations through the installation of protection measures and allowing wild spaces in farmland for grey partridges to thrive. In areas where the species has disappeared, conservation translocations are done to rebuild wild populations. With the expertise of European zoos on how to successfully reintroduce and translocate wild animals, following the IUCN guidelines for reintroductions and other conservation translocations, we can play an important role in making these efforts successful. A Coordinator is needed for this EEP, focusing on establishing Best Practice Guidelines for reintroductions and helping zoos to stimulate local initiatives helping the survival of remaining populations, like the installation of beetle banks and other small landscape elements.

Also in Europe and like the grey partridge EEP, the European grouse EEP is mostly focused on building experience and sharing information with organisations that are currently translocating or reintroducing grouse species on the continent. The main focus will be on capercaillie (*Tetrao urogallus*), black grouse (*Lyrurus tetrix*) and hazelgrouse (*Tetrastes bonasia*). The establishment of an *ex situ* population will also help to build husbandry knowledge around these challenging species and provide suitable birds for reintroductions.

Galliformes have always played an important role within our zoos. Historically, entire zoo sections were dedicated to these species, showing their diversity and beauty in pheasantries. The recent RCP workshop, and its resulting report, shows they still have important roles to play that go far beyond their beauty. With many galliformes species being threatened in the wild, much is to be gained by holding, displaying and breeding these species in zoos. Some even have the potential to become primary examples of how zoos are actively helping to prevent extinction.

Inside the Animal Health Law

A NEW GUIDANCE HANDBOOK PROVIDES A CLEAR PICTURE OF HOW THE EU ANIMAL HEALTH LAW APPLIES TO ZOOS AND AQUARIUMS

Allan Muir, Head of Veterinary Services, Durrell Wildlife Conservation Trust; Mads Bertelsen, EAZA Veterinary Committee Chair, Copenhagen Zoo; and Pavel Kvapil, EAZWV President

The Animal Health Law (AHL), a comprehensive new animal health framework of the European Union, came into force in 2021. It aligns relevant legislation and replaces older legal acts, in particular the Balai Directive. Through approval of zoos and aquariums as so-called confined establishments, the AHL provides tailored solutions for prevention, mitigation and risk management of listed infectious diseases. This tailoring takes into account the unique circumstances of breeding wildlife species for conservation purposes, and the capability of the institutions that house them to ensure high standards of biosecurity, disease surveillance and control measures.

EAZA and the European Association of Zoo and Wildlife Veterinarians (EAZWV) have teamed up with the European Association of State Veterinary Officers (a section of the Federation of Veterinarians of Europe) to analyse and explain the AHL in relation to zoos and aquariums. The resulting Guidance Handbook consists of three sections:

- The first section introduces the AHL and describes the status of confined establishments.
- The second section addresses the approval of a confined establishment, disease surveillance planning, and movements into and between confined establishments.
- The third section focuses on collection, movement within and entry into the EU of germinal products.

We encourage you to read the comments below to discover the many benefits of the Guidance Handbook – and then use the QR code to access it and see for yourself.

Allan Muir, lead author and Head of Veterinary Services at Durrell Wildlife Conservation Trust (Jersey), formerly EAZA EU Policy Coordinator:

‘Compared to previous legislation, the biggest change in the AHL is a much higher degree of harmonisation across all EU Member States. Harmonised rules can greatly help us improve our animal health systems within the EAZA community and in the zoo sector in general, primarily in the EU but also in partner countries. This legislation can also provide important support to our mission in conservation and sustainable population management through our ability to move animals.

‘Zoos as confined establishments are quite a unique subject for AHL. We hope the rules will be effectively implemented by the authorities and properly understood by zoo colleagues themselves. More and more EAZA Members, driven by their strong conservation mission, will hopefully pursue approval as a confined establishment. This Handbook is there to guide you through this process. I would like to thank all involved colleagues, from so many backgrounds and countries, for their commitment and contributions!’

Mads Bertelsen, co-author and EAZA Veterinary Committee Chair, Copenhagen Zoo (Denmark):

‘EAZA Members are eager to comply with all legal requirements, but it can be challenging to keep up to date with all of them, especially when complex new frameworks like the AHL are introduced. Implementing it on the official side can be equally challenging. Following the significant changes in the legislation around zoos, with the introduction of the “confined establishment” status, the new Handbook is a terrific tool, as it helps zoos and aquariums plan what they must do and aids official vets in understanding the bigger picture. Rather than authorities taking a policing role, the Handbook promotes a collaborative approach to inspections and interactions. This is also the spirit in which it was

written, with valuable input from all stakeholders.’

Pavel Kvapil, EAZWV President:

‘In EAZWV’s pursuit to help vets help wildlife, the importance of the intersection of good standards of captive wildlife veterinary care and welfare with legal principles and requirements cannot be overstated. The intricacy of the AHL can pose a challenge to practising veterinarians involved in ex situ wildlife conservation. However, above and beyond this, we firmly believe the AHL can be leveraged to improve veterinary practice and the health and welfare of animals under our care.

‘We are excited to provide this Guidance Handbook as an illuminating guide for zoo vets, curators and official veterinarians. We hope it will help you navigate the intricate landscape of animal health legislation and implement it to deliver outstanding animal care. We look forward to seeing this guidance applied as a collaborative endeavour between curatorial and veterinary staff, their conservation institutions and the animal health authorities. We also look forward to developing this Handbook as a live document, adding new sections such as aquatic confined establishments, and addressing any new developments in the field of wildlife health and legislation.’



Helping vets to help wildlife

Hugo Fernández, Executive Director of the European Association of Zoo and Wildlife Vets (EAZWV), was interviewed by Tomasz Rusek, EAZA Director of Advocacy and Communications, and Diogo Laneiro, EAZA Animal Programmes and Conservation Coordinator

In 2023, the European Association of Zoo and Wildlife Veterinarians (EAZWV) appointed Hugo Fernández, former head veterinarian at Barcelona Zoo (Spain), as its new Executive Director. Both in the EAZWV role and as Vice Chair of the EAZA Veterinary Committee, Hugo succeeded Stephanie Sanderson, who stepped down after eight years.

ZQ: Hugo, congratulations on your appointment. Can you tell our readers how your adventure with EAZWV evolved?

HF: Thank you! Throughout my pre- and postgraduate studies at the Veterinary School in Barcelona, I was always strongly interested in wildlife and conservation and volunteered at different wildlife facilities, including Barcelona Zoo. I gravitated naturally towards EAZWV, whose meetings I started attending in 2003. This peaked with organising the EAZWV conference with the Leibniz Institute for Zoo and Wildlife Research (IZW) in 2014, after which I got involved in the EAZWV board in several roles.

ZQ: Can you briefly summarise how EAZWV came to life and what it does?

HF: EAZWV is all about helping vets to help wildlife. It was founded in 1996, partly from the networking that took place at the zoo and wildlife diseases symposia, which were organised by IZW, to provide a sharing space where European zoo and wildlife vets can exchange knowledge and collaborate. The establishment of the Infectious Disease Working Group by Jacques Kaandorp and production of the Transmissible Diseases Handbook were early achievements of EAZWV. EAZWV also became involved with European policy, such as in the context of the H5N1 Avian Influenza epidemic of the early 2000s. The Association further professionalised in the 2010s, appointed Stephanie as its very effective first Executive Director, and built the scaffolding for the deliverables in many spheres



of our activity, including the close collaboration with EAZA.

ZQ: In what ways do you work together with EAZA?

HF: We are involved in the same elements of *ex situ* and *in situ* conservation. About half of our full members provide services to EAZA institutions. We complement each other, and together we have delivered outstanding collaborative tools, such as the Veterinary Advisor Resources, or the brand-new Guidance Handbook for the application of the EU Animal Health Law in zoos, for which I want to give special credit to Allan Muir (former EAZA EU Policy Coordinator).

The interests of our two organisations come together in EAZA/EAZWV working groups under the remit of the EAZA Veterinary Committee. This collaboration is a reflection of our common drive to share and communicate. I can't think of any other sector that would be as dedicated to the sharing of knowledge and information as the modern conservation community, specifically zoo and wildlife veterinarians and *ex situ* conservation institutions: from regularly shipping MedARKS zip or floppy disks with bloodwork results across the Atlantic (way back before the internet), to the sharing of DNA through the EAZA Biobank, or the pooling of information for the benefit

of vet advisers in ZIMS. Speaking of whom, we are very keen to increase the involvement of vet advisers via EAZA. Our geographic reach is growing, too: we hope that lessons from our joint work can be applied across continents and scenarios.

ZQ: What challenges are you expecting to face in the future?

HF: EAZWV is in a strong position, but we can't rest on our laurels! The world around us is constantly evolving. We need to embrace change and make sure our priorities are well adapted.

Vets are lucky to be trained to solve problems across many areas. They are well placed to provide social and technical leadership in numerous fields, from human health and zoonoses, to delivering safe food, to ensuring ecosystem health. In recent years, we saw how input from veterinarians helped countries better tackle the COVID-19 pandemic.

We are seeing an increasing contingent of vets working *in situ*. Involving them more in our conversations can give us valuable insights for animal care – from individual animals to entire populations. In the spirit of the One Plan Approach, we should continue breaking down silos and walls between professions, institutions and cultures.

ZQ: What message do you have for vets reading this article?

HF: Come join us! EAZWV conferences welcome more than 400 veterinarians, bringing together a fantastic wealth of knowledge and a supporting community. Our members benefit from scientific journals and EAZA resources. You can join many working groups which address a wide range of issues. We have a strong representation of young vets and students who can get grants for membership and conference attendance. I encourage every vet who cares for wildlife to explore what opportunities there are within EAZWV and in our national and regional sections. Visit our website (www.eazwv.org) and [contact us](#) with any questions!

EXHIBIT

A beacon for conservation

THE RHINOCEROS PAGODA AT BERLIN ZOO IS A SUPERB SHOWCASE FOR SUCCESSFUL SPECIES CONSERVATION AND ITS WIDE-REACHING BENEFITS

Kieran Stanley, Project Architect and Designer, dan pearlman Experience Architecture

The Rhinoceros Pagoda was ceremoniously opened at Berlin Zoo (Germany) in June 2023, after two years of construction. At the heart of the new Rhinoceros Pagoda lies one of the greatest success stories in species conservation ever seen on the Asian continent: the recovery of the greater one-horned rhinoceros (*Rhinoceros unicornis*) back from near extinction. There, close to the zoo entrance at the Lion Gate, visitors can be captivated by bathing rhinos, Visayan warty pigs (*Sus cebifrons*) and lowland tapirs (*Tapirus terrestris*) while learning more about species conservation in Berlin and across the world.

A NEW HIGHLIGHT IN BERLIN CITY WEST

In an area of approximately 14,000 square metres, a natural swamp landscape with numerous bathing pools, waterfalls, showers and mud pits resembling the natural habitat of the animals has been created at Berlin Zoo. The facility, which measures more than 2,000 square metres, meets the high standards of modern animal husbandry. The greater one-horned rhinoceros moves on soft, marshy surfaces in its natural habitat and requires special flooring for its sensitive feet. Therefore, particular attention was paid to using

exceptionally soft material for the indoor and outdoor areas. Since these rhinos spend a lot of time in the water, they have access to a natural rhino wellness landscape covering around 5,000 square metres, including five bathing pools, three mud pits and showers for their enjoyment, skin care and cooling. The other inhabitants of the shared enclosure also provide variety for all the senses: seven Visayan warty pigs share their home with the four rhinos. The pigs can retreat to their exclusive pig lounge at any time if the interactions with the heavyweight colossi become too intense. The pampering programme for pachyderms is rounded off with deadwood trees and logs that can be used as independent massage stations.

ARCHITECTURAL VIEW

We are particularly proud of the result: the Rhinoceros Pagoda is an architecturally complex and modern homage to the historical buildings of Berlin Zoo. In the new mixed-species facility, architecture, landscape architecture and education are holistically coordinated. We invite guests to become part of the animals' recreated habitat so that the spatial and emotional proximity to the animals conveys the educative

messages about species conservation. The successful implementation of this challenging project, both in planning and construction, is based on a co-creative, collaborative partnership between dan pearlman Experience Architecture and the zoo. 'The Rhinoceros Pagoda is the tallest building in Berlin Zoo, visible as a new landmark for the zoo beyond its borders, due to the 25-metre-high tower at the centre of the facility,' explains Frank Bruckmann, Chairman of the Supervisory Board of Berlin Zoo. 'Our guests have the unique opportunity to observe the rhinos up close and learn more about their way of life and the challenges they face.' Inside the Pagoda, guests can embark on a journey into the homeland of the fascinating greater one-horned rhinos, learn more about their habitat in northeastern India and engage with the big questions of the future – What does the loss of biodiversity mean? What rays of hope are there, and how can I contribute to species conservation myself?

In addition to being a beautiful architectural novelty and a lovely home for the animals, the facility also demonstrates that all three species in the Pagoda are part of the EAZA Ex situ Programmes (EEPs) and thus have a very important role to play.



ALL PICTURES © BERLIN ZOO

COMMITMENT TO *EX SITU* AND *IN SITU* SPECIES CONSERVATION

'The opening of the Rhinoceros Pagoda at Berlin Zoo provides valuable holding space,' explains Katharina Hartmann, coordinator of species conservation at Berlin Zoo. 'The carrying capacity for this species within the EAZA region has been reached, which makes it important that new enclosures are built. Providing the space to house not one but several males within one institution allows the EEP to increase the overall population size gradually and to realise its direct conservation role. The greater one-horned rhinoceros is an example of a species that has returned from the brink of extinction in the wild despite poaching and thanks to global conservation efforts. The EEP for this species will provide EAZA Members with tools to educate visitors about the impact of poaching and wildlife trafficking of rhino parts and increase appreciation for this species.'

Indeed, at the beginning of the 20th century, the greater one-horned rhinoceros was on the verge of extinction, with fewer than 200 animals remaining in its natural habitat. However, thanks to extraordinary conservation measures, not only was this species saved,

BERLIN WORLD WILD

Berlin Zoo and Tierpark Berlin are part of a global network and collaborate with other non-profit organisations and initiatives in the field of biodiversity conservation. Berlin Zoo and Tierpark's conservation programme Berlin World Wild supports species conservation projects around the world and provides emergency funding where necessary.

but also an entire ecosystem was preserved. The greater one-horned rhinoceros is thus a significant example of an 'umbrella species', a charismatic species whose conservation benefits many other, lesser-known species of animals and plants. After the rhinos were protected and national parks were established as sanctuaries, the populations gradually recovered.

'The Rhinoceros Pagoda is a significant step in our mission to advance species conservation and raise awareness of the alarming loss of biodiversity, using the example of greater one-horned rhinos,' explains Andreas Knieriem, Director of Berlin Zoo and Tierpark. 'In Berlin Zoo, we create a safe environment for the animals and their offspring. At the same time, we want to promote understanding of the threats they face and foster a willingness to protect these and other endangered species.' To this end, the zoo is gradually expanding its commitment

to the conservation of threatened species in their natural habitats. Donations collected at Berlin Zoo are being directed to the species conservation programme of the Zoological Gardens Berlin World Wild, benefiting rhino conservation in India, among other initiatives.

'We are proud of the success story of the rhinos. Thanks to the proactive measures taken by the government of Assam (India), not a single rhino was poached in Assam last year,' explains Bibhab Talukdar, IUCN rhino expert and CEO of the nature conservation organisation Aaranyak. Aaranyak has complemented and supported the proactive measures of the government authorities in Assam through their strong on-ground presence. 'Only with reliable partners like Berlin Zoo can we continue to support the government authorities in securing the future of rhinos in India,' adds Bibhab. 'We are very grateful for our allies in species conservation.'



New tools for animal welfare

HOW TWO EAZA MEMBERS TOOK A COLLABORATIVE AND NUMERICAL APPROACH TO WELFARE ASSESSMENT AND RESEARCH IN ZOOS

Constance Wagner, Assistant Curator and Welfare Manager, Brice Lefaux, Director, and Benoît Quintard, Deputy Director, all Mulhouse Zoo; Amélie Romain, Director, Akongo

The development of welfare assessment tools enables zoos and aquariums to monitor and adjust institutional practices, to answer visitors' questions about the conditions in which animals are kept and to improve working conditions and staff commitment. It is also used to answer the legal obligations to assess animal welfare in global or regional associations such as WAZA, EAZA and others.

Over the years, welfare assessment methods have been implemented to answer questions already raised and to develop institutional practices so that zoos and aquariums can achieve their animal welfare objectives.

A CROSS-DISCIPLINARY COMMITMENT

An animal welfare charter was established in 2020 at Mulhouse Zoo (France), inspired by the Five Domains Model of animal welfare (Mellor et Beausoleil, 2015) and the WAZA welfare strategy. As scientific monitoring is sometimes separated from the day-to-day work of the teams, this charter was implemented by involving all the different professions (e.g. keepers, vets, technical staff, curators, etc.) in a single team. For each situation, questions are asked about individual animal welfare and decisions taken accordingly. Reviewing the situation for each species and questioning practices in the zoo is the first step of the assessment protocol.

NEW TOOLS AND NEW PARTNERS

After identifying the priorities, Mulhouse Zoo worked with Akongo, a research company specialising in zoo animal welfare, to develop a tool for assessing and monitoring animal welfare.

The protocol used is based on the Welfare Quality® assessment (Blokhuis et al., 2008), transposed to wildlife species. The data is collected through observations and questionnaires carried out for every individual. This questionnaire includes around 100 questions related to four areas: environment, nutrition, health and behaviour. The observation sessions use detailed ethograms (i.e. a list of possible behaviours of a species) and enable the observer to objectively quantify the animal's behaviour in its daily life.

One of the key components of the tool is the use of a mobile application where keepers can fill out the questionnaires and observations specific to each species. The app is favoured because it is very practical for observers, who always have their mobile phone with them, and makes it easier to analyse the data collected. Collaboration with external experts is beneficial due to their expertise, but also because it saves time in analysing and interpreting data. These evaluations also highlight the good practices already put in place by teams and help to maintain them. Moreover, this collaboration allows us to play an active role in animal welfare research.

The mobile application has been used, for instance, to monitor social interactions, the effects of a new enclosure, a change of diet, a change in the frequency of food distribution, and other habits and practices.

PUTTING RESEARCH INTO ACTION

In 2023, Mulhouse Zoo and Akongo co-developed welfare assessment questionnaires and ethograms specific to two poorly documented species: Madagascar tree boas (*Sanzinia madagascariensis*) and tomato frogs

(*Dyscophus antongolii*). Thanks to this collaboration, all the zoos working with Akongo now have access to these resources. The project has also been the subject of a poster and a presentation at the EAZA Reptile TAG meeting at the EAZA Annual Conference 2023 for the benefit of all Members.

The collaboration between Mulhouse Zoo and Akongo is an interesting example of how zoos can work together with a research company to improve animal welfare. The new assessments that were developed through this collaboration are already making a positive difference in the lives of the zoo's animals.



Would you like to help with animal welfare research? Please scan the QR code and answer a few questions in this two-minute questionnaire about your experience with animal welfare during introductions.

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Immersed in nature



A STUNNING NEW EXPERIENCE AT ZÜRICH ZOO PLACES ITS VISITORS INSIDE THE WORLD'S MOST BEAUTIFUL HABITATS – AND CONVEYS THE URGENCY OF THE GLOBAL CONSERVATION CRISIS

Birte Fröhlich, PR Manager, Zürich Zoo

The first thing that makes you stop, listen and feel when entering the room is music. Beautiful music, powerful music, music that lets you know right away: something big is going on. And then, just a second later, you see the huge screen, showing stunning pictures of breathtaking wildlife. At least that is how I felt when I first entered the 360-degree film experience at our new conservation centre at Zürich Zoo (Switzerland). It just blows your mind; not just the music but the whole experience. For the first time, our visitors get a full overview of our nature conservation projects.

But let's start at the beginning. The journey, taking you through the conservation activities of Zürich Zoo, starts much earlier – at our Masoala Rainforest. This unique place is a miniature copy of the original rainforest at Masoala National Park in Madagascar, the first *in situ* conservation project of the zoo. Walking through it gives you a pretty realistic feeling of how the jungle must be. It is warm, moist, noisy. You can hear and sometimes even see the different animals surrounding you. You feel in touch with nature.

With all these wonderful impressions in your mind, you enter the conservation centre – and the journey changes. Great devastation takes over. The rainforest you were just discovering is bursting into flames. That's a shock. And that's deliberate. Because it is exactly this

emotional rollercoaster that the new exhibition wants you to ride on. Emotions raise awareness. Awareness of what is going wrong and why conservation efforts are urgently needed. While you follow the pathway, you might start mulling over what just happened and feel curious about what can be done to prevent it. The exhibition answers these questions in the next room. It highlights what Zürich Zoo and our partners are doing to conserve nature at Masoala National Park.

Finally, the visitor reaches the 360-degree film experience. The room is dimly lit, immersive, even a bit mystical. The screen surrounds you with a massive, almost real, animated Malagasy rainforest. Against this backdrop, real footage of four of our eight conservation projects is shown: Kaeng Krachan in Thailand, Lewa in Kenya, PanEco in Indonesia and Antarctic Research Trust in Antarctica. Our guest's attention span is short, so each clip lasts less than one minute and includes as little text as possible – not an easy setting in which to convey a message. To achieve it, we picked very strong, clear and distinct pictures to transport the message, always with the triad: the beauty of untouched nature followed by the threats and how we fight them.

The new conservation centre opened in spring 2023. In October, we did a first feedback assessment. More than 80% of our visitors appreciate the film and get the overall message:

Zürich Zoo – nature conservation worldwide. Getting across the individual conservation goal of each project is less easy, depending on the more or less clear structure of the clip. Some work very well – our work in Lewa, for example. The pictures of rhinos being slaughtered for their horns are explicit, perhaps on the borderline of being too disturbing, but also very clear. Eighty-one per cent of our guests get the message that the zoo supports anti-poaching programmes. In contrast, only 42% answered correctly when asked about the conservation goal of the Antarctic Research Trust, where the clip tries to explain our research efforts aiming to understand the penguin's foraging grounds and travelling behaviour.

However, as the main message is understood, we are very happy with the overall performance of the new exhibition. We succeeded in raising awareness and support for our worldwide conservation activities. Goal achieved!

ZÜRICH ZOO'S IMMERSIVE FILM EXPERIENCE: KEY FIGURES

- Screen length: **44.7 m**
- Screen width: **3.2 m**
- Speakers: **22**
- Room/Exhibition Size: c. **400 m²**
- Duration of the film loop: **6 minutes**
- Duration of each project clip: **40 seconds**

Big steps, small footprint

NEW EAZA GUIDELINES OFFER PRACTICAL ADVICE ON HOW ZOOS AND AQUARIUMS CAN REDUCE THEIR ENVIRONMENTAL FOOTPRINT

Myfanwy Griffith, Executive Director, EAZA Executive Office

Everyone is aware of the current biodiversity crisis and increasing rate of species extinction. One of the main drivers of this ecological disaster is the overexploitation of natural resources and overconsumption by humans. All stakeholders (including zoos and aquariums, industry, NGOs, local communities, scientists and individual consumers) have a major role to play in promoting the changes that need to be made to our current production and consumption models to more durable and sustainable practices. EAZA recognises that in order to truly achieve its vision of *progressive zoos and aquariums saving species together with you*, Members should be continually following the latest science and taking appropriate steps to reduce their environmental footprint. EAZA Members have an exceptional opportunity to lead by example and engage citizens in a vital and timely dialogue.

The fifth focal area of the EAZA Strategy revolves around sustainable operations, and EAZA has already carried out a variety of activities to support Members and demonstrate best practice in this area. This includes sessions at conferences, articles in *Zooquaria* and a range of guidance documents such as EAZA Guidelines for Ethical and Environmental Policies for Suppliers and Contractors; [EAZA Guidelines on Palm Oil](#); [EAZA Guidelines on Meat and Soya](#); [EAZA Guidelines on Timber](#) (all openly available from the Documents page on the EAZA website: www.eaza.net/about-us/eazadocuments). The most recent document developed to complement these resources is the EAZA

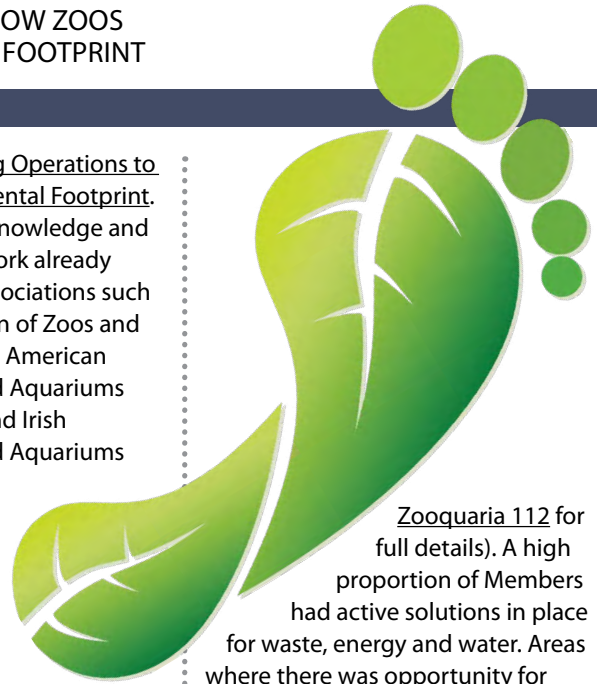
Guidelines to Managing Operations to Reduce your Environmental Footprint.

These Guidelines acknowledge and refer to the excellent work already carried out by other associations such as the World Association of Zoos and Aquariums (WAZA), the American Association of Zoos and Aquariums (AZA) and the British and Irish Association of Zoos and Aquariums (BIAZA). Sustainable operations are truly embedded in the work of zoos and aquariums all over the world and EAZA is pleased to be part of this. The new Guidelines provide a framework of references, information and examples to inspire and empower EAZA Members to manage the operations of their organisations to reduce the environmental footprint.

The Guidelines are split into the following key areas, each providing a wealth of recommendations and examples to guide zoos and aquariums in each area:

- Green Team
- Develop and Maintain a Sustainability Plan
- Chemical Management
- Energy Management
- Water Management
- Waste management
- Fuel Management
- Construction
- Sustainable Travel
- Sustainable Procurement

There are so many opportunities to reduce an organisation's operation footprint that it can sometimes seem overwhelming. While EAZA recommends that its Members be active in all areas, the key to being successful is to start somewhere that makes sense to your organisation and slowly expand from there. EAZA previously carried out a sustainability survey to understand Members' practices and strategies and provide a baseline for the needs of the community (see page 30 of



[Zooquaria 112](#) for full details). A high proportion of Members had active solutions in place for waste, energy and water. Areas where there was opportunity for improvement included coordinating activities into a sustainability plan (only 15% of respondents had one in place at the time of the survey, although a further 38% were in the process of developing one) and sustainable travel (30% of survey respondents had an active policy). If you are wondering where to start on your sustainable operations journey, then these are two chapters in the Guidelines that I encourage you to read first.

The EAZA Executive Office also wishes to lead by example and has many activities in place to manage operations and reduce its environmental footprint. These range from waste management to sustainable travel and procurement. Members will also experience some of these activities when hosting and/or attending conferences and courses. As recommended in the Guidelines, we continually review, improve and integrate sustainability objectives into everything we do. There is a huge range of areas where each and every one of us can reduce our environmental impact. These Guidelines, and all the other resources available from EAZA, provide the opportunity to learn, improve and maximise the opportunity to minimise our collective environmental footprint.

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