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ZOOQUARIA

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WILD PIG EMERGENCY

WHY SO MANY PIG SPECIES NEED URGENT SUPPORT

VIETNAMAZING UPDATE

CELEBRATING THE CAMPAIGN'S MANY ACHIEVEMENTS

SAVE OUR ZOOKEEPERS

HOW TO INSPIRE AND RETAIN VITAL TEAM MEMBERS

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
RSP: Regional Species Plan
TAG: Taxon Advisory Group
ZIMS: Zoological Information Management System

Zooquaria

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FROM THE DIRECTOR'S CHAIR

One thing jumped out at me when previewing this edition of *Zooquaria*: the high number of articles relating to something, or someone, new. This shows what I hope is as clear to you as it is to me: that EAZA continues to be a leader across all aspects of our activities. I truly believe that our diverse community – while it can be challenging at times – is also a defining factor that supports us to be at the forefront of innovation and progress. Speaking of leadership enables me to highlight the insightful interview with the new EAZA Chair, Christoph Schwitzer, on page 9–10. He shares his vision for EAZA to be an inclusive, financially stable and impactful association.

Something that is new but also looks back is our 2024 Annual Report. The new-style report combines what were two separate documents in the past into a fully integrated overview of the massive amount of work carried out by EAZA last year. This work is not possible without the expertise and dedication of thousands of individuals from among our membership. The report is available on our website and I encourage everyone to read it and share our successes.

Another new advancement for EAZA is the start of the next accreditation cycle. We move to a five-year model with the target of screening up to 80 Members a year. Please do not hesitate to contact the EAZA Executive Office if you are interested in becoming a screener and helping us meet this number. The new cycle supports zoos and aquariums with peer evaluation and advice while aligning EAZA with global benchmarks. Screening visits are well underway, and we were able to celebrate the first Members to maintain Full Accredited status. Find out more about the benefits of accreditation and being part of EAZA from a new Member on page 10–11.

From accreditation to population management, in 2024 EAZA completed the first full cycle of its renewed population management structure. The article on page 16–17 shares the evaluation of this cycle and how the new one will ensure that our approach continues to meet the needs of Members while aligning with broader conservation frameworks. One hundred and two new EEPs have been established as part of the first cycle, and four out of five of these have direct roles important for species conservation. New approaches are also highlighted in this issue by articles on the Large-antlered muntjac EEP – a programme for species not cared for in EAZA Member zoos – and the 'Plan P' initiative to save wild pigs from extinction.

The blending of Member needs and external influences is also apparent in the good work carried out by national associations BIAZA and VdZ and Members in their countries when advocating for legislative inclusion and/or improvements (see articles on pages 12 and 13). Connecting with the new Members of the European Parliament (MEPs) elected earlier this year is vital in making sure our collective voices are heard at local, national and European level.

Of course, I cannot finish without mentioning an existing practice that brings me much joy and pride: our conservation database infographics! You'll find both the 2024 data and a five-year overview at the end of this issue. I thank all Members for adding their data and enabling EAZA to evidence all the great work you are doing to save species across the world. Whether you are new to reading *Zooquaria* or an established subscriber, there is lots in this issue for you to enjoy!

Myfanwy Griffith
Executive Director, EAZA

NOTICEBOARD

EAZA ANNUAL CONFERENCE 2025

Early-bird registration for the EAZA Annual Conference 2025 at Orientarium ZOO in Łódź from 9–13 September is now closed. The programme schedule is available on the dedicated page on the EAZA website. We are looking forward to a well-organised and inspiring event.

There are many more upcoming events in 2026, so join us in looking forward, and save the dates for the events below!

SAVE THE DATES FOR EAZA EVENTS 2026

16–19 March 2026
EAZA Animal Welfare Forum, Antwerp Zoo, Belgium. Early-bird registration and abstract submissions will open in October.

13–17 April 2026
EAZA Directors' Days, Safaripark Beekse Bergen, the Netherlands

19–22 May 2026
EAZA Conservation Forum, Opel-Zoo, Germany

29 September–3 October 2026
EAZA Annual Conference, Muséum National d'Histoire Naturelle, France

Find out more about these conferences on the Events page of the EAZA website: www.eaza.net/events. We hope to see you there.

EAZA ANNUAL REPORT 2024

The EAZA Annual Report for 2024 has been published on our website (www.eaza.net/publications), summarising the excellent work carried out by our Committees, Working Groups, Taxon Advisory Groups (TAGs), EEP coordinators and individual Members over the last year. Its new format better reflects the Strategic Focal Areas that guide our work and help achieve our vision of progressive zoos and aquariums saving species together with you. Excerpts from the 42 TAG reports were integrated throughout, rather than collated in a separate report as in previous years, to emphasise the collaboration between EAZA TAGs

and Committees. We are proud to share that 2024 has been incredibly productive across all areas of our strategic work and invite you to celebrate EAZA's achievements – YOUR achievements! – with your teams and partners.

NEW EXECUTIVE TEAM ANNOUNCED FOR EAZWV

At the European Association of Zoo and Wildlife Veterinarians (EAZWV) Zoo and Wildlife Health Conference held last May, the new EAZWV Executive Team was announced. Allan Muir has been appointed Executive Director, and moves to EAZWV from his role as Head of Veterinary Services at Jersey Zoo. You will also remember him as former EU Policy Coordinator at the EAZA Executive Office in Brussels.

The rest of the new EAZWV Executive Team consists of Annika Posautz (Operational Lead), Gidona Goodman (Working Group and Regional Chair Coordination), and Rafaela Fiuza (Scientific Programme Manager). The new team took office in July 2025.

NEW ARTICLE FORMAT FOR JZAR

The Journal of Zoo and Aquarium Research (JZAR) has introduced a new article format: the short report. From now on, short reports – concise articles of up to 1,500 words – can also be published in JZAR, alongside the current article types (review, original research and evidence-based practice). The short report is described as 'a concise summary of a study which is preliminary or narrow in scope, where a robust scientific method has been followed and reported alongside appropriately analysed data. These articles will likely represent studies where the scope to generalise the results beyond the study subjects is limited.' Does this article type spark your writing ambitions? Find the detailed guidelines on www.jzar.org/jzar/about/submissions.

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NEW ARRIVALS

MALAYAN TAPIR SUCCESS AT MULHOUSE ZOO

MULHOUSE ZOO (FRANCE) cares for a number of Malayan tapirs (*Tapirus indicus*), an endangered species whose reproduction is critical for conservation efforts. Indeed, only 63 individuals are currently held in 26 EAZA institutions, making every birth significant for the EEP population's survival.

Mulhouse Zoo has had a difficult history with Malayan tapirs due to an outbreak of tuberculosis in the early 2000s, which led to the discontinuation of the species' display. However, in June 2020, the park welcomed Manado, an eight-and-a-half-year-old male who had never bred. A younger female named Bukit joined him in March 2022. Despite several matings observed by keepers over more than a year and a half, no pregnancy was detected.

To investigate this reproductive concern, Mulhouse Zoo's team collaborated with the Leibniz Institute for Zoo and Wildlife Research (IZW). At the end of December 2023, Manado was anaesthetised for a thorough reproductive assessment, including clinical exams, hormone testing, and a testicular ultrasound.

While the ultrasound did not reveal any abnormalities, Manado's testosterone levels were very low. Semen collected through electroejaculation contained many spermatozoa, but fewer than 10% were viable, indicating male infertility. An oral beta-carotene treatment was then administered for eight weeks at a dosage of 25 grams per day. Testosterone levels were regularly monitored and showed some increase, suggesting a positive response, although the hormone's natural ups and downs made it hard to draw firm conclusions.

The last mating between Bukit and Manado was observed in late March 2024. By mid-July, an ultrasound examination confirmed Bukit's pregnancy. The gestation was closely monitored with ultrasounds every two to three weeks to track foetal growth, positioning and cardiac function. Medical training sessions were performed on a regular basis to monitor the dam's behaviour, weight, and changes in her udders and vulva as she got closer to giving birth. At the beginning of May 2025, the delivery went smoothly and Bukit's calm behaviour was likely helped by regular keeper training.

This birth is especially significant given that only 10 Malayan tapir births have been recorded in EAZA institutions over the past two years. The collaboration with reproductive specialists and the careful medical and behavioural monitoring successfully addressed a fertility issue in this endangered species. This case highlights the importance of close reproductive monitoring and targeted treatments supporting the conservation and maintenance of *ex situ* populations, including the Malayan tapir.

BLACKCHIN GUITARFISH BORN AT OCEANOGRÀFIC VALENCIA

SINCE 2002, OCEANOGRÀFIC VALENCIA (Spain) has housed a population of blackchin guitarfish (*Glaucostegus cemiculus*) in its Oceans facility. This species is listed as Critically Endangered by the IUCN, and its population continues to decline. In Spanish waters, it is now found only in a very specific area in southern Spain (Andalucia), having disappeared from the entire Spanish Mediterranean coastline.

Oceanogràfic Valencia, together with Fundación Oceanogràfic and other national and international entities, is participating in an *in situ* conservation project for this species.

On 28 January, during a veterinary check-up conducted on several individuals in the Oceans facility, it was confirmed that one of the female fish was pregnant with two embryos. From that moment, the female was isolated in a space adjacent to the main facility, to facilitate the development of the pregnancy. Three weeks later, on 18 February, she gave birth to two offspring (one male and one female), weighing 224 and 225 grams respectively, and measuring 36 and 39 centimetres in total length (TL). Both neonates were transferred that same day to the quarantine facilities.

Unfortunately, one of the offspring (female) exhibited injuries that impeded normal respiration and swimming. Despite efforts by our veterinary team, she could not be saved.

ARTIS ZOO WELCOMES A NEW JAGUAR CUB

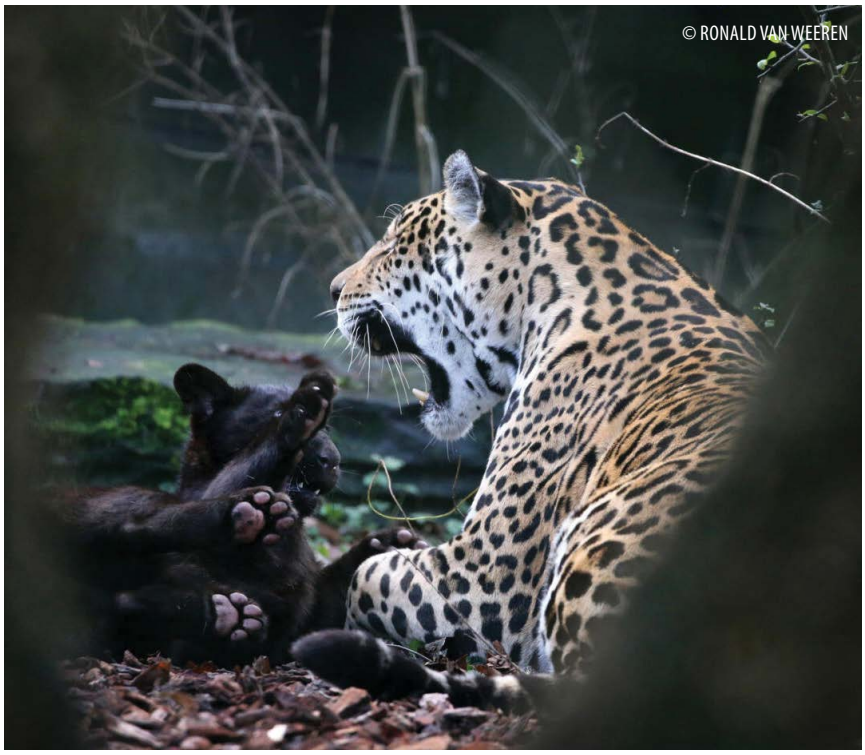
ON 16 OCTOBER 2024 AT 22:22, a healthy jaguar (*Panthera onca*) cub was born in Artis Zoo (the Netherlands). This is the second time our male and female have produced offspring; the last was in 2017.

As proven breeders, and with the EEP in need of newborns, we received a breeding recommendation. The first introduction between the jaguars was in April, but no mating was observed. Given that the male was already 19 and the female 14, we were doubtful whether they would still be able to breed.

However, in June, the female came into heat and mating started immediately. In September, we noticed some early signs of pregnancy. At that point, we separated the female and began preparing the indoor enclosure. We installed a soundproof door, dimmed the lighting and provided extra nesting material and a nest box. A camera allowed us to monitor her closely.

On the evening of 16 October, we noticed that the female jaguar had become slightly restless, and around 22:15, contractions began. Just 15 minutes later, a single cub was born. The mother immediately started licking her young, and not much later he started drinking. Quite the relief for us keepers!

The cub was named Nesto, meaning 'serious man' in Spanish. During the first days, we left mother and cub alone as much as possible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and kept an eye on them via the cameras. Since the cub was most likely to stay indoors for the first few weeks, we installed a live feed connection to a TV screen next to the enclosure, so our visitors could also have a peek.

After two weeks, Nesto opened his eyes. At four weeks, he started crawling around and making noises. At about five weeks old, his mother took him outside for the very first time. Not long after, he started exploring the outside enclosure by himself, closely followed by his mother.

At nine weeks, we vaccinated, dewormed, sexed and chipped the cub. At 12 weeks we vaccinated for the second time.

As the weeks flew by, Nesto became more stubborn; he started climbing trees and teasing his mother by jumping on top of her and ambushing her from all directions. She, on the other hand, continued caring for him patiently and corrected him when he had gone too far. At the time of writing (April 2025), Nestor is 20 weeks old and weighs 20 kilograms. He is turning into a tough jaguar that has stolen our hearts.

The male, named Ukelele, began feeding five days after his transfer to quarantine. Four months later (W: 1 kg; TL: 51 cm), he was moved to the access facility, where he currently resides alongside juveniles of various species.

Although this species has previously been bred under human care by other European institutions, *ex situ* breeding efforts are now compromised by a lack of genetic diversity. In this context, Ukelele holds significant genetic value for future breeding programmes.

At Oceanogràfic Valencia, after 23 years of dedication, we hope that Ukelele will be the first of many offspring to contribute to the expansion and assurance of this species' reproduction in European institutions.


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Leading with purpose

THE NEW EAZA CHAIR, CHRISTOPH SCHWITZER, TALKS TO *ZOOQUARIA* ABOUT EAZA'S VITAL ROLE IN A CHANGING WORLD

© DUBLIN ZOO

Tomasz Rusek, Director of Advocacy and Communication, EAZA Executive Office

In April 2025, Christoph Schwitzer was appointed EAZA Chair for a three-year term. A German national, Christoph has served as CEO of Dublin Zoo (Ireland) since 2020. He previously held senior roles at Bristol Zoological Society in the UK for 15 years, including Director of Conservation, Chief Zoological Officer and Deputy CEO. He is a long-time contributor to EAZA's Conservation and Research Committees and TAGs. A primatologist, he serves as Vice Chair of the IUCN SSC Primate Specialist Group and is a member of the IUCN SSC Conservation Planning Specialist Group (CPSG). From 2019 to 2022, he chaired the Council of BIAZA, the British and Irish Association of Zoos and Aquariums.

TR: Christoph, congratulations on your appointment. What are your top priorities as EAZA Chair?

CS: Thank you very much. I'm honoured to serve our community in this way. Being a lifelong 'zoo nerd', I have always appreciated EAZA as a place where people come together across borders, languages and institutions to advance shared goals and learn from each other. Together with the Executive Committee, I want to focus on three priorities:

1 **Maximising our collective impact**
After four decades of EAZA Ex situ Programmes (EEPs), I want us to focus on how we can make them even more effective and responsive. This means celebrating what works well and addressing areas where we're not achieving our desired outcomes. Furthermore, I see potential in increasing EAZA's involvement in biodiversity policy discussions at European and national levels. And, of course, accreditation remains a priority. We need to ensure that our standards are progressive and rigorous, but also realistic and achievable for Members with different sizes, locations and resources.

2 **Securing EAZA's financial and operational resilience**
Our ambitions are big, but we must stay strategically focused and financially sustainable. That means looking at how we can streamline operations, improve efficiency and continue delivering high-quality services to Members. There's room to involve more voices from the community, especially Council and CEOs, in strategic planning. Shared ownership is key to EAZA's future.

3 **Fostering inclusivity and collaboration**
EAZA is stronger when every institution feels part of the whole. I want to strengthen our engagement with smaller or newer Members, helping them to participate actively. I also want to deepen our relationships with partners like IUCN, government

bodies and zoo and aquarium communities in other regions. Whether it's through joint programmes, training or alignment of policies and standards, we can do more, together.

TR: Why are EEPs such a central focus for you?
CS: In my view, modern zoos and aquariums have three interlinked roles: managing viable *ex situ* populations, supporting field conservation and fostering behaviour change in society. In EAZA, EEPs are the foundation of our species management efforts, and they've never been more critical.

In the global biodiversity crisis we are living in, species can go from Vulnerable to Critically Endangered in a few decades or even years. I've seen it in my work with lemurs and with many other taxa. The survival of more and more species depends on *ex situ* populations managed under EEPs. They are not theoretical constructs – they are real lifelines.

We need to continuously assess how well our programmes are working. Are we seeing success across all taxa? What's holding some populations back? Where are we innovating? The One Plan Approach, which I was proud to help develop through the CPSG, showed us that conservation strategies are most effective when zoo professionals, field experts and range-state officials work together from the start. EAZA has adopted this integrated thinking, and we must keep building on it.

And then there's the growing role of the EAZA Biobank and cryopreservation. This isn't about science fiction de-extinction projects; it's about sound genetic conservation. Like Ireland's first national biobank focused on native fauna, which we are building at Dublin Zoo, this is part of a future where genetic samples complement living populations and give us more tools to preserve biodiversity.

TR: You also mentioned field conservation. What's your vision there?
CS: EAZA institutions already contribute significantly to *in situ* conservation. With the Global Biodiversity Framework (GBF) now in place, there's a real opportunity to align even more closely with international and national priorities. As we explored in the EAZA21+ campaign, every signatory to the Convention on Biological Diversity (CBD) is required to update its national conservation strategy. EAZA Members are uniquely positioned to contribute, especially for native species.

People sometimes assume that only large flagship species or multi-million-euro investments matter. But small and targeted projects, like breeding native amphibians or invertebrates, can be equally impactful. They can serve as proof-of-concept models and even drive national policy. EAZA Members have the expertise and infrastructure, and many already partner with local authorities and NGOs. What we need to improve is how we capture and present this work. Sharing data, documenting success and turning local achievements into regional or EU-level influence is key. The EAZA European Species Task Force has great potential in this area. As its former chair, I've seen its value at first-hand.

TR: What about the third role: education and behaviour change? How do you see it evolving within EAZA's mission?
CS: Education is integral to our mission, not an add-on or an after-thought. EAZA zoos and aquariums receive about 148 million visits each year – that's a platform that other conservation actors can rightly envy. If even 1% of our visitors make small lifestyle changes, we're already having a significant impact.

We need to use our voice to explain not just which species are at risk and how we ensure good animal welfare, but also how everyone's daily choices matter for conservation. To name the most obvious examples: recycling an old mobile phone can reduce demand for coltan and help protect gorilla habitat; choosing locally sourced or FSC-labelled charcoal supports sustainable forestry; buying MSC-certified fish helps protect marine ecosystems. These are small actions with big consequences.

We are getting better at measuring our impact in education and behaviour change. Several EAZA committees are working on it, and I fully support this direction. It's also encouraging to see more and more Members partner with universities to evaluate their educational efforts.

TR: In your manifesto, you speak about inclusivity in the Membership. Does it also mean a bigger role for aquariums?
CS: Absolutely. Aquariums are a natural part of EAZA, and I want their staff to feel fully included. We don't hear enough about their exceptional conservation work. Although aquatic ecosystems are under enormous pressure, they remain under-represented in European conservation plans. Our aquariums already help to fill this gap in many countries.

Many are working directly with fishing communities, contributing to species recovery, advancing knowledge and promoting sustainable seafood choices. But these efforts are often under the radar. I'd like to see us spotlight and scale these successes. For example, the EAZA Academy course on ocean literacy developed under the EU4Ocean coalition is a brilliant model for building awareness and connections.

Inclusivity also means encouraging cross-discipline learning. I know from experience that it's easy to stay in your comfort zone. I'm a mammal person, and I tend to go to mammal sessions at conferences. But there's so much value in crossing boundaries. Let's pick a few sessions at the upcoming Annual Conference that we would not normally attend. Let's invite different voices into our discussions. It enriches everyone!

TR: What else do you hope to leave as your legacy as Chair?
CS: Being essential cultural and conservation institutions, our accredited zoos and aquariums bring people together around a positive vision. We offer hope – hope that conservation can work, and future generations will still experience thriving biodiversity. If my term in office helps our community use that reach even more, and build partnerships that last, then I'll feel I've contributed something meaningful.

A celebration of excellence

WHEN GIJÓN AQUARIUM EARNED ITS EAZA ACCREDITATION, IT JOINED FORCES WITH THE MUNICIPALITY TO SHOWCASE THE ACHIEVEMENT, SHARING ITS SUCCESS WITH THE WHOLE CITY AND INSPIRING OTHER MEMBERS TO FOLLOW SUIT

Borja Reh, Accreditation Coordinator, EAZA Executive Office; Susana Acle, Head of Research, and Alejandro Beneit, General Director, both Gijón Aquarium

Let's begin with a question: what makes an aquarium or zoo a true scientific conservation organisation?

Crossing that threshold is transformative. It marks the difference between being perceived as an entertainment venue and being recognised as a credible force for species conservation. EAZA accreditation helps institutions to make that leap by setting a benchmark that redefines both perception and practice. It guides zoos and aquariums to operate at the highest ethical, scientific and educational standards, positioning them as mission-driven institutions held accountable to international norms.

EAZA accreditation is far more than a badge of honour. It is a demanding, evidence-based process that ensures participating institutions uphold excellence in animal welfare, conservation, education and governance. For the public, policymakers and the scientific community, it signals that a zoo or aquarium is not only committed to these values, but also part of a global network that recognises and rewards continuous improvement and transparency.

For institutions seeking to deepen their mission, build research partnerships, attract professional talent or earn the trust of their communities, EAZA offers both a robust framework and an international platform from which to do so.

Gijón Aquarium (Spain) exemplifies this journey. From the outset, we understood that EAZA accreditation would be a milestone – not just a professional recognition, but also a powerful endorsement of our commitment to conservation, research, education and animal welfare. However, we also understood that the true power of accreditation lies not only in the achievement itself, but also in how it is recognised and celebrated. With this in mind, the aquarium and the Municipality of Gijón joined forces to ensure that the presentation of their accreditation would be a milestone for both the institution and the city. It aimed to strengthen the social licence of zoos and aquariums by reinforcing their value in the eyes of the public and decision-makers.

ACCREDITATION AS CIVIC CELEBRATION

The accreditation process had been rigorous: an extensive evaluation covering everything from animal welfare standards to conservation impact. When Gijón Aquarium successfully completed the screening process and received confirmation of their EAZA membership and accreditation, our leadership team knew that this was an opportunity to highlight the broader importance of zoos and aquariums in society as well as celebrate our success. The question then became: how do we make this moment resonate beyond our walls?

The answer was to make the event a city-wide celebration, one that involved the local government and showcased the vital role of accredited institutions. With the support of the Municipality of Gijón, we set out to plan an event that would elevate our accomplishment and serve as an example for other institutions to follow. Given that Spanish aquariums have historically been under-represented in the EAZA community, this accreditation was also a breakthrough, signalling a greater commitment to European standards and collaboration within the sector.

CREATING A SHARED ACHIEVEMENT

A key element of the celebration was ensuring that public officials and scientific institutions fully understood the significance of EAZA accreditation. The aquarium leadership proactively engaged with the Municipality of Gijón, highlighting how this recognition underscored the city's commitment to excellence in conservation, education and sustainable tourism. Rather than viewing the accreditation as solely

ABOVE FROM LEFT TO RIGHT: JORGE GONZÁLEZ-PALACIOS (CITY COUNSELLOR, AYUNTAMIENTO DE GIJÓN), ALEJANDRO BENEIT (DIRECTOR, GIJÓN AQUARIUM), CARMEN MORIYÓN (CITY MAYOR, AYUNTAMIENTO DE GIJÓN), BORJA REH (ACCREDITATION COORDINATOR, EAZA EXECUTIVE OFFICE)

an institutional achievement, it was positioned as a collective success for the city and its citizens.

This strategic approach was met with enthusiastic support from the local authorities. The mayor of Gijón and other municipal representatives publicly endorsed the accreditation, recognising the added value that a high-standard zoological institution brings to the city's reputation, economic development and educational landscape. Their involvement helped to transform the accreditation announcement from an internal milestone into a city-wide celebration, strengthening the aquarium's social licence by fostering public trust and institutional backing.

Beyond political support, the event also gained strong endorsement from the scientific community of the Asturias Principate. Representatives from the Spanish National Research Council (CSIC), the University of Oviedo and professionals from healthcare institutions were actively involved. Their presence reinforced the scientific credibility of the aquarium's work and underscored the broader role of accredited institutions as vital centres for positive change.

A SHOWCASE OF EXCELLENCE

On the day of the official presentation, the aquarium was filled with an atmosphere of excitement. Representatives from EAZA, city officials and members of the public gathered to witness the recognition of Gijón Aquarium's achievement. The mayor of Gijón delivered a speech emphasising the importance of accredited zoos and aquariums in conservation and education, reinforcing the city's commitment to supporting these institutions.

The event also provided an opportunity for guests to learn about the standards and efforts behind accreditation. Visitors toured the aquarium, experiencing at first hand the exceptional care provided to the animals and the impactful educational programmes offered to the community. The celebration was more than just an acknowledgment of success – it was a statement of purpose and a testament to what collaboration between an institution and its local government can achieve.

A MODEL FOR OTHERS: THE POWER OF CELEBRATING ACCREDITATION

The story of Gijón Aquarium's accreditation journey is more than just a success story – it is a call to action for other EAZA Members. Achieving accreditation is a distinction that should not be kept within the walls of an institution; it should be shared with pride.

Public recognition strengthens trust, increases community engagement and reinforces the message that accredited institutions are leaders in animal welfare, conservation and education. By celebrating accreditation at a municipal level, zoos and aquariums can amplify their impact, securing stronger support and furthering their mission. For Spanish aquariums, this milestone is particularly significant, as it demonstrates that institutions in the country can and should aspire to meet the highest European standards.

For Gijón Aquarium, the accreditation ceremony was not just the culmination of a process – it was the beginning of a new chapter as an institution recognised at the highest level. Their experience stands as an inspiration for all EAZA Members: accreditation is not just a mark of quality, but a story worth telling, and a powerful tool in strengthening the social licence of zoos and aquariums worldwide.

THE NEW EAZA ACCREDITATION CYCLE

In 2024 alone, EAZA welcomed 11 new accredited Members into its community. With a renewed accreditation cycle now in place, EAZA continues to meet the global standard, ensuring that our Members are recognised and respected for the high quality of their animal care.

To support these efforts, the new EAZA Accredited Member Infopack is now available. This resource will help our Members to celebrate the achievement of EAZA accreditation. It provides a clear overview of the accreditation process and what it means to be an EAZA-accredited Member, with practical tools to help institutions communicate their accredited status, such as templates, visuals and messaging strategies designed for various audiences and media platforms. By using the Infopack, Members can ensure that their achievements are recognised and celebrated – both within their institutions and by the wider public.

The Infopack is available on the EAZA Member Area, under Resources > Communications and Advocacy Resources > Communications.

Keeping zoos on the political agenda in Germany

VDZ SHARES INSIGHTS ON THE POLITICAL RECOGNITION OF ZOOS, NEXT ADVOCACY STEPS AND ADVICE FOR THE WIDER ZOO COMMUNITY

Alice Albertini, EU Policy Coordinator, EAZA Executive Office

Following the European elections in June 2024, Ursula von der Leyen was re-elected as President of the European Commission, and launched a new team with fresh priorities. The Clean Industrial Deal replaced the Green Deal as the main focus, and key words such as 'competitiveness' and 'defence' are now central. While many Green Deal activities continue, the new deal pivots toward industry and energy, lacking the former holistic approach to climate and environment.

Therefore, it was a surprise to read the following statement from the new German governmental Coalition agreement: 'Zoos play a vital role in species conservation and education, and we fully support their work and investments. We oppose the introduction of additional bans on the keeping of animals in zoological facilities.'

Volker Homes, Director of VdZ (the Association of Zoological Gardens of German-speaking countries) and former chair of the EAZA National Associations Committee, shares his perspective on this encouraging commitment.

AA: In Brussels, environmental policy is going through a tough time. Does this German statement suggest a more optimistic outlook in Berlin?
VH: Unfortunately, no. In both Brussels and Berlin, the mood is similar. The previous German governmental coalition placed more emphasis on biodiversity and climate, much like the first mandate of Ursula von der Leyen. The current coalition focuses more on economy, investment, defence and security. Environmental concerns no longer lead the agenda. Still, VdZ welcomes the coalition's clear support for zoos.

AA: What role did VdZ play in this statement? What was your advocacy approach?
VH: We work on building long-term, trust-based relationships with political decision-makers. They know that our 42 million annual zoo visitors represent a broad and engaged voter base. The zoo sector is small but appealing: it can reflect public interest in biodiversity. Also, some politicians enjoy zoos. Inviting them for a local visit, where they can see their favourite animals, can ignite broader interest.

AA: Now that the statement is in place, what are your next steps to ensure follow-ups?
VH: The coalition agreement is a political roadmap for the next four years, not an action plan. VdZ now works with key ministries (especially environment, agriculture and education) and their parliamentary counterparts to help implement these ambitions. Environmental budgets may shrink under the new industrial priorities, but there are win-win solutions. For example, zoo investments aligned with urban greening and climate mitigation strategies, and helping to protect threatened wildlife.

AA: What advice do you have for EAZA Members on effective zoo advocacy?
VH: Advocacy is a shared effort: local, national and EU levels must work together, with harmonised messages. You can't do it alone. National associations and the EAZA EU Policy Office in Brussels are essential partners. This coalition statement in Germany proves that persistent lobbying pays off, even if it takes years!

AA: What value do you see in the EAZA 'EU Study Visit' to Brussels, given that you've joined many?
VH: The EAZA EU Study Visit offers a peek into how the EU works and how decisions are made on key sector topics. It's important to attend if you want to better understand the system, be more engaged and meet policymakers – such as Members of the European Parliament (MEPs), national representatives and the European Commission. After joining once or twice, you learn to prepare better, such as contacting MEPs early to book meetings during the event. The EAZA EU Policy Office supports your preparation and helps make your Brussels trip more effective for lobbying.

AA: Finally, what's your view on the EU Zoos Directive and its future?
VH: The Directive will remain stable in Germany, as long as it holds in Brussels. But with broader EU deregulation talks, we must remind policymakers how vital it is for our sector and *ex situ* conservation. The EU Commission's evaluation concluded that the Directive is fit for purpose. Continued lobbying is key to safeguarding its role in supporting our mission.

Scan the code to know more about the EU Zoos Directive and its evaluation

If you work in an EAZA Member institution and want to learn more about EU Institutions and strengthen your advocacy impact, join our EU policy update session at the EAZA Annual Conference in Łódź, where we'll also announce the next EU Study Visit!

ZAK SHOWELL © SHALDON WILDLIFE TRUST

Raising the bar

THE NEW UK ZOO REGULATIONS ARE WORLD-LEADING IN THEIR SCOPE AND DETAIL, AND WERE SIGNIFICANTLY SHAPED BY EXPERT INPUT FROM BIAZA AND EAZA

Zak Showell, Director, Shaldon Wildlife Trust

As the Director of Shaldon Wildlife Trust (UK), one of EAZA's smallest Members, and a trustee of BIAZA – where I also chair BIAZA's Membership and Licensing Committee, EAZA's Terrestrial Invertebrate TAG and coordinate three EEPs – I know that regulations can be a significant burden. After all, who started their career in zoos in order to do paperwork? And that is coming from someone who spent over seven years as a registrar!

However, I also know that effective regulation is essential in driving forward improvements, and I am delighted to have supported the mammoth efforts of BIAZA and EAZA in shaping the new set of zoo standards for Great Britain.

May saw the launch of the new standards by the UK government – and I, like many of my colleagues, have been taken back by both the sheer size of these regulations and their comprehensiveness. They are world-class, setting out incredible levels of detail on animal-visitor experiences, public safety, aquarium touch pools and much more.

HIGHER STANDARDS FOR ALL

How will the new zoo standards impact Shaldon Wildlife Trust? While Shaldon doesn't house elephants, aquariums or great apes, these parts of the new standards still benefit the entire zoo sector by raising the bar and setting a shared benchmark. I am very confident that Shaldon Wildlife Trust already goes above and beyond many of the conservation and education measures set out in the new standards. However, it benefits both us and the wider UK zoo community to be able to reference such a robust national framework when engaging with potential visitors or critics.

That the new standards are both ambitious and practical is primarily down to the hard work of the BIAZA team and and the Zoo Expert Committee of the UK's Department for Environment, Food and Rural Affairs (Defra). What they have achieved is unprecedented. I know that BIAZA fought very hard on behalf of its members (through its public affairs work), not only to shape these new standards, but also to ensure they were published at all. The consultation on the new standards was lengthy. Both BIAZA and EAZA raised important points about some of the UK government's suggestions, as did I. I'm pleased to see that much of this input has been taken on board. It is remarkable that more than 250 of BIAZA's suggestions were successfully incorporated into the new standards.

MAKING OUR VOICES HEARD

To me, this process proves that zoos should be more politically involved. I am delighted that Shaldon Wildlife Trust is playing its role here – even as a small zoo – by inviting our local representative for a site visit and connecting him to the national parliamentary group for zoos through BIAZA. I recommend that all EAZA Members seek advice from EAZA's Advocacy and Communications team, the rest of the brilliant team at the EAZA Executive Office, and their national associations on how they can be more politically active. These new standards make it obvious that zoos operate in a political context. Equally important, zoos have a vital role in advocating on issues like deforestation, nature restoration, and the illegal wildlife trade, making their voices heard at national and international levels.

Through our membership in regional associations like EAZA and BIAZA, I believe that Shaldon Wildlife Trust is well positioned to meet the new standards. In fact, the accreditation standards of these associations are widely recognised as going beyond the requirements of most national and European legislation, meaning that EAZA Members are already accustomed to operating at a high level of rigour and responsibility.

And while I do not look forward to the paperwork, I am confident that the new standards will usher in positive changes for the sector.

Vietnamazing progress

AN OVERVIEW OF THE ACHIEVEMENTS SO FAR OF THE EAZA CONSERVATION CAMPAIGN 2024-2025 REVEALS EXCELLENT PROGRESS, BUT IT IS VITAL THAT THE SUPPORT CONTINUES

Thomas Ziegler, Curator, Cologne Zoo, and Merel Zimmermann, Field Conservation Coordinator, EAZA Executive Office

SHINISAURUS CROCODILURUS VIETNAMENSIS © THOMAS ZIEGLER

Species	*In situ* actions (Vietnam)	*Ex situ* actions	Research & other efforts
Vietnamese giant magnolia snail (*Bertia cambojiensis*) 	Field research; genetic population screening	BPG development; network expansion in the UK (Chester Zoo); establishment of three breeding centres in Vietnam	Species conservation-related research
Nuichua stick insect (*Nuichua rabaeyae*) 	Field research on habitat requirements	Expansion of European breeding network; establishment of breeding programme in Vietnam	Husbandry training and support; conservation-based research (in concert with other threatened taxa)
Tiger hillstream loach (*Sewellia lineolata*) 	Field work to record distribution, population and ecology	Expansion of husbandry and breeding network in Europe; establishment of two breeding centres in Vietnam	Vietnam freshwater fish review; genetic sampling; threat analysis; reporting in IUCN newsletter
Vietnamese crocodile newt (*Tylototriton vietnamensis*) 	Field and laboratory work on population genetics	Successful reproduction in breeding centre in Vietnam and European aquariums	Genetic analyses for species delimination; review on *T. ziegleri*'; *Tylototriton* review and threat analysis
Mossy frog (*Theloderma spp.*) 	Field excursions; field surveys and genetic sampling	Establishment of breeding programme in Vietnam	Published threat analyses; reporting in Amhibian Ark newsletter; integrative taxonomic research
Vietnamese crocodile lizard (*Shinisaurus crocodilurus vietnamensis*) 	Site evaluations and preparation for reintroduction; field and laboratory work; environmental education activities	Successful breeding in breeding centre in Vietnam and European zoos	Genetic sampling
Vietnam pond turtle (*Mauremys annamensis*) 	Habitat assessment; plans for reintroduction; public awareness measures in Vietnam		Evaluation of eDNA; successful DNA sequencing; Published genetic research
Vietnam pheasant (*Lophura edwardsi*) 	Evaluating release sites; arranging permits for reintroduction and bird transportation	Additional husbandry and breeding facilities in Vietnam	Working with the EAZA Biobank to analyse the *ex situ* population
Northern white-cheeked gibbon (*Nomascus leucogenys*) 	Promote conservation measures in the wild; planning a workshop in Cuc Phuong National Park	Husbandry improvements in breeding centres in Vietnam; support breeding network in Vietnam	

The aim of the *Vietnamazing* campaign is to raise funds for the conservation of Vietnam's unique habitats and their endangered biodiversity, create public awareness and put IUCN's One Plan Approach to Conservation into practice, both in Europe and through close collaboration with Vietnamese conservationists and researchers.

Since its launch in Helsinki in late 2023, Vietnamazing has travelled far and wide, sparking a wave of activity across Europe and Vietnam, ranging from awareness campaigns to hands-on fieldwork and breeding programmes.

'BE PART OF IT' – AWARENESS AND PARTICIPATION

A campaign thrives on broad participation, and Vietnamazing has been no exception. From lectures and conferences to social media, television and even Vietnamese news outlets, the campaign has reached a wide audience.

Many zoos actively promoted Vietnamazing within their institutions by engaging the public with the campaign logo, visuals and merchandise. In doing so, they also spotlighted Vietnamese species in their collections. In addition, the campaign stimulated new animal holdings to help expand and strengthen Europe's conservation breeding network.

Regular updates featured in the EAZA campaign newsletter and *Zooquaria*. More than 20 articles on the campaign and its content have been published. Numerous student theses – for example at the University of Cologne (Germany) – have contributed to the campaign by identifying conservation gaps and helping to address them.

The studies on amphibians, reptiles, mammals and, most recently, fish have already been published, with more articles currently in preparation.

BERTIA CAMBOJIENSIS © THOMAS ZIEGLER

NOMASCUS LEUCOGENYS
© MICHEL FOOS

FIELD RESEARCH, BUILDING PARTNERSHIPS AND RAISING FUNDS

Field research in Vietnam continues. Various teams have been active across different regions to record species populations, conduct threat analyses and carry out public outreach initiatives. Much like the broader campaign activities, this work is set to continue long after the end of the campaign. Conservation breeding networks have also been expanded both in Europe and Vietnam for several target species, and many EAZA institutions are taking this opportunity to begin keeping threatened Vietnamese species.

Vietnamazing also facilitated a visit to Europe by a distinguished delegation from the Vietnamese Academy of Science and Technology (VAST), strengthening international cooperation. The campaign has increased interest in species and environmental protection, both within Vietnam and among the wider public.

Even beyond the campaign period, promising conservation measures are in the pipeline, such as further reintroductions to restock wild populations.

In parallel to the Vietnamazing species conservation campaign, the 'Zoo Species of the Year 2024' spotlighted the gecko, drawing attention to threatened gecko species from Vietnam. The aim is to raise public awareness and secure funding to support their improved protection. Together, both campaigns have strengthened existing partnerships and created new ones in support of species conservation.

Fundraising has also been a key part of the campaign, and many zoos have contributed generously. These funds are now available to support both the flagship species projects and other Vietnam-related conservation initiatives. With strong partnerships and more than €200,000 raised, the campaign is already enabling a new era of practical conservation action, both in the field and in zoos across two continents.

SPOTLIGHT ON VIETNAMAZING FLAGSHIP SPECIES

Vietnamazing has focused on nine flagship species; highly threatened animals that symbolise the richness of Vietnam's biodiversity. The table on the opposite page summarises *in situ* conservation efforts in Vietnam and *ex situ* actions in European and Vietnamese zoos, aquariums and breeding centres, as well as additional research and outreach activities supporting each species.

This initial overview of the campaign's achievements to date shows how the milestones reached were made possible through close collaboration with partners, participating zoos and dedicated institutions. With Vietnamazing providing strong momentum, we're confident that more successes in species conservation will follow.

To fully realise the goals of the campaign, however, continued support is essential. Initial funding enabled a strong start, but sustained investment is crucial. Further donations are needed to continue conservation-focused research and implement the One Plan Approach in Vietnam for lasting impact.

FURTHER INFORMATION

If you would like more information about Vietnamazing, you can find it on the campaign homepage (https://vietnamazing.eu), on social media, and on the species conservation Instagram account of Thomas Ziegler's working group (@thomas_ziegler_work_group) where news is constantly being presented.

TYLOTOTRITON VIETNAMENSIS OFFSPRING IN COLOGNE ZOO © ANNA RAUHAUS

Saving species by design

AS THE FIRST CYCLE OF EAZA'S NEW POPULATION MANAGEMENT STRUCTURE IS COMPLETED, WE LOOK AT HOW WE CAN CARRY FORWARD THE LESSONS LEARNED

BONOBO (*PAN PANISCUS*)
© PLANCKENDAEL ZOO

Raymond van der Meer, Director of Conservation and Population Management, William van Lint, Animal Programmes and Conservation Manager, and Elmar Fienieg, Population Management Centre Manager, all EAZA Executive Office

In 2024, EAZA completed the first full cycle of its renewed population management structure: an important milestone that provided a moment to reflect on progress and consider next steps. What have we achieved? Where are improvements needed? And how can we ensure that our approach continues to meet the needs of EAZA Members while aligning with broader conservation frameworks such as the Kunming-Montreal Global Biodiversity Framework and the WAZA Population Management Goal?

WHERE DID WE COME FROM?

The ARK paradigm that was introduced in the 1980s positioned zoos as lifeboats for endangered species. This paradigm, with its one clear concept, was revolutionary and appropriate at that time. Breeding programmes tended to be given the standard role of long-term self-sustainable back-up populations, with the goal of maintaining 90% of gene diversity for 100 years. Over the next 30 years, it stimulated the development of the scientific principles, methods and tools for the management of small *ex situ* populations. By 2017, however, the world had changed significantly, prompting a rethink of the existing approach.

In 2018, this led to the introduction of a new structure. At the heart of this new structure is a more holistic and integrated approach to assessing the conservation roles that *ex situ* animal populations, collectively held across all EAZA Members, can play in supporting the survival of species in their natural habitats. Furthermore, this system was meant to allow more flexibility for different programme set-ups, goals and strategies.

To achieve the above, the EAZA Executive Office was expanded to support this new structure, including the facilitation of workshops to develop Regional Species Plans (RSPs) and Long-term Management Plans (LTMPs).

Designed to promote professionalism, transparency and inclusive decision-making, the new structure also sought to enhance the operational support available to TAGs and EEPs, enabling them to prioritise species more effectively and manage their programmes with greater consistency.

WHERE ARE WE NOW?

For the first time in EAZA's history, all 42 TAGs have developed an RSP. These plans were created through a coordinated and inclusive process, with *in situ* experts actively involved, either by participating in workshops or providing input in advance. Their contributions fed into a structured five-step process based on the IUCN Species Survival Commission Guidelines on the Use of Ex situ Management for Species Conservation. This collaborative approach not only improved the scientific basis for decision-making, but also strengthened the alignment between *ex situ* and *in situ* conservation communities. As one *in situ* expert noted during the evaluation: 'I will definitely propagate this as a blueprint for the global zoo community.'

At the time of writing, EAZA institutions collectively manage more than 600 species through 497 EEPs – an increase of 102 programmes since

the start of the current cycle. Much of this growth reflects the development of new EEPs for taxa that had previously received limited attention, such as songbirds, freshwater fish and turtles. These groups alone now account for 62 additional species that are either Critically Endangered or Extinct in the Wild. Additionally, a significant number of new EEPs has been established for European species, many of which are already contributing – or are being prepared to contribute – to reintroduction and other direct conservation efforts.

To ensure that these programmes are well managed and impactful, more than 200 LTMPs were developed. These plans provide strategic guidance for the coordinated care and population development of EEP species. Relevant to this success has been the building of a team in the office to support the TAGs and EEP coordinators with their critical work. Increased opportunities for training or one-to-one support have significantly been enhancing the skills of EEP coordinators through tutorials, soft-skill modules, workshops and better onboarding for new coordinators.

Additional tools continue to reinforce programme quality. The EAZA Biobank has expanded its collection of genetic material, and the number of Best Practice Guidelines continues to grow, offering species-specific recommendations that promote animal welfare and good husbandry. Together, these elements form a strong foundation for ensuring that EEPs can deliver on their roles today and in the future.

REFLECTION: WHAT CAN BE IMPROVED?

In 2024, the EAZA Executive Office, on behalf of the EEP Committee, initiated a formal evaluation process of the population management structure. The results were reviewed by the EEP Committee and discussed with the TAG Chairs. The findings confirmed that the structure is effective and delivers the intended results, but also identified several areas where improvements are needed.

One of the key insights from the evaluation was the recognition that space, staff capacity and financial resources are limited within the community. So how *do* you manage so many populations that compete for the same space, and with only a limited number of people available to support them? To better support TAGs in navigating these challenges, feasibility will become a standard agenda item during the following RSP workshops.

Year	Individuals in EEP	Changes in programme
1991	41	Bonobo EEP established Standard goal: maintain 90% genetic diversity for 100 years
2021	140	Great Ape TAG **RSP** workshop sets detailed roles of EEP; includes capacity-building and the more conventional insurance population role
2022	145	Bonobo EEP **LTMP** sets EEP-specific goals and strategy; focus lies on maintaining social group structure and demographic stability once space capacity is reached in the future
2024	155	Population reaches space capacity
2025	157	Support and **breeding and transfer recommendation training** to help EEP deal with changing situation
>2025	?	Review of roles (RSP), strategy (LTMP), and periodical support and training

EXAMPLE: CHANGES IN THE BONOBO EEP (COORDINATED BY ANTWERP ZOO) AS PART OF THE NEW POPULATION MANAGEMENT STRUCTURE

Another challenge concerns the capacity for producing LTMPs. With current staffing levels, the EAZA Executive Office cannot facilitate an intensive process for all EEPs. Instead, a basic plan will be developed for all EEPs and a more intensive process will only be prioritised for EEPs for which this is most important. An EEP can be a priority for conservation reasons, but also because of its importance for the EAZA community.

Collaboration with *in situ* experts, especially IUCN Specialist Groups, proved to be uneven across TAGs. To address this, new guidance has been developed to help identify relevant experts, support their participation in RSP workshops – potentially through using more hybrid formats – and clarify their role in the decision-making process.

Finally, the evaluation confirmed a strong need for greater transparency. As a result, summary reports of the RSP outcomes will be made publicly available via the EAZA website. This will help to strengthen credibility, provide insight into our decision-making processes and serve as a source of knowledge and inspiration for partners both within and beyond the EAZA community.

LEARNING FORWARD: SHAPING THE SECOND CYCLE

The second cycle of the population management structure (2025–2030) begins this year, with the first few TAGs undertaking their second RSP within the renewed framework. Although only a limited number of workshops are planned in the initial year, the pace is expected to increase to an average of 10 RSPs per year over the course of the cycle. With LTMPs now developed for many EEP species, the insights gained from these plans will provide a stronger foundation for the upcoming workshops.

Whereas the first round of RSPs focused primarily on assessing species and identifying their potential (conservation) roles, this second round will place more emphasis on the implementation phase: exploring the challenges and opportunities that arise as EEPs are carried out in practice. The workshops will offer a chance to evaluate which roles are progressing as intended, where additional efforts may be needed, and how to address barriers to success. Given the limited resources available, a clearer understanding of where *ex situ* management can have the most meaningful impact will support more strategic and effective decision-making.

VISAYAN WARTY PIG (*SUS CEBIFRONS*) AT NUREMBERG ZOO © THOMAS HAHN

Plan P – save our wild pigs

A NEW INITIATIVE IS MOBILISING THE EAZA COMMUNITY TO SAVE WILD PIGS FROM EXTINCTION

Jörg Beckmann, Nuremberg Zoo, and Jan Pluháček, Olomouc Zoo, EAZA Tapir and Suiform TAG Chair and Vice Chair respectively

The human-based spread of African swine fever (ASF) has recently become the biggest challenge in wild pig conservation. Most wild pig species are endemic to Southeast Asia, and all are susceptible to the deadly virus that causes ASF. Once infected, pigs die miserably within a few days. With no vaccine or treatment currently available, and despite ongoing mitigation measures and *in situ* conservation efforts, ASF has reached every country where threatened wild pigs live.

In order to play a significant role in global conservation, it is our responsibility as the EAZA community – and one of our most important tasks – to take action. *Ex situ* conservation breeding in zoos and breeding stations has become not just a complementary strategy, but the only remaining viable lifeline for many species. Research and breeding under human care can provide a vital safety net, but scaling up these efforts requires substantial financial investment. Building and maintaining secure, ASF-free *ex situ* facilities in range countries is both technically possible and urgently needed. The EAZA community has the expertise, the networks, and the responsibility to act. In partnership with local actors and *in situ* conservationists, we can help prevent irreversible loss.

PIG SPECIES IN DANGER

Southeast Asia is the hotspot of pig diversity; roughly two-thirds of all pig species are endemic to the region. India, Indonesia and the Philippines are home to at least 11 species of wild pigs and an unknown number of subspecies. Most of these endemics live on islands and were already listed as threatened by the IUCN SSC before ASF arrived, mostly due to habitat loss. Now, ASF has the potential to drive all Asian pigs to the brink of extinction.

This July, we received alarming news from Indonesia's Nantu Forest; a once-renowned place to observe wild Sulawesi babirusa (*Babyrousa celebensis*). Since February 2024, no babirusa have been seen there. All three babirusa species are expected to be upgraded to Critically Endangered on the IUCN Red List, with bearded pigs (*Sus barbatus*) on Borneo and the Endangered pygmy hog (*Porcula salvania*) – the poster child of the vital role that conservation breeding stations can play in wild pig conservation – facing a similar fate.

It is virtually inevitable that the next IUCN SSC assessment will classify all Asian pig species as Endangered or Critically Endangered, with a tendency towards becoming Extinct in the Wild or even Extinct. Pig conservation is facing an immediate crisis; the cradle of pigs is in danger.

CONSERVATION ON THE FRONTLINES OF A PANZOOTIC

Since the COVID-19 pandemic, we all know what it means to fight a virus on a global scale. The efforts and costs were immense, but in the end, we succeeded as a global community thanks to control measures and vaccines. Now, pigs are facing a

pandemic (a panzootic) of their own. ASF affects not only biodiversity and ecosystems, but also human health via food systems, which is why this panzootic also has implications for One Health.

PIGS IN EAZA COLLECTIONS

Pigs are popular with our visitors and can be found in most of our collections; some zoos keep African or Asian pigs, others Eurasian wild boar or domestic pigs, often as rare local breeds. Yet pigs contribute to zoo operations in other ways, too; pork products are commonly served in zoo restaurants, despite often originating from farming systems with far lower welfare standards than those we uphold for our own animals. This contrast invites reflection on the broader ethical responsibility that zoos have, not only in what we present, but also in what we consume and promote.

Two out of the 11 Asian pig species are kept in populations in EAZA zoos. Both are threatened and managed as an EEP: the Sulawesi babirusa and the Visayan warty pig (*Sus cebifrons*). In the past, EAZA institutions have kept bearded pigs, but they eventually disappeared from our collections primarily due to limited interest in maintaining the species and challenges with sustainable breeding. This situation highlights that even very small populations of vulnerable species can suddenly become crucial for conservation, especially when wild populations decline rapidly.

RESEARCH AND DISEASE MANAGEMENT

In 2023, EAZA made the fundamental decision of sending six zoo-born common warthogs (*Phacochoerus africanus*) and red river hogs (*Potamochoerus porcus*) – both EEP species but not threatened – to the Friedrich-Loeffler-Institut for animal testing on ASF. This was a very important step by our zoo community in terms of research and conservation. While the results of this study will be published later this year, vaccine development and approval are expected to take several more years. But time is running out for pig conservation – so what can we do right now?

CONSERVATION BREEDING AND PARTNERSHIPS: A CHANCE FOR PIGS AND FOR ZOOS

The EAZA community, with its 400+ Members and cooperatives, can play a vital role by raising funds for wild pig conservation. If each of us contributes €2,500, we could collectively raise €1 million. Although education and awareness continue to play a valuable role in conservation, the immediate priority in this crisis is securing financial resources to create and sustain bio-secure breeding facilities and to fast-track the development of effective vaccines. These funds would also support ongoing education, research and *in situ* conservation and deepen understanding of pig diversity for informed conservation decisions.

The Tapir and Suiform TAG is cooperating with partners such as the Zoological Society for the Conservation of Species and Populations (ZGAP e.V.), the IUCN SSC Wild Pig Specialist Group or the Prigen Conservation Breeding Ark and the Talarak Foundation in Asia. In parallel, we are working with partners in Asia and North America to build up *ex situ* populations of bearded pigs. These long-term projects require stable and reliable funding.

With funding from ZGAP and Nuremberg Zoo (Germany) – €100,000, supported by the Association of Friends of Nuremberg Zoo – a breeding facility for Mindoro warty pigs (*Sus oliveri*) on the island of Mindoro is already under construction. This funding covers construction and operation costs for the first year. The project could become a blueprint for helping other endangered pigs in the region. Importantly, from a risk management perspective, it is more effective to establish multiple smaller breeding stations rather than one large facility housing multiple species, since ASF has previously breached high-bio-security stations and decimated stocks of Critically Endangered Visayan warty pigs within a week.

TOGETHER WE CAN MAKE 'PLAN P' COME TRUE

Zoos have a unique opportunity to amplify the voices of species that don't sell themselves. With ASF in mind, there is an urgent reason to do so; it highlights the growing threat of infectious diseases, an issue we must prioritise now and continue to monitor closely in both large and small populations. The current rapid spread of ASF poses a severe threat not only to wild pig populations, but also to entire ecosystems. It is both a wake-up call and a chance to put neglected species on the conservation map before it's too late.

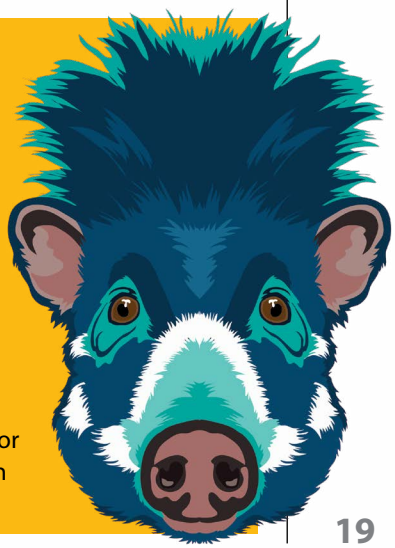
Now is the time to live up to EAZA's vision: 'Progressive zoos and aquariums saving species together with you.' By creating a shared 'piggy bank' for pig conservation, we can help secure the future of a remarkable group of animals – animals that are inextricably linked to the history of mankind. This is a defining moment for conservation, science and zoos alike. Let's not look back and say we could have done more. Let's act decisively together and now on behalf of pigs, of conservation, our reputation and for us. Together, we can ensure a future for these extraordinary species.

HELP US MAKE A DIFFERENCE FOR ENDANGERED WILD PIGS!

Urgent support is needed to protect some of the world's most threatened pig species. Your contribution can directly support:

- Foster breeding of **Bawean warty pigs** (*Sus blouchi*) at Prigen Ark – **€15,000 per year**
- Operation of the **Mindoro warty pig** breeding station on Mindoro Island – **€25,000 per year**
- **Pygmy hog** habitat restoration and biosecurity measures against African swine fever – **€50,000 per year**

If you'd like to contribute or learn more about how you or your institution can help, please contact Jörg Beckmann at Joerg.Beckmann@stadt.nuernberg.de.



Emergency measures

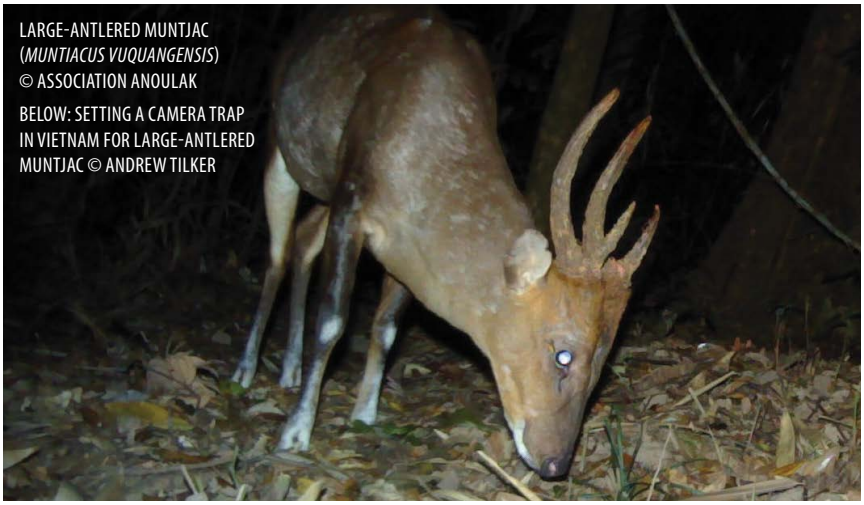
A NEW KIND OF EEP IS BEING DEPLOYED TO FIGHT THE RAPID DECLINE OF THE LARGE-ANTLERED MUNTJAC

Andrew Tilker, Large-antlered muntjac EEP Coordinator, Leibniz Institute for Zoo and Wildlife Research

The large-antlered muntjac (*Muntiacus vuquangensis*) is a deer species that is endemic to the Annamite mountains of Vietnam, Laos and north-eastern Cambodia. Remarkably, this muntjac was described scientifically only as recently as the early 1990s. The species resembles the sympatric northern red muntjac (*Muntiacus vaginalis*), but is distinguished by its generally stockier body, large outward-facing brow tines in males and dark forehead in females. Both sexes have a short, broad tail.

Despite its relatively recent discovery, the species is already facing extinction, and it is listed as Critically Endangered on the IUCN Red List. Although habitat loss has been a factor in its decline, the major threat to the large-antlered muntjac is widespread intensive snaring to supply the thriving illegal wildlife trade in the region. Wire snares are cheap to make, easy to set and often deployed in large numbers, blanketing vast forest areas. Even in protected areas, snaring persists at alarming levels. As a result of these high snaring levels, large-antlered muntjac populations have been severely depleted. Only a handful of populations are thought to remain in extremely remote areas of the Annamites.

So how do we save the large-antlered muntjac? The answer lies in combining *in situ* and *ex situ* strategies.



LARGE-ANTLERED MUNTJAC (*MUNTIACUS VUQUANGENSIS*) © ASSOCIATION ANOULAK

BELOW: SETTING A CAMERA TRAP IN VIETNAM FOR LARGE-ANTLERED MUNTJAC © ANDREW TILKER

A MULTI-PART STRATEGY

To protect remaining populations *in situ*, it is imperative to strengthen protected area management, increase the scope and scale of snare-removal efforts and promote community guardianship in places where large-antlered muntjac persist. These actions should be combined with broader efforts to reduce demand for bushmeat in the region. It is also important to raise the profile of the species at local and national levels, especially with government counterparts, as there is currently little awareness that the species is on the verge of national extirpation and global extinction.

Given the precariousness of the species' situation in the wild, it would be prudent to establish an *ex situ* insurance population as soon as possible. Large-antlered muntjac are currently not held in human care, and such a population would not only safeguard the species, but also enable future conservation breeding and reintroduction efforts. Although the reintroduction of large-antlered muntjac is likely decades away – in part, because of the substantial work that needs to be done to establish safe, protected areas in the Annamites – it is important to establish an *ex situ* population now, while animals persist in the wild. Establishing an insurance population will be a large and costly endeavour, but it is vital for the species' survival.

HOW THE EEP WILL WORK

The Large-antlered muntjac EEP was established as a new type of EEP to help promote the conservation of species not held in EAZA facilities. The EEP has several goals. First, it seeks to raise awareness of the conservation situation of the large-antlered muntjac within the EAZA community and the wider public. Second, it aims to gather technical knowledge – including on capture, handling and husbandry – to support the establishment of an *ex situ* population in one or more range states. Third, it supports research that informs the conservation and management of the species. Finally, the EEP will help to raise funds for both *in situ* and *ex situ* conservation actions.

The situation of the large-antlered muntjac may be dire, but if we work together, we can not only save it from extinction, but also help it thrive in the wild for generations to come.

Helping vets to help wildlife

THE EAZWV ZOO AND WILDLIFE HEALTH CONFERENCE 2025 DELIVERED A HUGE RANGE OF TOPICS FOR ITS GLOBAL PARTICIPANTS, FROM ADVANCED ANAESTHESIA TO ZOO PATHOLOGY

Catarina Santiago, EU Policy Coordinator, and Anna Mękarska, Biobank Coordinator, both EAZA Executive Office

From 14 to 17 May 2025, zoo and wildlife health professionals from 68 countries gathered in Győr, Hungary, for the European Association of Zoo and Wildlife Veterinarians (EAZWV) Zoo and Wildlife Health Conference. With 346 participants in person and more than 100 online, the event was a vibrant week of science, conservation and community spirit.

The four-day programme featured three plenaries, 58 oral presentations, 52 posters and nine workshops, reflecting the diversity and dedication within the field.

Plenary sessions covered a wide range of topics. Pete Morkel (independent wildlife veterinarian, Namibia) focused on human factors in wildlife capture, emphasising teamwork and communication. Károly Erdélyi (HUN-REN Veterinary Medical Research Institute, Hungary) discussed the emergence of mosquito-borne flaviviruses like West Nile and Usutu viruses, and the role zoos can play in monitoring their spread. Sam Rivera (Atlanta Zoo, USA) shared on emerging reptile diseases, including serpentoviruses and herpesviruses, with guidance on diagnosis and prevention.

The **conference workshops** offered hands-on sessions in areas including advanced anaesthesia, zoo and wildlife pathology, camel health in both zoo and racing contexts, raptor medicine, and a short course by the European College of Zoological Medicine. Half-day workshops addressed wellbeing in ageing wildlife, health and management of black rhinoceroses (*Diceros bicornis*) in human care, zoo-based One Health strategies and assisting downed elephants.

Several **presentations and posters** covered advances in zoo and wildlife health. A multicentre French study led by Mathilde Bosseur (Beauval Zoo, France) evaluated the long-term use of the Nobilis® H5N2 inactivated vaccine for Highly Pathogenic Avian Influenza (HPAI), reporting that 88% of vaccinated birds developed H5-specific antibodies. Species, age and timing of vaccination all influenced immune response. Marion Stettler (Bern Animal Park, Switzerland) presented results from a single-cycle vector vaccine, which showed no adverse effects and maintained high antibody levels in immunised birds up to one year after vaccination.

Dominik Fischer (Wuppertal Zoo, Germany) presented research on tetanus vaccination in elephants, showing that the vaccines were well tolerated but antibody levels decreased after six months, highlighting the need for ongoing monitoring. A retrospective study led by Miriam Leal (Marine and Environmental Sciences Centre/MARE-ISPA and Zoomarine, both Portugal) on pain behaviour in seals identified new behaviours that could improve welfare assessments. A session on geriatric care featured Hanspeter W. Steinmetz (Munich Zoo, Germany), who addressed challenges in ageing great apes. With increasing longevity under human care, the talk explored ethical decisions around medical intervention, euthanasia and balancing individual welfare with EEP-level conservation objectives.

The EAZA Biobank was actively promoted during the conference. Biobank Coordinator Anna Mękarska shared a poster titled 'Daily sampling routine – discovering and saving species together with you!' and hosted a booth that encouraged discussions on collaborative research opportunities. Several talks showed how Biobank samples are advancing research and conservation.

Beyond formal sessions, the conference fostered a **strong sense of community**. Social events included a 'poster and pasta party', a lively 'boathouse festive' evening featuring Hungarian specialities and local wines, and a closing dinner at Győr Zoo.

A particularly emotional moment was the tribute to the late Hugo Fernández Bellón, remembered for his work in zoo medicine and mentoring young veterinarians. His legacy was honoured with the EAZWV Helping Vets Help Wildlife Award, and a new student grant bearing his name.

The conference also marked the announcement of EAZWV's new Executive Team, taking office in July 2025: Allan Muir (Executive Director), Annika Posautz (Operational Lead), Gidona Goodman (Working Group and Regional Chair Coordination) and Rafaela Fiuza (Scientific Programme Manager).

Looking ahead, the 2026 conference will be hosted by Dublin Zoo (dates to be confirmed). A joint conference organised by EAZWV and the American Association of Zoo Veterinarians is planned for Munich in 2027.

More than a scientific gathering, the conference was a space to reconnect, reflect and recharge. In a profession full of challenges and purpose, moments like these remind participants of their shared purpose and the strength found in working together.

Tiny farmers, big impact

LEAFCUTTER ANTS PRESENT SOME CHALLENGES TO ZOOKEEPERS, BUT THIS FASCINATING INSECT IS A HUGELY IMPORTANT AND REWARDING SPECIES TO CARE FOR

Šarūnas Kulbokas, Scientific Coordinator, Klaidas Mikėnas, Animal Care Specialist, and Gintarė Stankevičė, Director, all Lithuanian Zoological Gardens

Amid the lush rainforests of South America, leafcutter ants (*Atta* spp.) stand out as nature's most skilled farmers. These remarkable colony-dwelling insects have perfected the art of cultivating fungi (*Leucoagaricus gongylophorus*) for food, building intricate underground networks and even outsmarting zoo enclosures with their escape attempts. Their presence in or absence from a forest is an important ecological indicator, reflecting changes or disturbances in the environment.

WHY ZOOS KEEP LEAFCUTTERS

Leafcutter ants are not only ecological powerhouses, but also crowd-pullers in modern zoos. Their massive colonies, visible trails and complex behaviour offer engaging and educational displays that fascinate visitors. These ants serve as powerful ambassadors for invertebrates and play a vital role in promoting biodiversity awareness. By showcasing them, zoos can highlight the intricacies of tropical ecosystems, the importance of mutualistic relationships and the broader relevance of insect conservation.

COLONY FORMATION

The colony of *Atta sexdens* functions as a highly organised society made up of six castes, each with a specific role. At its core is the queen, who starts the colony after her nuptial flight (revoada), carrying a small piece of fungus to begin cultivation. Mated once in life, she stores sperm from several males, yet only 2.5% of queens successfully start new colonies. Caste development isn't predetermined, it's shaped by pheromones, nutrition and environment. Early workers tend the fungus and care for larvae while later ones forage up to 60 metres away. Soldier ants protect the nest and generalist workers perform various tasks. A single mature colony can number up to eight million ants.

THE ULTIMATE FARMERS

Unlike most ants, *Atta sexdens* does not consume the leaves it harvests. Instead, it cultivates a highly specialised fungus, *L. gongylophorus*, which serves as its sole food source in one of nature's most extraordinary examples of insect agriculture. This fungus is not just a crop, it's the nutritional heart of the colony, producing protein-rich *gongylidia* structures that feed the entire ant society. The farming process is remarkably advanced: gardener ants meticulously cut fresh leaves into small pieces, apply an anal secretion that acts as a fertiliser and inoculate the substrate with fungal spores. They even incorporate flower petals to maintain fungal diversity and health. This symbiosis is so refined that the ants actively weed out contaminants and prune the fungus to promote optimal growth. The result is a highly efficient, self-sustaining agricultural system that pre-dates human farming by millions of years. This system not only is vital for the colony's survival, but also underpins their ecological influence, making this mutualistic relationship one of the most sophisticated and ecologically impactful in the animal kingdom.

WHY *ATTA SEXDENS* MATTERS TO ECOSYSTEMS

Beyond its colony, *Atta sexdens* plays a vital role in keeping ecosystems healthy. As ecosystem engineers, their tunnels aerate the soil, improving water flow and root growth. By breaking down leaves and fungi, they boost nutrient cycling and enrich the soil. These ants also act as rainforest gardeners, dispersing seeds while foraging and helping regenerate vegetation. Their colonies support predator-prey dynamics, serving as food for anteaters, birds and insects. As indicator species, their presence reflects ecosystem stability, while population decline may signal deforestation, climate stress or pesticide use. Because they're sensitive to change, their loss can warn of ecosystem degradation. Protecting *Atta sexdens* supports both its survival and forest health.

THE CHALLENGE OF CARING FOR LEAFCUTTER ANTS

One of the greatest challenges of housing leafcutter ants in a zoo setting is designing an enclosure that

balances engaging visitor experiences with secure containment. Managing their exhibit requires meticulous attention to detail, as any misstep could lead to an unexpected escape. These ants are masters of precision, marching in perfect lines and cutting leaves with surgical accuracy, making any careless action within their enclosure potentially disastrous. Their powerful mandibles can chew through thick fabric gloves, clothing and even metal ventilation grates. Any intrusion into their territory is perceived as a direct threat to the queen, triggering an aggressive response.

LEAFCUTTER ANTS EXPOSITION
© LITHUANIAN ZOOLOGICAL GARDENS

LEAFCUTTER ANT EXHIBIT EXPERIENCES AND LESSONS

This section describes the exhibit choices made, and husbandry procedures used in the Lithuanian Zoological Gardens. There are various alternatives to choose from to fulfil the needs of this species in human care.

At the Lithuanian Zoological Gardens, the ants' enclosure is surrounded by a water moat system, which acts as a natural barrier, keeping the colony from wandering beyond the exhibit. Zoos may use a barrier system that combines a moat and smooth vertical surfaces, while ensuring the ants don't create escape bridges through leaf placement. However, water maintenance presents its own difficulties. Leafcutter ants use the moat as a landfill, discarding waste, dead colony members and unwanted debris into the water. Changing the water is one of the most challenging tasks, as even the most experienced keepers risk ants escaping without noticing. Water replacement occurs as needed, but no less than once every two days to maintain hygiene.

Leaf supply becomes particularly problematic during the colder months, when natural vegetation stops growing. Without a consistent leaf supply, the colony's fungal farms could collapse, ultimately leading to the death of the colony. Keepers at the Lithuanian Zoological Gardens have observed that dried raspberry leaves, collected from forests, provide a good alternative during winter. However, some species of *Atta* ants (e.g. *A. cephalotes*) are less receptive to dried leaves, favouring fresh vegetation which promotes more efficient fungal growth. Additionally, fruit is occasionally introduced into the ants' diet, with apples receiving the most enthusiasm. This dietary supplement ensures nutritional variety, supporting the colony's health and further enriching their complex and fascinating world.

When a colony is introduced into a new environment, it takes time for the ants to establish a stable fungus farm. Initially, there were concerns about the fungus surviving in the provided conditions, but observations revealed that the ants naturally regulate their own environment, adjusting ventilation within the fungus-growing chambers. *L. gongylophorus* is extremely sensitive and its survival depends entirely on the ants maintaining strict humidity, hygiene and temperature conditions. Any failure can cause full colony collapse, highlighting once more how specialised and vulnerable this symbiosis is.

Every new colony faces initial difficulties in unfamiliar surroundings before achieving stability. To support this transition, the exhibit's temperature and humidity are carefully regulated, with the general environment maintained at 25°C and 30% humidity. The fungus-growing chambers reach up to 90% humidity to create optimal conditions for fungal cultivation. These controlled settings not only aid colony development, but also contribute to behavioural research and provide substantial educational value, allowing visitors to observe and explore the ants' complex hierarchy and social interactions at first hand.

Currently, queens used to establish colonies are collected from the wild; although *Atta sexdens* remains a widely used display species, other fungus-farming ants such as *Acromyrmex* spp. exhibit similar husbandry requirements and may be considered for future exhibits, depending on institutional objectives and availability.

The sounds that shape the zoo

UNDERSTANDING SOUND ENVIRONMENTS IS A CRUCIAL PART OF CARING FOR OUR ANIMALS

Rhian Waller, Press Officer for Science and Conservation, Chester Zoo

Bioacoustics research has gained momentum at Chester Zoo (UK) in recent years. Bioacoustics – the study of sound environments – have been under-researched in zoos compared to the physical environment, yet it is proving to be just as important for both animal welfare and the visitor experience. This type of research investigates not only the noises animals make, but also the sounds they hear and how the nature of the spaces they inhabit shape those sounds.

Recent projects at Chester Zoo have centred on Bali myna (*Leucopsar rothschildi*), fossa (*Cryptoprocta ferrox*), Java sparrows (*Padda oryzivora*) and golden mantella (*Mantella aurantiaca*), exploring both their habitats in the zoo and the sound environment they experience.

One of the latest contributions is 'Hullabaloo at the Zoo: aligning acoustic research with the goals of the conservation zoo',[1] published in *Bioacoustics*, the International Journal of Animal Sound and its Recording, in July. This study reviews more than 30 years of zoo-based bioacoustics research, covering everything from soundscape analysis to vocal communication, sound localisation and acoustic signal detection.

'Zoo soundscapes have real implications for visitor and animal welfare and for conservation practices, and they offer a rich and unique environment for inquiry. We would invite researchers in any acoustic discipline to consider zoos as an arena of study.'[1]

Key findings from the study include the observation that visitor noise is the most commonly researched aspect of zoo soundscapes, while most studies focus on non-human primates. In contrast, the sound environments of birds, reptiles, amphibians and fish are comparatively under-researched. The researchers also noted that temporary noise sources, such as after-hours events or construction, tend to receive more attention than persistent background noise such as filtration systems.

The authors, Leah Williams, Lead Conservation Scientist in Population Biology, and Rebecca Lewis, Conservation Scientist in Population Biology, both Chester Zoo, emphasise that bioacoustics research provides valuable insights into how environmental noise affects the way animals communicate and behave. It can even offer avenues for mitigating any negative effects towards improving animal welfare.

Currently, most bioacoustics research focuses on sounds recorded in the wild or in controlled laboratory settings with domestic or farm animals. This suggests that zoos remain under-considered as sites that could offer both rich avenues of research and opportunities for real-world impact; practitioners may well see their research shape zoo environments and conservation programmes.

REBECCA LEWIS CONDUCTING BIOACOUSTICS RESEARCH AT CHESTER ZOO © CHESTER ZOO

But there are barriers; Lewis and Williams recognise that many zoos do not have the capacity to carry out their own bioacoustics research. It is a complex field and requires technical expertise and access to specialised equipment. Chester Zoo is fortunate to have team members with expertise, but other organisations do not. Therefore, Lewis and Williams argue for increased cooperation between members of the zoo community and practitioners in acoustic research, including and beyond those specialising in bioacoustics. Their solution is to encourage zoos to reach out to bioacoustics researchers – and for researchers to reach out to zoos.

Bioacoustics research in zoos should prioritise delivering practical benefits to the host institutions by generating useful information and by focusing on species or environments where the impact is likely to be greatest. Any approaches by bioacoustics researchers or universities should reflect this focus and be tailored to the needs of the host zoo. Lewis and Williams say the best way forward is collaboration, with clearly defined research goals. Their paper has been shared with various bioacoustics specialist groups with that in mind.

In the meantime, in-house bioacoustics work continues at Chester Zoo. These include a recent study, 'Evaluating the influencers of acoustic indices in a zoo soundscape'[2] (published in *Bioacoustics* in June), as well as a new project investigating infrasonic calls in the southern cassowary (*Casuarius casuarius*). Chester Zoo's bioacoustics research will soon be available at: www.chesterzoo.org/conservation-science-education.

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Animal welfare online

EAZA'S ANIMAL WELFARE WEBINARS ARE A SOURCE OF INVALUABLE ADVICE AND INFORMATION FOR THE WHOLE EAZA COMMUNITY

Ellen Williams, Animal Welfare Webinar Coordinator, and Sally Binding, EAZA Academy Manager, both EAZA Executive Office

The EAZA Animal Welfare Webinars support animal management professionals in developing evidence-based, welfare-friendly practices. These topic-based sessions follow a seminar format from an animal welfare specialist, followed by a short Q&A. The key element of these webinars is their applied nature; each session ends with a clear take-home message focused on practical welfare improvement.

The webinars began in 2020 and since then we've hosted 33 sessions, held every two to three months, with more than 4,000 online participants. So far in 2025, we've welcomed five fabulous speakers: Emily Hanley (Whipsnade Zoo, UK) presented on the importance of considering animal welfare over a full 24-hour cycle, rather than focusing only on daytime activity. Traditionally, welfare assessments are conducted during the day, when staff are most present and active. Claudia Tay (S.E.A. Aquarium, Singapore) and Kai Mattsson (Särkänniemi Aquarium, Finland) took us on an underwater adventure, providing thought-provoking webinars on improving welfare for aquatic species considering enrichment and cognitive needs. Heather Bacon (University of Central Lancashire Veterinary School, UK) discussed the impact of pain on zoo animals and the challenges of managing it.

HEATHER BACON'S WEBINAR ON PAIN IN ZOO ANIMALS © HEATHER BACON

HEATHER BACON: PAIN IN ZOO ANIMALS – CHALLENGES AND OPPORTUNITIES FOR BETTER WELFARE

Pain is a complex experience with both physiological and emotional components. Acute pain has an evolutionary purpose because it triggers behavioural responses that help animals to avoid harm. However, pain also causes suffering and is thus a key contributor to poor welfare. Pain can be acute (short-term, protective/adaptive) or chronic (long-term, maladaptive) and may be nociceptive (damage to body tissues), neuropathic (nerve damage), inflammatory (pain associated with redness and swelling) or a combination of these. Recognising pain is challenging due to species-specific behaviours and a lack of reliable assessment tools. Heather's webinar used case studies from various species to review pain physiology and highlight why careful pain management is essential. She identified key ethical and welfare considerations, including the importance of applying the precautionary principle to pain management.

A VISITOR INTERACTING WITH A GREY KANGAROO (*MACROPUS FULIGINOSUS*) © SAMANTHA WARD

Finally, Samantha Ward (Nottingham Trent University, UK) presented a session on the importance of human-animal interactions in zoos. In the boxes below, we take a deeper dive into the last two of these webinars.

We still have a couple more webinars planned for this year: from Daniel Garcia (Oceanogràfic Valencia, Spain) on using technology to monitor animal behaviour and welfare; and from Max Janse (Royal Burgers' Zoo, the Netherlands) on what corals can tell us about their own welfare.

All previous webinars can be found on the EAZA YouTube channel. If you would like to be considered as a presenter for an EAZA animal welfare webinar, we would love to hear from you. Please email Ellen Williams on ewilliams@harper-adams.ac.uk with a brief overview of your topic.

SAMANTHA WARD: THE IMPORTANCE OF HUMAN-ANIMAL INTERACTIONS FOR ZOO ANIMAL WELFARE

Humans in zoos and aquariums – whether animal care staff, veterinarians, volunteers or visitors – affect animals through a wide range of interactions. Human-animal interactions in zoos range from passive and brief to intense or extended, all of which shape the daily experiences of animals. Their impact may be positive, negative or neutral, depending on context and the animal's individual perception. As with other aspects of animal welfare, this makes such interactions complex. Samantha's webinar focused on two main themes: 'the visitor effect' – literature on how visitors impact animals – and keeper-animal relationships. The webinar discussed the factors that shape the relationships between humans and animals, explored risk factors for reduced welfare (including both animal and environmental variables) and considered ways for us to ensure that human presence supports positive animal welfare experiences.

Embedding SDGs in our DNA

HOW BELLEWAERDE ZOO HAS EMBEDDED SUSTAINABLE DEVELOPMENT GOALS INTO ITS CULTURE – WITH OUTSTANDING RESULTS

Stefaan Lemey, Director, Bellewaerde Zoo

Bellewaerde Zoo (Belgium) is a 'hybrid theme park', combining animals and attractions in a green environment. We welcome between 750,000 and 800,000 visitors annually. Officially accredited as a zoo in Belgium, we care for approximately 140 animals across 30 species, including amur leopards (*Panthera pardus orientalis*) and Rothschild's giraffes (*Giraffa camelopardalis camelopardalis*). We are also particularly proud of our success in breeding European flamingos (*Phoenicopterus roseus*) - something that, as specialists can confirm, is no easy feat!

Sustainability has been part of our identity for a very long time. The park's natural environment, the thousands of trees we cherish, the care for threatened animal species, our own wastewater treatment facility... they have all formed the basis for a higher level of sustainability. Over the past four years, we've taken this further by aligning our actions with the 17 UN Sustainable Development Goals (SDGs), creating an annual action plan with at least 10 initiatives directly linked to the SDGs.

Here are just a few of the steps we've proudly taken so far:

- **We developed a new savanna habitat**, complete with a stable for our Rothschild's giraffes and Grévy's zebras (*Equus grevyi*), while simultaneously renovating our largest nearby restaurant. As the two buildings are only 100 metres apart, we connected them to a shared geothermal heating and cooling system. Thirty 100-metre-deep boreholes and an underground pipe network now sustainably regulate the temperature – right beneath our happily roaming giraffes. This system has significantly reduced our carbon footprint. Later this year, we'll install a similar set-up in another restaurant, further phasing out fossil fuels.

- **We partnered with Think Pink**, a Flemish organisation that supports breast cancer patients and raises funds for scientific research. For the past two years, we've organised the 'Race for the Cure' at Bellewaerde. For just €19, participants can run or walk 5 km in and around our park – through buildings and restaurants, past the animals and attractions. Thanks to past editions, we have already raised more than €50,000 for Think Pink's work. The next race is planned for 3 October: every reader is welcome to join!
- **We planted 160 tall trees last year** to compensate for part of our carbon footprint. It was a significant investment, but the benefits are even greater. The trees not only capture carbon, but also provide shade during hot days and are natural air conditioners – very much appreciated by our visitors.
- **Workplace safety has become a top priority for us**, which aligns with the SDGs focus on employee wellbeing. Big risks can often be reduced through small investments, while even minor hazards like slips or cuts can lead to serious consequences. That's why we're committed to fostering a strong safety culture across all departments.

So, with a mix of big and small steps, everyday actions contribute to meaningful progress. Ultimately, it's the company culture that drives lasting change. As the saying goes, 'Culture eats strategy for breakfast'; we've learned at first hand that this holds true when embedding sustainability into the DNA of an organisation.

Each year, our efforts are audited, and we present the concrete actions we have taken and the results we have achieved. In October last year, we were incredibly proud to receive the 'SDG Pioneer' award for our actions. This distinction must be earned; only companies that demonstrate years of commitment, address all 17 SDGs and successfully complete multiple audits are eligible to apply. The fact that Bellewaerde received this distinction confirms that the SDG framework is an effective guide for zoos that want to strengthen their sustainability efforts.

This award is a powerful recognition of the hard work our team has put in, and it has only strengthened our motivation to keep going and aim for the next milestone. It shows that hard work doesn't go unnoticed or unappreciated; investing in sustainability truly pays off.

Save our zookeepers

HOW A NON-PROFIT ORGANISATION IS WORKING TO RETAIN, ENCOURAGE AND INSPIRE ZOOKEEPERS ACROSS THE GLOBAL COMMUNITY

Alice Vassallo, Director, and Sam McKinstrie, Team Member, both Keeper Educational Exchange Programme (KEEP)

For many in the profession, zookeeping has been a dream job from an early age. However, as in many professions, job dissatisfaction, burnout and a lack of appreciation can cause experienced keepers to leave the field, taking their knowledge with them.

This is where our Keeper Educational Exchange Programme (KEEP) comes in. We are a small, UK-based, non-profit organisation aiming to improve keeper job satisfaction and knowledge retention within collections by connecting zoos through keeper exchange placements.

The concept of keeper placements is not new, nor are the challenges faced by keepers attempting to organise them independently. This is what started KEEP: a belief that every keeper should have an equal chance to develop themselves and their expertise. Participation in the programme does not depend on knowing the right people or working at a large institution – registration is free for both individual keepers and collections. The only stipulations are that applicants must be employed in a zookeeping role and have at least one year of zookeeping experience.

Since its launch in January 2023, more than 40 collections and 300 keepers have registered with KEEP, and we have facilitated more than 50 placements, with more to come this year. Until now, our focus and engagement has been primarily UK-based, but we have had a growing number of non-UK collections and keepers engaging with us. Considering that the notion of KEEP was only conceived five years ago, it is remarkable how far we have come in the industry. As a team, we are immensely proud to have received 100% positive feedback from participating keepers about their placements. We could not be more grateful to both the incredible collections that have offered to host keepers and the inquisitive minds of the keepers who apply.

KEEP PARTICIPANTS COMPLETING THEIR PLACEMENT AT CHESTER ZOO © JAMES STAR

The benefits for keepers are simple: placements offer them the opportunity to expand their knowledge of the species/taxa they work with, develop new skills, build a network of connections by interacting with keepers at their host collection and experience different husbandry approaches.

For collections and management, hosting visiting keepers offers the chance to highlight their innovative practices and exhibits while engaging in knowledge capacity-building within the sector, both for the visiting keeper and their own staff. Additionally, by encouraging and supporting their own keepers to apply for KEEP placements, they are investing in the development of individual keepers and the wider team, which can lead to improved job satisfaction and staff feeling valued.

Of course, establishing KEEP has not come without challenges. These include the logistical obstacles of maintaining our website, sourcing funding to cover operating costs and alleviating a collection's concerns about staff using the programme to seek new employment – something that is not its intended use. The KEEP team of volunteers has worked to address these to ensure the smooth facilitation of placements.

As far as KEEP has come, we know we have more to contribute to the development of keepers everywhere, and our strategic goals aim to achieve this by:

- facilitating exchanges across Europe and further across the world;
- establishing KEEP branches in different countries;
- expanding KEEP placements to other zoo professions; and
- launching 'KEEP Conservation' - an initiative that supports *in situ* projects by sending experienced keepers to share their skills and build capacity.

Hopefully, after reading about KEEP, our achievements, challenges and goals, you will feel inspired to participate in a KEEP placement, whether as a keeper or as a host collection. We are always looking to engage with new keepers, host collections and sponsors, and would be happy to discuss how you can get involved.

If you would like to find out more about the programme you can:

- register with KEEP on our website (www.keeperexchange.org)
- follow us on Facebook (www.facebook.com/zookeepx) for updates on opportunities and success stories
- email us (info@keeperexchange.org) if you have any questions

We truly hope to see you on a KEEP placement soon.

Making zoos greener

THE 2025 EAZA ZOO HORTICULTURE CONFERENCE DEMONSTRATED HOW INNOVATIVE PLANTING SCHEMES CAN IMPROVE BIODIVERSITY AND SUSTAINABILITY WHILE CREATING HIGH-QUALITY EXHIBITS

Louwerens-Jan Nederlof, Botanical Collection Manager, and Rick Put, Senior Horticulturalist, both Rotterdam Zoo, on behalf of the EAZA Zoo Horticulture group

The 2025 EAZA Zoo Horticulture Conference took place from 24–26 June 2025 at the Royal Zoological and Botanical Gardens Rotterdam (the Netherlands). The event brought together 30 delegates from EAZA zoos and botanical gardens for three days of presentations and guided tours and an excursion to the renowned Trompenburg Arboretum and Gardens.

The conference began with several presentations outlining Rotterdam Zoo's historical development and future direction. Key topics included the zoo's new masterplan, the creation of a Himalayan exhibit for red pandas (*Ailurus fulgens*) and the successful *in situ* and *ex situ* conservation efforts for the Rwandan warm water lily (*Nymphaea thermarum*). Throughout the day, speakers demonstrated the vital role of plants in masterplan development. Informed landscaping choices and the use of climate-resilient trees are fundamental ingredients for making our environments more sustainable by reducing energy use, supporting livelihoods and safeguarding biodiversity.

Speakers from Erasmus University College, Ebben Nurseries, Royal Burgers' Zoo, Libéma Group, Rotterdam Zoo (all the Netherlands), Chester Zoo (UK), Wrocław Zoo (Poland) and Randers Rainforest (Denmark) reinforced these themes. Their presentations showed how the thoughtful use of plants and trees not only substantially contributes to creating high-quality exhibits, but also serves as a powerful tool for raising conservation awareness.

Several talks focused on the functional and aesthetic importance of trees in animal enclosures and landscape design. For instance, a presentation from Edinburgh Zoo (UK) explored the challenges and value of carefully managing a tree collection, a task that demands both passion and dedication. The principle of placing the 'right tree in the right place' remains a central topic – especially when weighing the benefits of using non-native species to increase climate-change resilience against the potential risks to biodiversity.

Innovation in zoo horticulture often begins with small ideas, prototypes and testing. One example is the use of passive solar energy in greenhouses, which could significantly cut energy costs for animal enclosures and growing facilities. Nursery Het Polderveld (the Netherlands) is set to launch such a pioneering experiment to explore this sustainable approach. Another example is the novel approach of London Zoo and Whipsnade Zoo (both UK) to systematically scoring plant damage in animal enclosures to create more resilient planting schemes that deliver better animal welfare and a more engaging visitor experience.

During guided tours around Rotterdam Zoo, delegates saw at first hand the challenges and results of implementing sustainable horticulture practices. The tours focused on the botanical collection, greenhouses and nursery operation behind the scenes, offering practical insights into the day-to-day work of horticulture staff. After two packed and inspiring days, the group took a short drive by safari bus – kindly sponsored by Ebben Nurseries – to the nearby Trompenburg Gardens and Arboretum. There, among the lush greenery of Rotterdam's outskirts, the conference themes came together in one place.

Trompenburg's impressive historic tree collection and the evidence-based planting of climate-change-resilient species serve both as a living monument and as a beacon, reminding us of our responsibility to care for the green spaces in our institutions and in our daily lives.

With fresh ideas, new contacts, and renewed inspiration, delegates said their goodbyes. Watch the EAZA calendar for next year's conference at Randers Rainforest.

Collaborate, innovate, inspire

THE 2025 INTERNATIONAL CONGRESS OF ZOOKEEPING BROUGHT TOGETHER A GLOBAL COMMUNITY OF EXPERTS TO INSPIRE EACH OTHER WITH THEIR KNOWLEDGE AND PASSION

Samantha Mager, former zookeeper, Royal Burgers' Zoo, and caretaker, Bird Rehabilitation Centre, De Wulp

Earlier this year, I had the privilege of attending the International Congress of Zookeeping (ICZ) 2025 in Wellington, New Zealand. The congress brought together an inspiring mix of zookeepers, researchers, conservationists and educators from across the globe. Held in a country known for its rich biodiversity and deep-rooted conservation values and efforts, the event was a powerful reminder of the role that zoos and zoo professionals can and should play in protecting wildlife and shaping the future of our planet.

Wellington made an immediate impression. Surrounded by hills and coastline, the city has embraced its wildlife, with native birds such as the kākā (*Nestor meridionalis*) thriving in urban spaces, thanks to decades of collaborative conservation work.

INSPIRING NARRATIVES

The presentation topics ranged from high-level conservation strategies to practical husbandry insights. Karen Fifield (Wellington Zoo) opened the event by introducing the idea of radical transparency in animal care. At her zoo, visitors can observe veterinary procedures through viewing windows into the hospital. Her message – that we must shape our narratives with openness and honesty – set the tone for a congress rooted in truth, collaboration and progress.

Laura Fidler's work with a socially complex chimpanzee (*Pan troglodytes*) group at Taronga Zoo (Australia) made an impression. Her team demonstrated how group-based training, carefully designed not to disrupt social dynamics, can enhance welfare and empower animals. In this case, the chimps themselves became the teachers, modelling behaviour for each other and illustrating the natural ripple effects of positive reinforcement.

Paul Ward (Capital Kiwi Project) told the story behind New Zealand's kiwi rewilding efforts: a landmark project that has seen kiwi chicks born in the wild near Wellington for the first time in over 150 years. This achievement is the result of thousands of pest traps, landowner cooperation and dog safety training. It's a shining example of what's possible when science, policy and community come together.

Samantha Seymour's presentation on Sydney Zoo's (Australia) eastern quoll (*Dasyurus viverrinus*) breeding programme also stood out, as did others that focused on

breeding under human care and the release of species into their natural environment. With meticulous planning and post-release monitoring, the project demonstrated how modern zoos can reintroduce species with precision, accountability and long-term vision.

Animal welfare was a thread woven through nearly every talk. Ngaio Beausoleil (Massey University, NZ) presented the 'Five Domains model', challenging us to interpret animal behaviour not just as action, but also as expression. It's a shift from management to understanding, from observation to empathy. Other sessions explored everything from carcass feeding for big cats to recall training for rescued bears, reinforcing the idea that high-quality care is inseparable from welfare-driven design and strategy.

THE VALUE OF COLLABORATION

Equally valuable were the informal conversations. Whether talking about drone use in animal care or community-led red panda (*Ailurus fulgens*) work in Nepal, it was clear that innovation thrives through collaboration. The more we share, the better we can care for the animals and our future.

Outside the sessions, I took time to explore the natural beauty surrounding the city. As I travelled through the mountains, deep into Wellington's forests and across its wetlands, I spotted all sorts of plants and animals. It felt strange to see so many familiar species – plants and animals from home – thriving on the other side of the world. Once seen as beautiful, here they are an image of invasion. The more time I spent in Wellington's nature, the more the congress's message resonated. Seeing the wildlife up close made it clear that our conservation efforts remain essential – there is still so much to protect, restore and understand.

Leaving ICZ 2025, I felt more connected than ever to the global zoo community. The congress didn't just deliver ideas – it brought inspiration. There's something deeply motivating about gathering with others who carry the same sense of responsibility and purpose. ICZ reminded me that our work, though often quiet and behind the scenes, is part of something bigger.

CONTRIBUTIONS TO CONSERVATION
TOTAL SUPPORT 2024

Based on information available in the EAZA Conservation Database on 12 May 2025

210,075 HRS
STAFF TIME

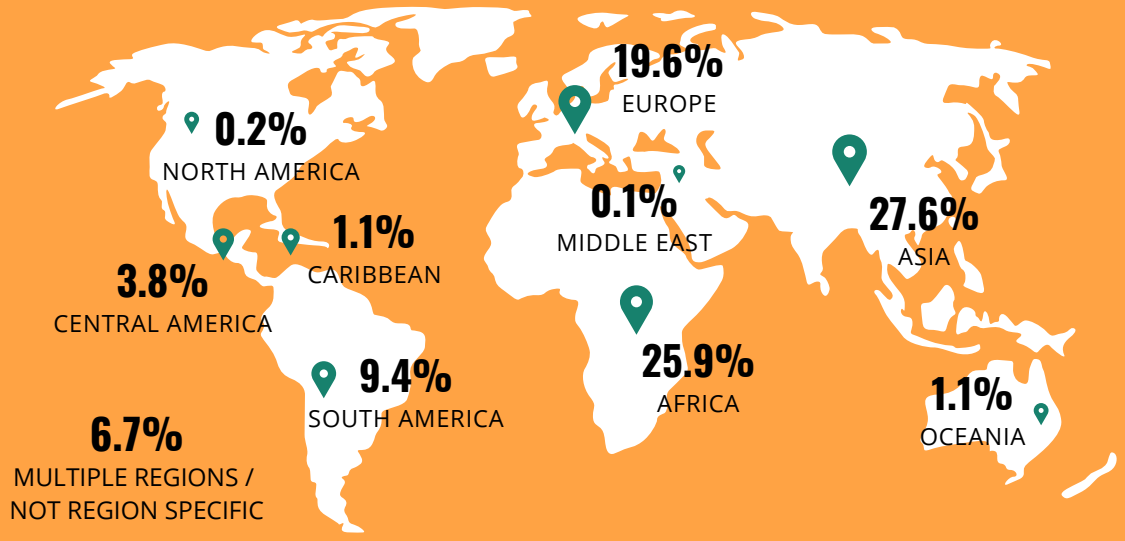
€32.1 MILLION

235
MEMBERS

>500
PARTNERS

>800
SPECIES

AREAS OF FINANCIAL SUPPORT



**includes plant, habitat conservation, conservation tool development*

Progressive Zoos and Aquariums Saving Species Together With You

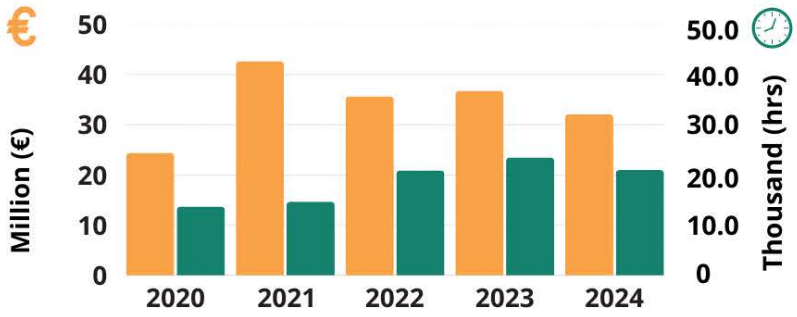
CONTRIBUTIONS TO CONSERVATION
TOTAL SUPPORT 2020 - 2024

Based on information available in the EAZA Conservation Database on 12 May 2025

299
MEMBERS

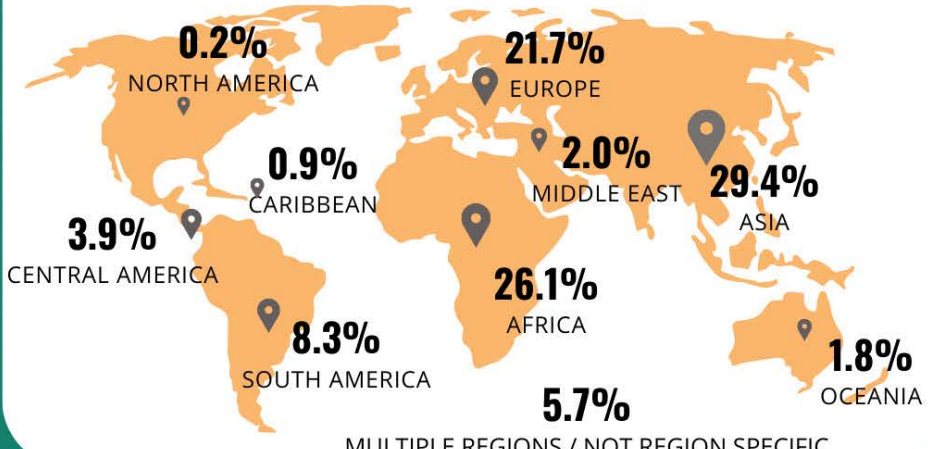
>1000
PARTNERS

>1000
SPECIES



€171.6 MILLION
FINANCIAL SUPPORT

938,872 HRS
STAFF TIME



TAXA TOP 5
supported by highest number of Members

FELIDS
125 MEMBERS

SMALL CARNIVORES
125 MEMBERS

REPTILES
118 MEMBERS

PROSIMIANS
92 MEMBERS

RAPTORS
92 MEMBERS

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