

QUARTERLY PUBLICATION OF THE EUROPEAN ASSOCIATION OF ZOOS AND AQUARIA

ZOOQUARIA

AUTUMN 2019

ISSUE 106



LEARNING TO LOVE THE HYENA

WHY NEW INITIATIVES ARE NEEDED TO HELP THIS UNLOVED SPECIES



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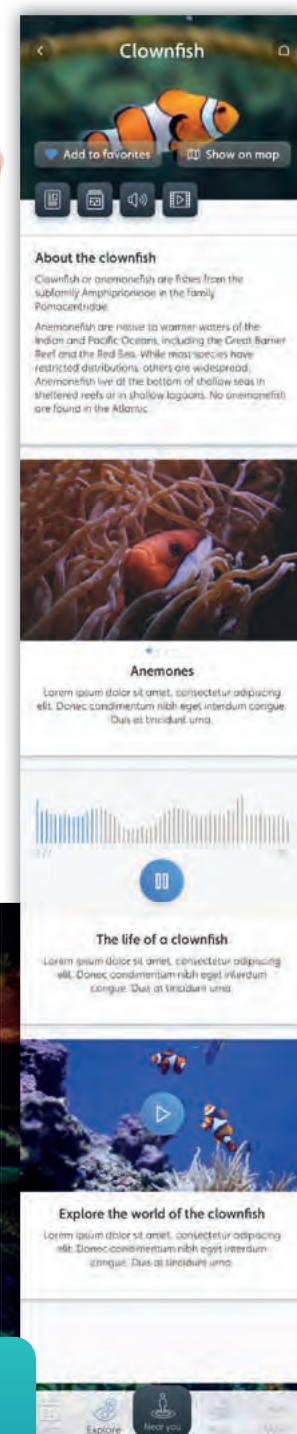
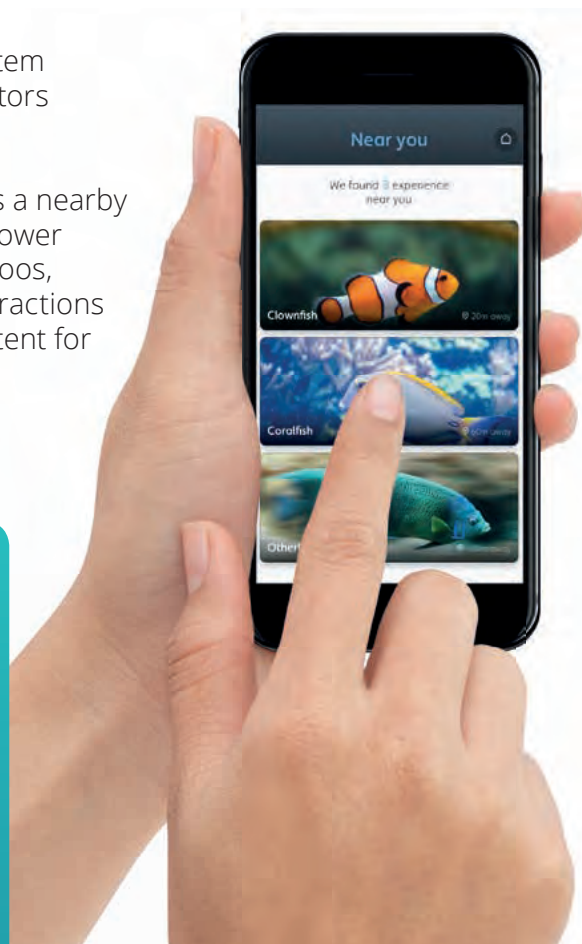
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Zooquaria

EDITORIAL BOARD:

Executive Director Myfanwy Griffith (Myfanwy.Griffith@eaza.net)

Managing Editor David Williams-Mitchell (David.Williams-Mitchell@eaza.net)

Editor Joanna Swinnerton

Editorial Staff Katharina Herrmann, William van Lint

Designer Louise Tait

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EAZA Executive Office, PO Box 20164, 1000 HD Amsterdam, The Netherlands.

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FROM THE DIRECTOR'S CHAIR

Many of you will have seen the powerful speech given by environmental activist Greta Thunberg at the 2019 UN Climate Action Summit in New York. She shared the opinion that the 'politics and science needed [to mitigate climate change] are still nowhere in sight' and challenged world leaders, businesses and individuals to stop talking and start acting, stating that 'the eyes of future generations are upon you.' Did this impassioned warning make a difference and, if so, what does it mean for EAZA and its Members?

There were indeed many outcomes from the Summit that will affect us all. To mention just a few examples:

- The EU announced that at least 25 per cent of the next EU budget will be devoted to climate-related activities;
- France committed not to enter into any trade agreement with countries that have policies counter to the Paris Agreement;
- Germany stated its intention to be carbon neutral by 2050.

In closing the Summit, UN Secretary-General António Guterres, said 'We need more concrete plans, more ambition from more countries and more businesses.' I feel that zoos and aquariums are very well placed to work with communities, businesses and governments to push for and be part of delivering science-based, ambitious, concrete plans to address climate change. I encourage everyone to question their local and national governments as to what actions they are taking and how your zoo or aquarium can be part of the solutions.

Climate change and biodiversity are often considered to be separate topics on the political agenda; however, both are becoming more and more inexorably interlinked. It is therefore important that the zoo and aquarium community are aware of any opportunities to work together on both topics.

The global assessment report on biodiversity and ecosystem services released by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) earlier this year included the worrying prediction that biodiversity is declining faster than at any time in human history. With around 1 million species facing extinction, the report calls for 'transformative' systemic change in the production and consumption of energy, food, feed, fibre and water. We can only hope to address the underlying causes of biodiversity loss via a coordinated approach from local, national and international governments, and the connections zoos and aquariums have with visitors, civil society and governments mean that we are well placed to support these efforts. The report sets out eight areas for sustainable transformation, several of which zoos and aquariums can address directly, such as demonstrating values and actions that people can take to reduce their waste and consumption, helping generate social justice in the context of species conservation, and providing high-quality education and

knowledge-sharing opportunities. Many of these will already be embedded in the work of our Members and I encourage everyone to focus on highlighting, strengthening and developing activities that support the goals and values set out in the report. Despite the alarming statistics, it is not too late for biodiversity if we combine our efforts towards making these transformative changes.

Next year will see several key opportunities for EAZA and its Members to contribute to the post-2020 biodiversity agenda; the IUCN World Conservation Congress (WCC) in Marseille, the EU's work on the Green Deal and post-2020 Biodiversity Strategy, and the Convention on Biological Diversity Conference on the Parties (CBD COP 15) in Kunming. You can read more about the influence of the WCC in the article on page 22, and we will keep Members updated on opportunities related to the EU. We should remember that Article 9 of the CBD concerns the importance and value of *ex situ* conservation, which has been directly translated into *ex situ* activities under the EU Zoos Directive and zoo-related legislation in other CBD Parties. Consequently, post-2020 actions and commitments decided at a range of levels could well play a part in influencing legislation and activities relevant to our work.

The good news is that EAZA is already well on the way to aligning its current and future work with aspects of the post-2020 biodiversity agenda. During the well-attended Annual Conference in Valencia we heard about the very successful Silent Forest Conservation Campaign and how it has and will continue to address the Asian songbird crisis. Our next campaign, Which Fish?, was launched and will focus on the high-priority topic of the sustainable use of aquatic resources. We also saw the culmination of an inclusive process of developing a new EAZA Vision and Mission to guide us in developing our 2021–2025 Strategy and beyond. Entitled 'Progressive zoos and aquariums saving species together with you', this will be enacted from 2021 and provides a clear focus for demonstrating our conservation credentials and partnership working, all of which is essential if we want to enact the transformational change that will address climate change and biodiversity loss.

Myfanwy Griffith
Executive Director, EAZA

NOTICEBOARD

EAZA COUNCIL

The EAZA Council held their autumn meeting on Friday 20 September in Valencia, Spain. The following decisions were made:

NEW MEMBERS

Full Membership was awarded to:

- Pécs Zoo, Hungary

Temporary Membership (2 years) was awarded to:

- Kaliningrad Zoo, Russia (upgrade from CfM)
- Oasis Park Fuerteventura, Spain

Corporate Membership was awarded to:

- Immotion, UK
- Seafoodia, France

EAZA ACCREDITATION PROGRAMME

Accreditation and Continuing Full Membership was awarded to:

- Arabia's Wildlife Centre, UAE
- Berlin Tierpark, Germany
- Bratislava Zoo, Slovakia
- Dierenpark Amersfoort, Netherlands
- Fota Wildlife Park, Ireland
- Living Coasts, UK
- Marwell Wildlife, UK
- Newquay Zoo, UK
- Zoo Děčín, Czech Republic
- Zoo de La Flèche, France
- Zoo Hannover, Germany
- Tierpark Goerlitz, Germany

Temporary Membership will be retained by:

- Tierpark Ueckermünde, Germany
- Zoo Ústí nad Labem, Czech Republic

Withdrawing Members include:

- Deerns, Netherlands (Corporate Member)
- Feldman Ecopark, Ukraine (Candidate for Membership)
- La Ferme aux Crocodiles, France

Terminated Members include:

- ClaxItalia, Italy (Corporate)
- PJA Architects, USA (Corporate)

RHINOS TO RWANDA

In late June, five black rhinoceros were transferred from EAZA Member Dvur Kralove to the Akagera National Park in Rwanda, where they were released into bomas for acclimation. The animals, which hail from Dvur Kralove (Czech

Republic, three animals), Ree Park Safari (Denmark, one animal) and Flamingo Land (UK, one animal) have been thriving since their arrival and have been moved to a larger enclosure.

As this issue goes to press, the animals should be ready for release to a larger area prior to their final release into the park when the team judges that they are ready. The EAZA EEP for black rhino collaborated with Rwanda Development Board and African Parks on the project, and had fundraising assistance from Veronica Verecova, a US-based animal lover, philanthropist and former model.

EAZA would like to extend its thanks to all involved, especially Jan Stejskal of Dvur Kralove and his staff who organised the transfer and accompanied the animals to Rwanda for the initial release.

WAZA WELFARE SUMMIT

The World Association of Zoos and Aquariums (WAZA) held a three-day summit on welfare and accreditation in Barcelona in July. EAZA Accreditation and Membership Manager April Adams was there and gave a presentation on welfare elements of the EAZA Accreditation Programme. The summit was also attended by representatives of ALPZA (Latin America), JAZA (Japan), ICZA (India), AMAZOA (Caribbean and Meso-America), SEAZA (South and East Asia), AZA (North America), ZAA (Australasia), VdZ (German-speaking countries), UIZA (Italy) and BIAZA (UK and Ireland).

While concrete outputs on welfare assessment did not materialise, the group agreed to meet again in two years to report on efforts to ensure that all Members of the associations constituent

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- Carl Stahl Architecture
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- KaGo & Hammerschmidt GmbH
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- Lionhouse Architects
- Marine Nutrition
- Mazuri
- Nautilus
- Nieuwkoop
- Pangea Rocks
- Ralf Nature
- Rasbach Architekten
- Ravensden Plc
- Ray Hole Architects
- Saint Laurent S.A.
- Sanero Kunstfelsen
- Seafoodia
- TVK Zoodesign
- Zoological Adviser
- Zoologistics
- Zoopoli
- Zooprofis

of WAZA are accredited and to work on further progress towards WAZA's stated aim of ensuring that some form of welfare review has been undertaken by all Members by 2023.



NEW ARRIVALS

A GOOD YEAR FOR THE EAZA MANATEE POPULATION



WROCLAW ZOO

By Lorenzo von Fersen, Nuremberg Zoo and Manatee EEP Coordinator

WITH ONLY 10 ZOOS participating and 36 animals, the Manatee EEP is a rather low-profile species to manage within EAZA. There are three species of manatees worldwide: the West Indian (*Trichechus manatus*), the West African (*Trichechus senegalensis*) and the Amazonian manatee (*Trichechus inunguis*). EAZA zoos are keeping the West Indian manatee and within this species the subspecies *T. manatus manatus*, which is found in Atlantic tropical and subtropical coastal waters and rivers from the Bahamas to Brazil.

The experience has shown that despite their rarity as a zoo species, manatees attract many visitors because of their unique biology, morphology and behavioural adaptations. Due to the many pressures manatees are facing in their natural habitat, which lead to a continual decrease in the wild population, the species is listed as Endangered by the IUCN. Habitat loss and direct kills are major threats and difficult to reduce in the near future. Therefore, zoo manatees can serve as an important ambassador for the conservation of neotropical riverine and coastal habitats. Hence, it is very

important to set up an appropriate self-sustainable *ex situ* population, not primarily as back-up, but particularly to learn more about this species' biology and reproduction.

Although manatees have been part of European zoo collections since the 70s, it was not until 2008 that the EAZA Manatee EEP began. It is currently the only coordinated management programme for this species. Manatee births are common, but calves often have to be hand-reared because the mother does not produce milk, or because other behavioural anomalies prevent the calf from nursing. Since the inception of the EEP, 24 births have occurred, of which 17 calves are still alive. Within the last 10 years one major achievement in manatee reproduction, especially concerning the survivorship of neonates, was the establishment of a proper hand-rearing protocol. This was possible only thanks to the data gathered and the EEP's experiences over the last few years. Other major developments, such as new facilities with more water volume and well-functioning Life Support Systems, have been crucial for the slightly positive trend observed in the EEP population.

The year 2019 started promisingly for the EEP population when a female calf was born in January in Faunia, Spain, and the new exhibit at Burgers Zoo in Arnhem saw the birth of a manatee calf in March. Two months later, a male calf was born in Odense, Denmark and, finally, Wrocław Zoo celebrated the birth of a female calf in June, the second successful birth since their opening three years ago. In summary, the births of new calves will certainly contribute to the further consolidation of this species under human care.

In the last few years, through the initiative of the Manatee EEP, several conservation projects in Latin America were supported, in the form of veterinary advice in cases of stranding events or health issues, the provision of funding for scientific meetings and support for conservation research projects. It is the goal of the Manatee EEP to continue these activities, involving more zoos and manatee specialists.

STEADY PROGRESS FOR THE WEST AFRICAN CROCODILE IN LAUSANNE

THE STORY OF THE WEST AFRICAN CROCODILE (*Crocodylus suchus*) is a long one. Until 2003, the crocodile was considered as a subspecies of the Nile crocodile (*Crocodylus niloticus*). In 2003, Schmitz *et al.* discovered that the 'Nile Crocodile' from Lake Tchad and West Africa (Mauretania to Gabon) is genetically different from *C. niloticus*. In 2011, Hekkala *et al.* confirmed the species as *Crocodylus suchus*. Indeed, the Greek historian Herodotus (484–425 BC) wrote that the ancient Egyptian priests were selective when choosing crocodiles to protect their cult temples. These priests were aware of the difference between the two species, with *C. suchus* being smaller and more docile than *C. niloticus*, making it easier to catch and tame them.

West African crocodiles arrived at Aquatis in Lausanne between 1984 and 1989 from Zoo Frankfurt, measuring around 1m in length. Since 2016, Aquatis has seen an increase in this species' numbers each year. In order to initiate copulation, the water temperature is lowered from 28°C to 23/24°C in the beginning of November.



MICHEL ANSERMET

A few days later, the crocodiles start to copulate. The egg deposition is observed around the middle or end of February and the crocodiles hatch between 82 and 92 days later. The number of eggs that are transferred to an incubator depends on the demands of other institutions. The surplus of eggs are integrated into an evolutionary research programme at the University of Geneva.

The 2019 hatchlings are assigned to Morocco, which hopes to reintroduce this species in national parks in the south of the country where the last *C. suchus* disappeared 70 years ago. The reintroduction will be a collaboration between Aquatis, Crocs Park of Agadir and the state of Morocco under the supervision of the EAZA Crocodiles vice chair.

PACIFIC WALRUS BORN IN TIERPARK HAGENBECK



MICHAEL FLUEGGER

ON 5 MAY A MALE PACIFIC WALRUS (*Odobenus rosmarus divergens*) was born in the Hagenbeck Zoo in Hamburg. The birth was fast and problem-free. The mother, Polosa, and father, Odin, are both 23 years old. Both animals are wild-born and lived in Moscow Zoo from 1996 to 2013 before coming to Hamburg.

The new offspring is already the fourth (3.1) Pacific walrus born in Hamburg. The previous births took place in 2014, 2015 and 2018. So far, 2.0 calves have survived. The 2015-born female Loki died of an infection at the age of two. The young bull Snorre died at the age of three months. At the moment there are 3.3 Pacific walruses kept in Hamburg.

In Europe, apart from Hamburg, walruses are currently kept only in Valencia (which has three females) and Harderwijk. A few years ago, walruses bred several times in Harderwijk, but this is not currently the case. In order to ensure a genetically healthy population in the EAZA zoos in the long term, the EEP is looking for new institutions to keep Pacific walruses.



Building bridges

ZOOQUARIA TALKS TO VOLKER HOMES, THE CHAIR OF THE NATIONAL ASSOCIATIONS COMMITTEE, ABOUT HIS NEW ROLE AND HIS GOALS AND PRIORITIES

DWM: Volker, firstly congratulations on being appointed Chair of the National Associations Committee (NAC). Could you tell us more about your background, and how that led to your role as Director of VdZ (Association of German Zoo Directors)?

VH: Thank you! I am a trained biologist, I studied conservation and zoology, and started my career in species conservation in Germany, primarily with

in situ projects for local species. My first job was with TRAFFIC, where I helped with an investigation into the trade in musk deer products in East Asia. Since then I have worked for WWF Germany, in species conservation on a field level and on a policy-based level. That's also where I started engaging with CITES.

DWM: That's interesting; as we are talking, the CITES CoP18 is just about to start. How do you see the National Associations Committee's

role in EAZA's interactions with CITES?

VH: It's not a prime focus of the Committee as yet. I believe that there is room for the zoo and aquarium community to do more at CITES, and I would very much like to see harmonisation in the approach to CITES at all levels – WAZA, EAZA, the National Associations and individual institutions.

DWM: We hear a lot that the most

effective measures for conservation will come from governments and international bodies – do you think that we, too, can be effective in these forums?

VH: Well, conservation is all about the interaction of people and wildlife, the relationship of people with animals and plants. I am a strong believer that zoos have a role in showing people what a healthy relationship with animals looks like. The recent IPBES report showed that there are a million species under threat of extinction, and puts the blame firmly on humans; given that humans are a speciality of ours, I would like to see recognition from the UN, CITES, the European Union and so on that we, the zoo community, can be a major player in educating and mobilising people to take action to protect animals and their habitats.

DWM: It sounds as though you believe that the National Associations Committee can help with spreading that message – would you say that this will be a priority of the Committee under your leadership?

VH: It's early to say exactly what the priority will be, but let me say that we have seen a huge amount of development in the last five years – from the establishment of the Committee in 2014 under the excellent leadership of Kirsten Pullen [formerly the Director of BIAZA, now Head of Conservation and Engagement at Paignton Zoo] to having permanent staff members based in Brussels. I definitely want to continue in this direction, and there's still a lot of work that needs doing, but yes, I think it would be a good idea to show stakeholders more of what the community already knows about itself.

DWM: Could you expand on that? Do you think we are too inward-facing?

VH: We are a complex mechanism with lots of moving parts which all work very well, like a Swiss watch! Like the makers of those watches, I think we assume that external stakeholders don't need to understand the clockwork, but in our case, I think we do need to explain what we do in more detail to stakeholders. We've seen a number of cases recently

where the stakeholders haven't understood the workings of EAZA and its Members and what kind of role they could play within their communities with regard to conservation, education and science. I am disappointed by decisions taken by the City Council of Barcelona, for example, as they were discussing the future of the zoo; there's also the city of Basel, which decided not to build a proposed aquarium. I think that if decision-makers understand better at all levels, we might be able to gain more policy support. And decision-makers of the respective organisations need to say more loudly that they would like to support the contribution of zoos and aquariums, in particular on biodiversity conservation and education. I particularly see a role for the NAC in building bridges to policy-makers in this regard.

DWM: How do you view the opposition to zoos and aquariums, and how does that relate to the Committee's work?

VH: Let me start by saying that I think that at the heart of the opposition to zoos and aquariums is the challenge we have of showing that conservation and individual welfare are two sides of the same coin. We can and should demonstrate that zoo-led conservation is far more effective when zoos have good welfare, and vice versa. If we can show that there is a harmony between these two elements and back it up with evidence, we can go a long way to overcoming opposition to zoos.

Whether or not we can ever stop fighting this fight is down to society and the decisions it makes; we'll always see extreme positions against zoos, but these are minority viewpoints, and so far we can see that the public supports zoos – VdZ Members are seeing more visitors than ever, and I think that is the case in most parts of Europe. I also think that visitors increasingly see that zoos are part of the solution to the current crisis. We need to build on that, be sure we know what we want to do and can achieve, and then mobilise our visitors, policy-makers and society more widely to support holistic conservation.

DWM: That's an interesting point, particularly in the light of our current reevaluation of the EAZA Vision and Mission.

VH: I came from WWF, which is an umbrella organisation in the same way as EAZA – there are hundreds of different cultural viewpoints under that brand, but they all agree on one thing, that the ultimate goal is to save species and their habitats. As with WWF, deciding how we get there is tricky, mainly because Europe probably has more cultural differences in a concentrated space than anywhere else in the world. We need to work together, fight against compromising our ideals and be diplomatic; I am confident we can get a common viewpoint if we are all aiming at the same point, however we get there!

DWM: What's in the immediate future for the National Associations Committee?

VH: I think we need to review our internal processes a little, especially in how we approach working with the EU and national legislators, parliaments and implementing ministries. Part of that is identifying which countries need more support, and which ones already have close relations with decision-makers of key stakeholder groups. For the latter, we need to find out more about how they work and which role each of them can play in furthering the overall aim of the Committee and EAZA, and for the former, we need to learn how to build capacity and help them be more effective. I really think that we can make a huge difference over the next three to five years, and I would like to pay tribute to Kirsten again for pulling the Committee together and making it so effective. Now that a lot of things are moving and working, we need to continue to develop what we can do; we have a huge potential and haven't yet reached our full capacity.

DWM: It sounds like you are raring to go!

VH: Very much – I am very enthusiastic about where EAZA is heading, and what we as a Committee can contribute.

DWM: Assuming that you occasionally get time for a holiday, what do you like to do?

VH: I am an enthusiastic traveller and like to go with my family on trips – especially to the south of Europe, or wherever the sun is shining!



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Forests, fish and flamenco

EAZA'S ANNUAL CONFERENCE TOOK PLACE IN VALENCIA'S BIOPARC, UNITING FRIENDS AND COLLEAGUES FROM EVERY CORNER OF THE CONSERVATION WORLD

David Williams-Mitchell, EAZA Director of Communications and Membership

The 2019 EAZA Annual Conference took place between 17–21 September in Valencia, Spain, and was hosted by EAZA Member BioParc in Valencia, Spain. With nearly 900 delegates, this conference was the largest yet, and reflects an expansive trend in this flagship event of the EAZA calendar.

On the Tuesday, the conference started as usual with the TAG Chairs' and EEP Coordinators' meetings followed by the icebreaker event, both held at the main conference venue, the Palacio de Congresos de Valencia. For the majority of delegates, the conference started in earnest the following day, with a welcome from Sergi Campillo, Deputy Mayor of Valencia, Fran Quesada, General Director of Natural Environment, Generalitat Valenciana, and José Maldonado, President of Rain Forest SA, the owner of the zoo. Thomas Kauffels, Chair of EAZA, then welcomed delegates to the conference and opened the proceedings, highlighting the excellent value for money represented by EAZA membership fees, and encouraging Members to become more involved with the committees and other working structures of the Association. Executive Director Myfanwy Griffith summarised the work of the last 12 months carried out by Members and staff in fulfilment of the four focal areas of the 2017–2020 EAZA Strategy. Keynote speaker Luc Bas, European Regional Director of IUCN, focused on the role of zoos and aquariums in helping to shape

policy at international meetings such as the World Conservation Congress, and in the wider struggle to contain and mitigate biodiversity loss as we aim for a new CBD Framework to be decided in China in 2020.

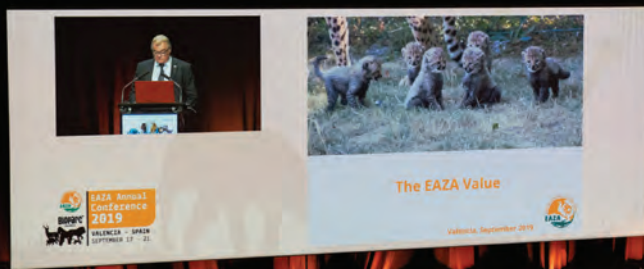
A second plenary in the afternoon laid out the successes of the Silent Forest campaign and introduced the new EAZA campaign, Which Fish? With 243 participating institutions, 30 species helped and nearly €100,000 in funds raised for songbird conservation, Silent Forest campaign representatives Simon Bruslund and Tomas Ouhel had plenty of material for their wrap-up report. The campaign has not only generated a huge amount of awareness of the issue of songbird capture and trafficking, it has also encouraged an expansion in the number of EAZA Members caring for the campaign species and has led to the publication of a number of Best Practice Guidelines and inspired the creation of a CITES working group (see report on page 20-21) in which EAZA will play a role. Which Fish? will work towards sustainable use of marine resources in three principal areas: sustainable consumption by humans, sustainable consumption by animals, and the sustainable sourcing of animals for aquariums across the EAZA network. Outgoing Campaign Chair Claudia Gili, Philippe Vallette and Stéphane Hénard of the French national aquarium Nausicaa and Joao Falcato of Lisbon Oceanário outlined the challenges posed

by the campaign and by the current marine conservation situation, and offered some suggestions for meeting those challenges.

Meetings of Committees, TAGs and programmes, which make up the majority of the business of the Annual Conference, took place every day between Wednesday and Saturday; and while these meetings are not covered by social media live-streaming like the plenaries and are thus a less visible part of the conference, they are the backbone of the event for animal managers, curators, Directors and other EAZA Member staff at the event. Proceedings for many of the meetings will be available on the EAZA Member Area within the next few weeks.

Thursday afternoon is traditionally put aside for the visit to the host institution, and the visit to the BioParc did not disappoint. With unseasonably mild weather and a zoo full of interesting animals and enclosures, delegates were in their element until well after dark. The visit is a good opportunity to network with colleagues, and judging by the numbers of delegates deep in conversation, the BioParc was a great venue for making new contacts and catching up with old acquaintances.

Friday saw an in-depth look at the meaning and role of *ex situ* conservation. Danny de Man, EAZA Director of Conservation and Population Management, introduced the session by showing that the wider conservation



question-and-answer session with the panel of speakers.

Finally, with the main business of the conference completed, on Saturday afternoon a final plenary took place, and included the presentation of three EAZA Lifetime Achievement Awards. These were presented to Bob Lacey, formerly of the IUCN SSC CPSCG and an expert in the development of software tools such as PMx used by the global zoo community, for conservation and other work over several decades; to Laurie Bingaman Lackey, a driving force in the uptake, use and revision of software designed to assist population managers to understand and analyse animal pedigrees (SPARKS) – and a tireless authority for population managers with queries about how to gain useful outputs; and Bengt Holst, Scientific Director of Copenhagen Zoo and former Chair of the EEP Committee, who oversaw the integration of the One Plan approach thinking into the EEP structure and drove forward the project of making EEPs reflect the needs of individual species via Regional Collection Plans and Long Term Management Plans. All three are living legends in the European zoo community and it was great to see them honoured by their colleagues. Valencia BioParc's CEO Daniel Pons handed over the EAZA flag to next year's host, Joerg Junhold of Leipzig Zoo, and Chair Thomas Kauffels closed the 2019 conference. The gala dinner was held in a beachside restaurant and gave delegates the chance to listen to and watch a flamenco performance and subsequently dance the night away – with some clutching their purchases from an auction of Silent Forest themed bird paintings.

EAZA would like to thank the staff and management of BioParc Valencia, the conference organiser Pacific World, and the Municipality of Valencia for their professionalism, hospitality and warm welcome. We look forward to seeing many of you in Leipzig in 2020.

community tends to look at *ex situ* conservation as a last resort – but by the time a species reaches this point, it is often too late for *ex situ* facilities to be able to provide the level of help needed, such as in the case of vaquita (*Phocoena sinus*), where there are probably too few animals left to establish a viable breeding programme. Friederieke von Houwald (Basel Zoo, Greater one-horned rhinoceros EEP Coordinator) and Mark Pilgrim (Chester Zoo, Black rhinoceros EEP Coordinator) gave three presentations on rhino conservation and the role of *ex situ* conservation in safeguarding populations and providing animals for release. Other speakers included Achim Johann (Rheine), Matt Goetz (Jersey), Dalia Conde (Species 360), Simon Bruslund (Marlow), and Lorenzo von Fersen (Nuremberg), each outlining the tools in use that allow EAZA Members to maximise their conservation impact outside the range of the animals they protect – including chelonians, cetaceans, passeriform birds, geladas and lemurs. Session keynote Johannes Refisch from the United Nations Great Ape Survival Partnership (UN-GRASP) outlined the role of EAZA zoos in great ape conservation efforts coordinated by GRASP.

The Autumn EAZA Council meeting also took place on Friday. This meeting represents the 'mid-year meeting' of the Council. Decisions from the meeting are listed in the Noticeboard section of this issue on page 5.

Saturday's business included two plenary sessions. The first of these, chaired by Tomasz Rusek, EAZA EU Policy Manager, aimed to present the work of the National Associations Committee, and how this reflects priorities in conservation work and legislative relations. Jose Tavares, Director of the Vulture Conservation Foundation, outlined the links between the Foundation's work, zoo involvement in the restoration of wild populations in Europe and the legislative framework that EAZA and its Members can influence to assist with these projects. Patricia ter Maat of the Dutch Association NVD introduced its screening and accreditation regime, which provides guidance to its members and guarantees the standard of Dutch zoos for the public and works on a shorter cycle than the EAZA Accreditation Programme. Volker Homes, VdZ (German-speaking Association) Director and Chair of the EAZA National Associations Committee, presented an overview of VdZ's activities with particular reference to *ex situ* species conservation as a unique offering of zoos. John Pullen of BIAZA, the British and Irish Association, presented their support for research based in or run by the zoo and aquarium community in the UK and Ireland. Erich Kocner of UCSZoo in the Czech Republic and Slovakia also introduced the history and operation of the association. This was followed by a

Breaking the silence

DESPITE THE GRAVE SITUATION THAT CREATED ITS FORMATION, OPTIMISM PREVAILED AT THE FIRST MEETING OF THE IUCN SSC ASIAN SONGBIRD TRADE SPECIALIST GROUP

David Jeggo, Cologne Zoo

In March this year 50 experts in songbird conservation gathered at the Jurong Bird Park in Singapore for the first meeting of the IUCN SSC Asian Songbird Trade Specialist Group (ASTSG), a partner in EAZA's Silent Forest Campaign.

On two previous occasions, in September 2015 and February 2017, experts had gathered there for Asian Songbird Crisis Summits. These were hosted by Wildlife Reserves Singapore amid growing concerns that the capture of songbirds from the wild was imperilling the survival of a growing number of species, causing once common species, such as Black-winged Myna (*Acridotheres melanopterus*), to be brought close to extinction in the wild. In view of the gravity of the situation, one of the recommendations that came out of the first Summit was that an IUCN Specialist Group should be formed to help tackle the problem. As a result the Asian Songbird Trade Specialist Group came into being and gained official approval in May 2017. The meeting this year was to report on progress and to plan the Specialist Group's activities for the coming years.

On the first day, each of ASTSG's five sub-groups (Field Research, Genetics, Trade and Legislation, Conservation Breeding and Reintroduction, and Education and Community Engagement) gave a series of presentations illustrating their activities to date. A number featured work supported by EAZA's Silent Forest Campaign, and its Javan Green Magpie (*Cissa thalassina*) logo featured prominently. On day two the participants broke into their sub-groups and planned and prioritised activities for the coming year and beyond. The final day was devoted to the sub-groups reporting back and then drawing the priority actions into a single plan.

SPECIES OF CONCERN

The first Songbird Crisis Summit produced a list of 28 species that it considered were most at risk from the

trade in Asian songbirds, 12 of which were prioritised as being of greatest conservation concern. By this year the list of species to consider had grown to over 40, albeit in part due to some taxonomic rearrangement that split some new species. In the intervening years many had also had their Red List categorisation elevated, a process that is ongoing, with ASTSG in discussion with BirdLife International (who advise IUCN on all bird Red Listings) regarding the up-listing of several more. This illustrates the worsening situation; there is a pattern whereby markets are suddenly flooded with large numbers of a species seldom previously seen in them. As trends and fashions change, and different species are targeted, new ones are coming under threat.

ASTSG has a core group of 10 which acts as a steering committee, comprising the chair, the vice-chairs of the five sub-groups and the two co-ordinators. Prior to the main meeting they had evaluated and refined the expanded list of species of concern. The problem being faced is that there

is a growing number of species on the verge of extinction in the wild; the meeting addressed what urgent actions are required if their extermination is to be avoided. However, if the root causes are not addressed also, the list of species at risk will continue to grow. For those most threatened, as the prospect of conserving them in the wild is currently most uncertain, conservation population management programmes are being recommended as a precaution. This in itself is not a failsafe measure and these programmes will take considerable effort and resources, particularly when for species like the White-eyes and Leafbirds, the husbandry requirements to form sustainable *ex situ* populations are far from perfect. Therefore for a number of the species concerned, where conservation breeding was considered by the sub-group responsible to be a wise precaution, they advocated husbandry research as a high priority.

The meeting highlighted the concern that exists for the shamas (*Kittacincla [malabarica] melanura*) from the Barusan Islands, which lie



SCENES FROM THE ASIAN SONGBIRD SUMMIT © DAVID JEGGO



SIMON BRUSLUND

off the coast of Sumatra; due to the deep seas that separate them, they have long been isolated from the mainland. As a result, these islands are sites of unique biodiversity. An example of this can be found in the shamas that inhabit them and the case that is being made that these are distinctive enough morphologically and genetically to be regarded as full species. Perhaps because of their difference from the White-rumped shama (*Copsychus malabaricus*), of which they are currently considered a sub-species, these island shamas are particularly targeted by trappers, to the extent that they have now been almost completely extirpated. This has given rise to the 'Barusan emergency'; unless conservation population management programmes are established in the immediate future, these taxa will be lost completely. The trappers sell the birds on, and those that go on to breeders are mixed with other forms of shama, so the resulting populations quickly become of mixed origin.

This is further complicated as the Shamas from the various islands also differ and can be divided into three or four different forms. The meeting held several sessions devoted to this topic, discussing the need for action now and how best to set up the conservation population management programmes. It also reflected on the need for further fieldwork to seek out any remaining

birds in the wild. Also looking ahead, community engagement and potential pride campaigns could be set up to sensitise the local populations and to assist with the protection of birds in the wild if, in the future, the stage is reached where birds can be returned to their natural habitat.

These islands are also the home of several distinctive Hill Mynas including the Nias Hill Myna (*Gracula robusta*) the largest of all the Hill Mynas and one of the campaign's focal species. In view of their conservation needs, it is no surprise that two of the Silent Forest preselected projects are focused on activities in these islands.

TACKLING THE SUPPLY CHAIN

On the last day of the meeting a session was devoted to the topic of demand reduction, as this clearly has a role to play in finding a solution to tackling the supply end of the chain. A greater understanding of what drives the keeping of songbirds is fundamental to targeting actions that will reduce its impact and remove some of the threat it poses to species' survival. A number of research projects have been and are being conducted to find which positive measures might make a real difference to reducing this threat. Along with protecting the birds in the wild, this is clearly where the Education and Community Engagement sub-group have an important role to play.

While much of the trade is internal, particularly within Indonesia, international trade in certain species is of sufficient volume to be of conservation concern, and the Trade and Legislation sub-group recommended that greater regard to listing some of these on one or other of the CITES appendices would be helpful. No species are currently being proposed for listing, but to draw attention to the issue, it is proposed that ASTSG should hold a side event at the CITES Conference of Parties this year and it has now been agreed that this will be organised jointly with the governments of Sri Lanka and the US as a single event that would be sponsored by BirdLife, the Wildlife Conservation Society, Wildlife Reserves Singapore and TRAFFIC. This is relevant to our region, as threatened species such as Sumatran (*Garrulax bicolor*) and Collared (*Trochalopteron yersini*) Laughingthrushes are arriving in Europe, and once they are here, little can be done to control this. This is where EAZA Member institutions must act responsibly and not acquire these recent imports, for how can we encourage better protection of threatened species if our own house is not in order?

In spite of the grave and worsening situation for songbirds, the meeting was very positive and optimistic with an excellent collaborative spirit. It was good to see how prominently the Silent Forest Campaign featured and to see the strong representation from EAZA. Much needs to be done, but many actions were proposed, all of which will require funding, manpower, energy and commitment. EAZA's campaign is already assisting with the implementation of a number of these actions, and the funds pledged will enable the support of more. The Passeriformes TAG's RCP for Asian species, recently approved, is in tune with the requirements of the population management programmes and will play a vital role in these. It is important that EAZA institutions continue (and if possible increase) the support they give to in-country population management centres, fieldwork and other conservation activities for these birds. In this way Silent Forest will have the lasting legacy we hope for.

EMPEROR SCORPION OR
IMPERIAL SCORPION

Inside the workshop

THE FIRST TITAG REGIONAL COLLECTION PLAN WORKSHOP PRODUCED A CLEAR COURSE OF ACTION TO ENSURE A BETTER FUTURE FOR INVERTEBRATE SPECIES

Mark Bushell, Bristol Zoo and EAZA TITAG Chair

After much planning and preparation, the Terrestrial Invertebrate TAG (TITAG) coordinated the first Regional Collection Plan (RCP) workshop on 31 October 2018 at Chester Zoo, UK. This was the conclusion of well over a year's worth of planning and preparation by several key parties. Our aim was to define the main purpose of the TITAG and to develop a clear picture of what we felt would be the best course of action over the next few years and beyond.

To this end, we wanted to strongly encourage EAZA collections to consider invertebrate exhibits in collections, viewing them as part of the development of new exhibits rather than an add-on. We also wanted to encourage EAZA zoos and aquariums to initiate more conservation efforts, not only by joining existing programmes, but also by instigating new initiatives,

guided by the IUCN Specialist Groups, the TAG and NGOs as appropriate.

With the release of the new-format EAZA EEP in 2017, all TAGs were tasked with re-evaluating their existing programmes and developing the RCP for their taxa. As I knew this would probably be most tricky with the invertebrates, it felt as if we should be one of the first TAGs to go through the process; what better way to work out any bugs in the system?

With some two million species of invertebrate having been described and new species still being discovered, it would be an impossible task to put all of them through the current procedure for assessing species and inclusion in the TITAG RCP. Therefore, the TAG had to consider a much more pragmatic approach, including a pre-selection of species. For that reason, it was decided that we would:

- draw selected species only from a list of those being kept in EAZA and/or AZA Member institutions;
- exclude Lepidoptera (butterflies). Although butterfly walkthrough exhibits are popular within zoological collections, many of the species fit into the category of exhibit/display value and education, and as such are not specifically targeted by the TAG as species to breed. The ambition is to tackle Lepidoptera and their associated exhibits in a separate Best Practice Guideline document.
- include species that are kept at five or more collections, and which also have a population of over 50 individuals/groups/colonies;
- include species that have been assessed by the IUCN Red List of Threatened Species; and
- include any pre-existing EAZA programmes.

Even with these guidelines, we were still left with more than 200 species potentially to assess, so further cuts to the list were made. The final list of assessed species was kept as diverse as possible, to include as many examples of the various invertebrate taxa that are exhibited within EAZA collections, as well as a range of species from the easier-to-keep taxa to the more challenging. Conservation, research and educational messages also played a part in the final selection of the species for evaluation.

The workshop was held at Chester Zoo from 31 October to 1 November; at first I thought that we were being optimistic about making it through our initial list of species in two days, but thanks to some excellent discussion and debate, and our EAZA colleagues to keep us on schedule, we did it with a little time to spare. The workshop was doubly useful, in the sense that we are now familiar with the methodology of how species are assessed; coupled with the pre-collected information on the taxa that was done before the workshop, it is likely that any future RCP-based meetings will run a lot more smoothly.

From the list of species, the 'original' four EEPs – Polynesian tree snails (*Partula nodosa*), Frégate beetles (*Polposipus herculeanus*), Desertas wolf spiders (*Hogna ingens*) and the Lord Howe Island stick insect (*Dryococelus australis*) – became new-style EEPs. The one ESB (Gooty ornamental spider, *Poecilotheria metallica*) that was overseen by the TAG has also been upgraded to an EEP, and although it will now encompass the whole genus *Poecilotheria*, the focus will still remain on *P. metallica*.

As we expected, a few new EEPs were proposed as a result of the workshop, and now that the RCP has been officially approved, we can start the ball rolling on the new programmes. There's much more information within the TITAG RCP, which is now available in the TAG workspace or by contacting the TAG Chair directly, but I thought I would highlight a couple of the potential new programme species to whet people's appetites.

IMPERIAL SCORPION (*PANDINUS IMPERATOR*)

This species has been a staple of zoos and aquariums for a long time; they

are the archetypal 'big black scorpion' and are popular exhibit animals as well as being considered docile enough for supervised close encounters with the public. They used to be exported from Western Africa in huge numbers, hence why they are one of the few invertebrate species listed on the CITES Appendix II. In recent years the number legally exported has been reduced dramatically due to trade embargos, making this species quite hard to come by in the trade. They haven't been assessed for the IUCN Red List as of yet, although it is in the pipeline.

The good news is that there is currently a good population within EAZA (~300 animals) although it is starting to decline, most likely due to old animals dying; many specimens are wild-caught, and knowing their age can be difficult. Although this species can be reproduced *ex situ*, there hasn't been any real coordination of this, and breeding events have been sporadic. In order to secure a sustainable population of this charismatic, popular species, a more coordinated approach to maintaining it in human care needs to be initiated, alongside robust best practice guidelines. This species is relatively long-lived (10–15 years) and with some planning, the future population will be secure within EAZA zoos and aquariums.

SEYCHELLES GIANT MILLIPEDE (*SECHELLEPTUS SEYCHELLARUM*)

This very large, impressive millipede has been in a small number of zoo collections since 1996 where it was part

of a focus on endangered invertebrate species from Frégate island, including Frégate beetles (*Polposipus herculeanus*) and Enid snails (*Pachnodus fregatensis*). They are classed as Vulnerable by the IUCN Red List due to habitat loss caused by invasive flora, predation by invasive mammals and droughts that are affecting the area.

Although perhaps the African millipedes have been more popular as exhibit species, the Seychelles giant millipede easily equals them in size; in addition they have a more engaging story from a conservation education point of view, as regards the challenges faced by island species. There is also the possibility that in the future there may be a need for animals kept in human care to supplement wild populations. At present there is a very healthy population being kept in EAZA collections, but at very few institutions; in order to have a more stable *ex situ* population, we need to have large populations held by more collections, and for some management to be in place to ensure they are all kept at viable numbers.

As a final note, many, many thanks go to Gerardo Garcia and the team for their hospitality and help in organising the workshop alongside David, William and Elmar from the EAZA office, to the participants in the workshop for their incredible enthusiasm and assistance in getting to this point, and to Chester Zoo for hosting this pivotal meeting. Here's to the next one, which we hope will be soon!



SEYCHELLES GIANT MILLIPEDE
(*SECHELLEPTUS SEYCHELLARUM*)

Restoring reputations

THE HYENA HAS LONG SUFFERED FROM A BAD PRESS, BUT TWO NEW EEPS HOPE TO IMPROVE ITS FORTUNES – AND ITS PUBLIC IMAGE

Raymond van der Meer, EAZA Population Management Centre Manager and Frederic Houssaye, Assistant Curator CERZA, Coordinator, Striped hyena EEP



SPOTTED HYENA (*CROCUTA CROCUTA*)
©COLCHESTER ZOO

'What an ugly and mean beast!' This is the sort of thing our visitors tend to say when they see a Spotted hyena (*Crocota crocuta*). And while many visitors are not familiar with striped hyenas (*Hyaena hyaena*) they might come to the same conclusion. Unfortunately, the poor image of hyenas is not limited only to zoo visitors; it is also a threat to hyenas in their local habitat. Deliberate and incidental killing of hyenas, especially by poisoning, is happening on a broad scale, and results, amongst other things, in local extinctions and a general decline throughout the range countries for Striped hyenas and a decline outside protected areas for Spotted hyena.

The challenges that hyenas face were discussed in the recent Regional Collection Planning workshop for Canids and Hyaenids (2017) and resulted in the decision to establish EEPs for both species. Both species, already managed as ESBs under the old population management structure, now have clearly defined roles that will help to guide the Long Term Management Planning (LTMP) process. Education inside and outside the range countries and fundraising are tasks identified for spotted and striped hyenas, while

research into taxonomy and general biology are additional tasks for the striped hyena.

With a new coordinator in place for the spotted hyena (Bas Aalders, Amersfoort Zoo) and a striped hyena population with some challenges, the Canid and Hyaenid TAG prioritised these two species for a LTMP. In December 2018 a group of people including the coordinators and species committee members gathered together in Amsterdam to discuss challenges, work on a strategy and agree actions for both hyena species.

CHALLENGES FOR THE SPOTTED HYENA

The spotted hyena population is demographically quite robust and grew in numbers between 2002 and 2016. In more recent years, growth has stabilised and the population seems to have reached its carrying capacity. Spotted hyena live in fission-fusion societies and intrasexual aggression over food resources is observed in both males and females. Aggression is a common behaviour observed in wild groups of hyenas and is also seen in zoo-resident groups. Following natural patterns, in the wild, young male hyenas that reach the reproductive age will migrate out of the native group and join a male bachelor group at the bottom of the hierarchy. In a zoo situation the period before migration out of the group could lead to tensions between the growing young males and their sire, resulting in increased bouts of aggression.

The carrying capacity in the EEP is therefore mostly driven by limited space for males, and the coordinator is facing a challenge in the housing of males.

Tension in zoo-living groups and the timing of the aggressive behaviour towards other males in the group can be managed to some degree, and it was concluded during the LTMP meeting that there is no single solution

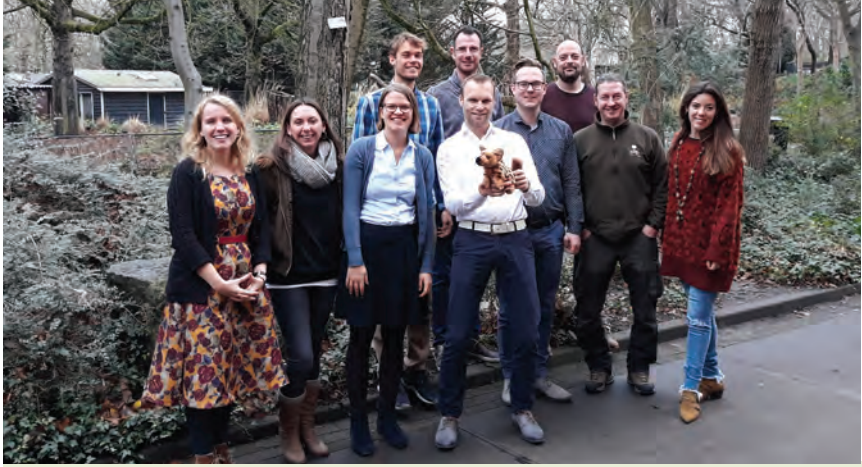


STRIPED HYENA (*HYAENA HYAENA*)
© MARTINE THIERRY

to the male problem. Therefore an overall strategy was discussed, which considered several actions that might be effective. Holding bachelor groups and developing strategies to keep young males longer in the group were both discussed, along with other tools such as breed and cull. While developing the different strategies in more detail, the EEP coordinator is already looking for zoos that would like to help by keeping male groups, to allow the EEP to mimic more closely the natural situation in the wild.

There are zoos interested in joining the EEP, and in addition there are managed populations in other regions (AZA, ZAA and JAZA) that are not sustainable now, and animals from the EAZA population could help to support their demographic goals. Considering these dynamics in the EEP population, the demographic goals were discussed. To maintain the population size, 10-12 births are needed in the coming years. The coordinator will aim for this number, but will allow more breeding if the carrying capacity can be stretched by more zoos keeping spotted hyena, or when opportunities arise to transfer animals to other regions with managed populations.

The genetic diversity of the spotted hyena population is healthy at the moment, and although gene diversity will reduce over the years, the population will continue to have more than 90 per cent gene diversity over the coming 33 years. For a non-threatened species that has no insurance role, this should buy enough time to work towards fulfilling the education role. However, to limit the loss of gene diversity, the EEP coordinator will issue breeding recommendations that should be followed by the holders.



NOTES FROM THE STRIPED HYENA EEP COORDINATOR

The different Skype meetings and the intensive work done by the EAZA Population Management Centre made the LTMP process very easy! The LTMP gave a clear view of what needed to be achieved, so gave a real boost to the newly established Striped hyena EEP. Thus, different tasks have been identified for the coordinator and holders as a strategy for the species: improving existing enclosures, educating visitors in range and out of range and working more closely with the IUCN Hyaenid Specialist Group on delivering suitable education and research.

It is important that holders keep striped hyenas in natural enclosures that fulfil the animals' needs. It is vital also to help visitors to have a better perception of the species. The striped hyenas, just like the spotted hyenas, suffer too much from a bad reputation! The education of visitors (in range and out of range) is a very important role for the EEP.

By keeping animals in appropriate enclosures and in an appropriate social structure, mimicking the natural situation, holders will be better able to increase their animals' population. The Best Practice Guidelines, which are in progress, are designed to help holders in that task. Regarding the LTMP, 10 births are needed to maintain a viable demographic population. Considering the limited successes in this area, it means that all holders with a pair are allowed to breed.

Striped hyena taxonomy is currently under debate and the IUCN Hyaenid SG does not officially recognise the five subspecies that are described at the moment. Following the LTMP, a discussion has now started with both the IUCN Hyaenid SG and the Leibniz Institute for Zoo and Wildlife Research (IZW) to start a partnership and collect samples from wild animals. Working together with these partners, the aim is to collect representative samples that cover the whole distribution area of the species. This taxonomic study will eventually support the long-term conservation strategy for striped hyenas in their local habitat and will also allow the *ex situ* population management programme to use its resources effectively by focusing on some subspecies or subpopulations.

An additional benefit for partnering with the IUCN Hyaenid SG are the collaborative attempts to improve the poor image of hyenas across its range. The EEP or individual zoos can specifically help with this by sharing information and education materials and can create links or use existing links to discuss other ways to support in-range zoos or care centres. Since the LTMP, the coordinator re-established contacts to specialist care centres in Jordan, Djibouti, United Arab Emirates and Lebanon to discuss future support.

The LTMP process was very helpful in drawing up a better management strategy for the Striped hyena EEP and will also help with fulfilling the roles identified in the RCP. Integrating our work and strengthening our cooperation with partners such as the IUCN Hyaenid SG is crucial for reaching the long-term conservation goals.

The Canid and Hyaenid TAG is proud to have both hyena EEPs being among the first EEPs within EAZA to be set up in accordance with the new EAZA Population Management structure (RCP and LTMP produced). With the RCP providing clear ideas on conservation and non-conservation roles for both species, the outcome of the LTMP helps both programmes in identifying concrete actions to put all roles into practice.

Population Management Tutorial

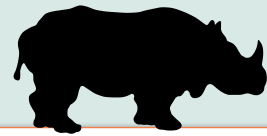
THIS STEP-BY-STEP GUIDE IS DESIGNED TO HELP EEP COORDINATORS STAY ON TRACK

The Population Management Tutorial is a tool designed to make your life as an EEP coordinator easier when you are working with PMx. It complements both the Intro to EEP management course and the Advanced Population Management course. It works as a reminder, prompting you to work through the process systematically every time you develop breeding and transfer recommendations, and so can save you a lot of time. So far, it includes guidelines for all the topics shown below. The link can be found at www.eaza.net/conservation/programmes/#PMT



SETTING YOUR FILTERS

There is a different tutorial for each step in the process, starting with setting the right filters when exporting to PMx.



Also for technical processes as knowing how to create a PMx project, it can be helpful to have a reminder.

EXPORTING FROM ZIMS TO PMx

TARGET POPULATION SIZE

Do you know the size of population that you want and have space for?



BIRTHS/HATCHES NEEDED

Are you using the right settings when calculating the number of births you need this year?

DEALING WITH UNKNOWN ANCESTRY

Some populations have unknown ancestry, so what is your strategy to deal with this within genetic management?

EXCLUDING INDIVIDUALS FROM GENETIC ANALYSIS

Some of the individuals in your population need to be excluded before running any genetic analysis. See here why and how to do this.

BREEDING AND TRANSFER RECOMMENDATIONS

Every population is different. Two modules give tailor-made guidelines for the different breeding systems.

ONE MALE BREEDS WITH ONE FEMALE

ONE MALE BREEDS WITH MULTIPLE FEMALES

MORE TO COME...

Do you have any feedback or suggestions for further topics?
Please contact the EAZA PMC Team (nora.hausen@eaza.net)

Funding for progress

EUROPEAN FUNDS ARE THE CATALYST THAT IS NEEDED FOR PROJECTS TO MEET THE SDG TARGETS

Dalila Frasson, EAZA Funding Coordinator

Conservation of biodiversity and natural resources is one of the most pressing problems of our time. The 2030 Agenda for Sustainable Development has at its heart the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries in a global partnership. Accredited zoos and aquariums and their unifying association, EAZA, have many opportunities to contribute to the achievement of these SDGs and be part of combined collaborative solutions.

At first glance, EU funds seem to provide specific opportunities for zoos and aquariums to reach the SDG 13 (climate action), the SDG 14 (life below water) and the SDG 15 (life on land), but what about the SDG 17 (partnerships for the goals)? Here's a flavour of how EU funds guarantee our commitment to these four SDGs.



LIFE Tritó Montseny (2016-2020): linked to SDG 13, 14 and 17

This project, run by Barcelona Zoo and the regional administration, is working to improve the conservation status of the endemic Montseny brook newt (*Calotriton arnoldi*) by carrying out a population management programme and by reversing the threats to its habitat.

The Montseny brook newt is a critically endangered species. Fewer than 1,500 adults populate an area of only 8km² in the Iberian Peninsula, and numbers continue to decrease. Since the Montseny brook newt is exclusively water-based, managing water levels is key to habitat improvements. Connecting water bodies and maintaining river banks is crucial. LIFE Tritó Montseny has benefited from the experience of other LIFE projects working on hydrology and conservation actions, including Catalunya PirosoLIFE, LimnoPirineus, which are both active in the Pyrenees, and the Finnish project Hydrology LIFE.



WildForestReindeerLIFE (2016–2023): linked to SDG 13, 15 and 17

This is a population management and conservation project, with the central aim of reintroducing wild forest reindeer (*Rangifer tarandus fennicus*) to their native habitat in southern Suomenselkä, Finland.

The major threats to the sub-species are excessive mortality caused by large carnivores and traffic, and the potential genetic dangers of inbreeding. The project is coordinated by Wildlife Service Finland with nine partner organisations, including the Ministry of Agriculture and Forestry, the Ministry of the Environment, and the Finnish Hunters' Association.



Corncrake Conservation: linked to SDG 13, 15 and 17

A third example of partnerships for the goals is the project for Corncrake (*Crex crex*) conservation in the Czech Republic. Since 2010, Plzen Zoo and

its partners have launched a joint Czech–German research project, with financial support from the European Regional Development Fund, to study the little-known biological aspects of these birds, as well as quantitatively monitor the population with satellite telemetry.

Corncrakes are largely dependent on appropriately managed grasslands. Under these circumstances, the species is fragile as it is unable to withstand the rapid and widespread changes in farming systems that have commonly occurred in recent times. Collaboration with farmers to find new areas of management is of paramount importance for this species.

Crucial partnerships

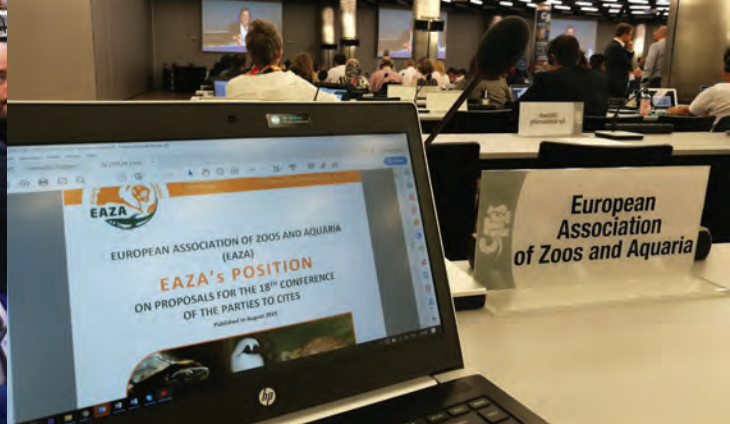
These few examples show how EU funding and concern for the well-being of wildlife populations spans generational lines, political affiliation and geographic regions.

By serving as trusted and inclusive facilitators, guided by principles of scientific objectivity and political neutrality, EAZA and its Members perform an invaluable service to society at this critical time. These partnerships show and support our commitment to the main EU target of 'halting the loss of biodiversity and the degradation of ecosystem services' by 2020, which remains a serious challenge for all of us.

EAZA encourages its Members to make use of these funding opportunities to further maximise their conservation actions towards achieving the SDGs. The Executive Office regularly shares details of funding opportunities via the EAZA eNews and is on hand to provide support and guidance to Members with applications.



EAZA is supported in this work by the European Union LIFE NGO funding programme. The European Union is not responsible for the views displayed in publications and/or in conjunction with the activities for which the grant is used.



Danny de Man, EAZA Deputy Director, Tomasz Rusek, EAZA EU Policy Manager and David Williams-Mitchell, EAZA Director of Communications and Membership

In at the deep end

FOR THE FIRST TIME, EAZA SENT A TEAM TO THE CITES CONFERENCE OF THE PARTIES, TO ENSURE THAT THE ASSOCIATION PLAYS ITS PART IN THIS VITAL DECISION-MAKING PROCESS

In August this year, EAZA Deputy Director Danny de Man and Tomasz Rusek, EAZA's EU Policy Manager attended the CITES Conference of the Parties (CoP). Danny has attended meetings of the Animals Committee and Standing Committee of CITES (the Convention on the International Trade in Endangered Species) over the last couple of years, so this year it was decided that he and Tomasz would also represent EAZA at the CoP, the decision-making forum of the Convention.

One of the objectives of the team in attending the CoP was to 'demonstrate that we have a wide variety of (*ex situ*) expertise on a broad range of taxa and...to present the Association as a stakeholder that trades (import/export) CITES-listed species as well as a conservation partner involved in combating illegal wildlife trade.' To meet this requirement, EAZA produced a Position Document responding to each of the 57 species listing proposals advanced for decisions and providing a voting recommendation

to the Parties. This was developed by the Executive Office with input and approval from the relevant TAG Chairs and Vice Chairs, and with the CITES Sub-group, made up of the Chairs of the Conservation, EEP, National Associations and Executive Committees of EAZA. The main outcomes of the CoP can be summarised as follows:

Side-event: Zoos and Aquariums – Partnering for Conservation of CITES-listed Species: In cooperation with WAZA, AZA, San Diego Zoo Global (SDZG), Wildlife Conservation Society (WCS) and the Zoological Society of London (ZSL), EAZA organised a very successful and well-attended side-event on 18 August, on the work of the professional zoo and aquarium community for CITES-listed species. Sponsorship for part of the event came from EAZA Corporate Member St Laurent.

Songbirds: EAZA, on behalf of the zoo and aquarium organisations

present, developed an intervention on songbirds. As there was a risk that this important topic would be deprioritised by the parties due to the scale of the problem and lack of focus in the document, we highlighted the importance of the matter, pushed for a more focused and concrete mandate and proposed the set-up of an in-session working group to define this mandate during CoP18. EAZA coordinated with BirdLife International, IUCN and TRAFFIC and together we succeeded in setting up a working group, which will aim to provide clear proposals for discussion at the next CoP. The US and Sri Lankan governments organised also a side event on songbirds, in cooperation with TRAFFIC, Birdlife and the IUCN SSC Asian Songbird Trade Specialist Group (chaired by Cologne Zoo), which strongly promoted our Silent Forest Campaign.

Captive-bred and Ranched Specimens and Purpose Codes: The documents on 'captive bred and ranched specimens' and 'purpose codes' were of high importance for EAZA and the wider zoo community, and the CoP recommended more work be done on these issues via working groups that EAZA has joined.

Disposal of Confiscated Specimens: With opinions widely divergent on

the role of zoos in the housing of confiscated animals, EAZA joined a working group that aims to hammer out a mandate for confiscation procedures that reflect the needs of relevant authorities and make use of the expertise of zoos and aquariums – this in the face of intensive lobbying by Animal Rights groups opposed to zoos and unwilling to consider culling as a management option. During some of the side-events EAZA discussed the new IUCN Guidelines on Placement of Confiscated Specimens with representatives of IFAW, Born Free Foundation, IUCN and others, emphasising that there are opportunities for EAZA and EAZA Members to help support range states with developing national action plans on how to deal with confiscated specimens and share expertise in ensuring an infrastructure for immediate (24–48 hour) care for animals that are confiscated.

Helmeted hornbills: EAZA joined an intervention by WCS calling for a stronger mandate to combat the trade in casques and protect the species. The Asian Species Action Partnership (ASAP, which EAZA helped to set up and still supports) and our EAZA Associate Member Wildlife Reserves Singapore are very involved in this issue and EAZA agreed to partner on this intervention. The intervention resulted in a working group that helped to define a stronger mandate for combating the trade.

Appropriate and Acceptable Destinations: The documents under point 44 on Appropriate and Acceptable Destinations were of key importance for EAZA. There were two documents under Agenda item 44: doc 44.1 and doc 44.2, both related to species that have a split-listing (so they are CITES I listed in general but have a CITES II listing in a selected number of countries with a so-called Annotation). African elephants and southern white rhinoceros are CITES II in some Southern African range state (each with their own Annotations) allowing them a certain amount of trade in ivory, horns and live specimens.

44.1: As part of a working group under the Animals Committee

and Standing Committee, EAZA contributed to the development of ‘non-binding guidance for determining whether a proposed recipient of a living specimen is suitably equipped to house and care for it’. EAZA supported the adoption of these guidelines. We also offered help with the proposed ‘species-specific guidelines for African elephants and southern white rhinos’ and with ‘developing non-binding guidance on how to determine whether the trade would promote *in situ* conservation’ as proposed to be developed until CoP19 in 2022. The proposals in this document were approved by consensus by the CITES Parties.

44.2: This document was submitted by Burkina Faso, Jordan, Lebanon, Liberia, Niger, Nigeria, Sudan and Syria and essentially proposed that African elephants cannot be housed appropriately and acceptably in human care and that African elephant conservation can only be done in range states. This document was premature (given 44.1), worded vaguely, and on a number of key points went against the aims of the Convention. The proposal also made the CITES II listing criteria stronger than those for CITES I and, given that all international rules-based systems are fragile, EAZA was concerned that the proposal would unbalance CITES with very damaging consequences. The expectation was that the majority of parties would vote against the proposal, but as the voting took place in the first days of the CoP and due to an issue with accreditation of many of the Parties, including the EU, a large number of votes were excluded and the motion passed. With votes ratified in plenary at the end of the CoP, there was an opportunity to overturn the decision, and so the zoo and aquarium delegation, along with Animal Rights organisations, started to lobby strongly for our respective views. The Animal Rights groups immediately mobilised their networks to run a strong media and celebrity campaign, presenting the initial decision as an ‘historic win that will avoid hundreds of baby elephants going to China’ and to lobby the EU all the way up to the Environment Commissioner Vella and Commission President Juncker.

Together, the zoo and aquarium organisations developed a joint position highlighting the legal flaws of the decision. EAZA submitted data and positions that underlined that the Association does not have plans to import live wild-caught African elephants and has not done so in over a decade. It also emphasised the importance of professional *ex situ* conservation programmes, including social group management, and their contribution to species conservation. This work contributed to the compromise that was approved during the plenary session. While the compromise does not address fully the concerns EAZA had about this issue, the result is certainly less damaging for the CITES framework and the principle that zoos are capable of caring for elephants than the adoption of the original wording would have been. We believe our lobbying efforts were very successful, despite the media attention. This was in part due to the hard work with and by the EU delegation at the CoP but also due to the cooperation of the National Associations Committee and Council Members and the management of communications with the EEO team in Amsterdam.

Species Listing proposals: EAZA joined interventions in support of the proposals to list the smooth-coated and small-clawed otters (provided by Human Society Philippines) and pancake tortoise (by WCS) and these three listings were approved. Overall, 89 per cent of the listing proposals were aligned with the recommendations of our TAGs, which we believe to be a good result.

One lesson from CoP18 is that there is a worrying number of parties that are supporting an emotionally driven agenda that threatens the science-based focus of CITES on sustainable and regulated trade – an approach that will punish countries that are successful in conservation management.

All told, the Conference of the Parties provided an interesting introduction to the highly political and controversial world of CITES CoPs, and EAZA intends to continue to contribute to this vital international framework.

On the road to Marseille

PREPARATIONS ARE UNDERWAY FOR THE 2020 IUCN WORLD CONSERVATION CONGRESS – AND THERE'S PLENTY OF TIME TO GET INVOLVED

Myfanwy Griffith, EAZA Executive Director

The IUCN World Conservation Congress (WCC) is the world's largest recurring conservation event. It takes place every four years and brings together the expertise and influence of IUCN Members, including heads of state, high-level government officials, top CEOs and business leaders, representatives from leading civil society organisations, scientists, educators and other conservation leaders, to address the most pressing issues of the day. The next WCC will take place from 11-19 June 2020 in Marseille. It will consist of three parts: a marketplace of ideas called the Forum, an exhibition showcasing conservation initiatives from across the world and a voting session for IUCN Members called the Members' Assembly. The Forum and exhibition are open to everyone and are a great place to learn, network and influence others.

Preparations for the WCC start a year in advance with a series of Regional Forums. These events provide an opportunity to share ideas and connect with Members who may be interested in developing activities and Motions for the WCC. Staff from the Executive Office and some joint EAZA/IUCN Members attended the Europe, North and Central Asia Regional Forum that took place in Rotterdam, the Netherlands, from 1-3 July 2019. During the Forum, EAZA ran a Knowledge Café titled 'How can zoos and aquariums contribute (more) to collaborative conservation impacts?' This workshop provided a great opportunity to showcase the conservation work of EAZA and our Members as well as gain insights from other organisations about their views on zoos and aquariums and potential conservation collaborations. High-level topics discussed during the Forum included Post-2020 Biodiversity Framework, Development of Natural Capital and Nature-based Solutions, and Strengthening Nature to Tackle Climate Change. In addition there were specific topics such as: How to Save the Eel for



Europe?, Synthetic Biology: why and how is it relevant to conservation?, and Removing Barriers to Family Planning.

The Regional Forum also provided an opportunity to feed into the IUCN Regional workplan for 2021-2024. This workplan will have four Programme Areas:

1. Healthy Lands and Waters
2. Healthy Oceans
3. Climate Change Mitigation and Adaptation
4. Equitable Governance of Natural Resources

It is important to be aware of activities under each programme area so that we can maximise any opportunities for alignment and joint working within the EAZA Strategy 2021-2025. The last part of the meeting focused on IUCN procedural matters such as governance reforms, the process for nominating candidates from our region for the IUCN Council, and an introduction to the Motions Process required for the WCC.

Over the summer, the Executive Office worked with the Conservation Committee and many Members to propose and/or support two campus sessions and three speaker pitches to take place during the Forum part of the WCC. The aim of these activities is to showcase to the 10,000 or more anticipated attendees the diversity and scientific expertise of our conservation activities.

EAZA was also the lead sponsor on two proposed motions (respectively linked to our Position Statements on songbird trafficking and Law Enforcement regarding Trade in Tigers

and Tiger Parts). Motions can address any matter of importance related to IUCN's objectives and are an important part in developing IUCN's Mission and the global conservation agenda.

I would like to take this opportunity to thank the joint EAZA/IUCN Members and other partners such as WAZA, AZA, TRAFFIC, Birdlife International, IUCN Asian songbird trade specialist group and the IUAC Asian Species Action Partnership who agreed to co-sponsor or support our proposed motions. In addition, EAZA agreed to co-sponsor five motions put forward by other IUCN Members on topics from behaviour change and linking *in situ* and *ex situ* efforts to imported deforestation. Many of these were developed by EAZA/IUCN Members and it is great to see our community taking the lead in this way. We will know in October whether the campus sessions, speaker pitches and proposed motions have been accepted.

Overall, EAZA and our Members have made a great start in demonstrating our 'conservation credentials' as part of the activities in the lead-up to the WCC. We will provide further updates on progress and opportunities towards the end of 2019 and into 2020. As mentioned at the start of this article, the Forum is open to everyone and is a great place to learn, network and influence others. Registrations open soon and you can find out more about the WCC at: <https://www.iucncongress2020.org/>. We look forward to seeing many of you there!

A Swedish success

THE 2019 ZOO AND WILDLIFE HEALTH CONFERENCE HELD AT KOLMÅRDEN WILDLIFE PARK CREATED A FORUM FOR COLLABORATION FOR ZOO VETS FROM AROUND THE WORLD

Allan Muir, EAZA EU Policy Coordinator

Marked in the calendars of zoo veterinarians across the globe, the annual Zoo and Wildlife Health Conference is an opportunity for hearing the latest developments and research in the ever-advancing field of wildlife medicine, establishing new contacts and, of course, catching up with old friends. The 2019 edition of this annual affair was jointly organised by Leibniz-IZW, EAZWV (European Association of Zoo and Wildlife Veterinarians) and ECZM (European College of Zoological Medicine) in conjunction with our hosts at Kolmården Wildlife Park, Sweden.

Over four packed days, more than 300 delegates from 35 countries were treated to the delights of Swedish hospitality (saunas included!), while enjoying the true splendour of the Vildmarkshotellet venue's stunning coastal location.

The pre-conference workshops offered participants the chance to advance their understanding and practical skills in the areas including anaesthesia, zoo animal pathology, dentistry and cetacean medicine.

The conference's Scientific Programme provided fantastic updates and insights, with a smörgåsbord of talks provided by veterinarians working with both *ex situ* and free-living wildlife populations. Talks were grouped by topic and covered reproductive medicine, diagnostics, therapeutics and more. It has always been clear to me how zoo clinicians are perfectly placed to contribute to *in situ* wildlife health projects; talks by Benoît Quintard (Mulhouse) on the veterinary considerations of a European pond turtle (*Emys orbicularis*) reintroduction, and by Nic Masters (ZSL) on new methods in the diagnosis of tuberculosis in Asian lions (*Panthera leo persica*) only reinforced this opinion.

It is important to remember the longstanding partnership between EAZA and EAZWV, whose relationship is formalised through a Memorandum of Understanding (MoU). This



MoU, in short, aims to strengthen the actions of both organisations through collaboration on initiatives and lobbying actions concerning zoo animal population health, welfare and husbandry. Given that this MoU is due for renewal this year, the conference provided the perfect opportunity to review the successes and future direction of the joint work undertaken in this collaboration. Nowhere is this fruitful cooperation more evident than in the work of the four EAZA/EAZWV joint subgroups, which cover legislation, vet advisors, biological resources and data sharing.

Updates on the work of the subgroups were provided to the conference audience during the open mid-year EAZA Veterinary Committee meeting. Arne Lawrenz (Wuppertal) – chair of the EAZA Veterinary Committee, legislation and vet advisor subgroups – and I gave an update on the work being undertaken by the subgroups and the EAZA Brussels office with regards to the formation of the new EU Animal Health Law, which will repeal the Balai Directive (92/65/EEC). A new contact list of aquarium vets was also established to help in this regard. Interested clinicians are encouraged to sign up to the legislation and vet advisor subgroups (please contact my EEO colleague and Vet Committee liaison Katharina Hermann for vet advisor sign-up).

Arne also provided an update on the biological resources and data-sharing group, in the absence of the Chair, Baptiste Mulot (Beauval), whose work interlinks with the new EAZA Biobank. Finally, Alexis Lécuyer (Paris), Chair of the infectious diseases subgroup, gave

updates on the new edition of the Transmissible Diseases Handbook, EAZA Tuberculosis Management Strategy and newly emerging infectious diseases.

Away from the meetings, workshops, round tables and talks, the social programme did not disappoint! A tour of the facilities was the perfect chance to explore Kolmården, with backstage insights provided by the attentive staff. The beautifully landscaped and expansive Amur tiger (*Panthera tigris altaica*) exhibit was breathtaking, as too were the chimpanzees (*Pan troglodytes*). Only the bravest (or most foolhardy?) delegates faced the twists, turns and loop-the-loops of the infamous 'Wildfire' wooden rollercoaster. The pasta and poster night, which is fast becoming an annual tradition, allowed delegates to discuss research findings with the researchers over a bowl of penne and a drink, and the air was filled with laughter and conversation as we dined at the zoo's hilltop restaurant overlooking the tranquil bay below.

Huge congratulations are due to the organising committee, which comprised IZW, EAZWV and ECZM; the logistics of putting on such an event are not to be underestimated. Thanks must go also to the Scientific Committee for a fascinating array of talks and posters, and special praise is due to Torsten Möller and the team at Kolmården for making us feel so welcome!

We now look forward to the 2020 EAZWV conference hosted by Emmen Wildlands in the Netherlands. Keep an eye on the EAZWV website (<https://www.eazwv.org/>) for upcoming information and dates.

The bigger picture

THE EAZA CONSERVATION DATABASE HAS PROVED ESSENTIAL FOR DEMONSTRATING OUR MEMBERS' CONTRIBUTION TO CONSERVATION WORLDWIDE

Dalila Frasson, EAZA Funding Coordinator and Merel Zimmermann, EAZA Coordinator Animal Programmes and Conservation

Since the EAZA Conservation Database (ECD) was re-launched in 2014, it has provided useful information for advocacy, promotion and analysing our communities' contributions to conservation.

But why is it so important to get a clear insight into what our community is doing for conservation?

According to the EU Zoos Directive, which forms the basis for national zoo legislation in EU Member States, zoos

and aquariums have an important role in biodiversity conservation that needs to be strengthened. The ECD is the tool for demonstrating our conservation efforts as a community and providing detailed background on where these efforts are focused. The ECD has proven essential for being able to actively represent EAZA and its Members' interests during influential external events such as EU elections, the CITES Animal Committee and Convention of

Parties (CoP) of CITES.

Within the 2018 EAZA Manifesto – one of the publications that is used to communicate with MEPs during and after EU elections – we can now refer to a clear overview of the annual contributions to conservation made by our Members and where and what they are supporting, showing that EAZA Member zoos and aquariums play a significant role in the conservation of species.

PROJECTS
 supported by highest number of EAZA Members

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| <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-left: 10px;"> <p>AEACL Association Européenne pour l'Etude et la Conservation des Lemuriens</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-left: 10px;"> <p>Wae Wuul nature reserve, West Flores Community awareness, habitat and wildlife protection plan</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-left: 10px;"> <p>White-footed tamarin International conservation programme</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-left: 10px;"> <p>Okapi Conservation Project Epulu Centre</p> </div> </div> <div style="display: flex; align-items: center;"> <div style="margin-left: 10px;"> <p>Red Panda Conservation Red Panda Network/ Forest Guardians</p> </div> </div> | <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-left: 10px;"> <p>IUCN SSC SWG Saola Working Group</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-left: 10px;"> <p>SRI Save the Rhino International</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-left: 10px;"> <p>WAPCA West African Primate Conservation Action</p> </div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-left: 10px;"> <p>WildCats Conservation Alliance Wild Amur tiger & leopard conservation</p> </div> </div> <div style="display: flex; align-items: center;"> <div style="margin-left: 10px;"> <p>CPSG IUCN SSC Conservation Planning Specialist Group</p> </div> </div> |
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SPECIES
 supported by highest number of EAZA Members

| | | |
|-----------------------------|-------------------|------------------------|
| <p>Chimpanzee</p> | <p>Giraffe</p> | <p>Orangutan</p> |
| <p>African penguin</p> | <p>Tiger</p> | <p>Komodo dragon</p> |
| <p>Okapi</p> | <p>Red panda</p> | <p>Snow leopard</p> |
| <p>White-footed tamarin</p> | <p>Amur tiger</p> | <p>African penguin</p> |

For the 18th CoP of CITES it was possible to build EAZA's Position on Proposals (August 2019) with background information from the ECD on, for instance, increasing efforts towards elephant conservation, hereby strengthening our position on Proposal 44.2 on international trade in live African elephants.

Closer to home, since 2015 the ECD Snapshots have publically highlighted conservation projects and the EAZA Members supporting them. On a monthly basis the Snapshots are published in eNews, on our public website and on Facebook. Each post reaches on average 6,000 people, which makes the ECD a good promotional tool.

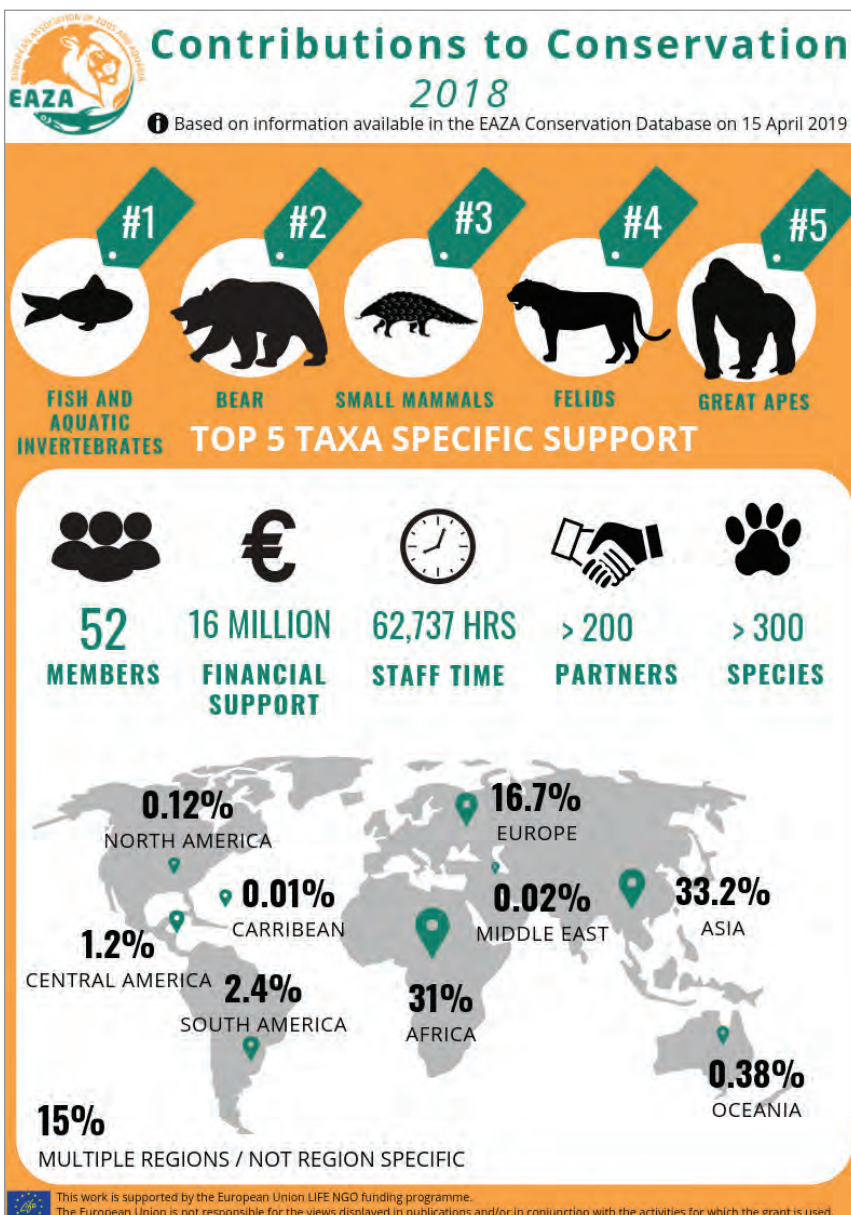
Snapshots that received good traction in the past year were focused on Corncrake conservation in the Czech Republic, Western Derby eland conservation in Senegal, a LIFE project on the Montseny brook newt and the collaboration with local independent nature-protecting associations for local biodiversity conservation in Sigean. All of these projects, as well as a total overview of projects supported throughout the previous year, are always included in the EAZA Annual Report.

POPULARITY CONTEST

General figures on financial support are available in the EAZA Annual Report 2018 and report on activities carried out in 2018, supporting more than 300 species across the world, adding up to €6 million and almost 63,000 staff hours (see illustration, right).

But what have been the most popular projects and species to support in the last couple of years? The illustration (top left) shows that supporting mammal conservation projects receives support from many of our Members. The majority of these projects have clear support or even direct involvement of their respective Taxon Advisory Groups or EAZA Ex situ Programmes. A clear commitment for many EAZA Members is to support the work of the IUCN SSC Conservation Planning Specialist Group – which is maybe less sexy to talk about, but highly relevant for furthering *ex situ* conservation work as a whole.

When looking purely at which species the highest number of EAZA Members are supporting (see



illustration, bottom left), there is some overlap, as some species are linked to the projects supported by most EAZA Members. However, there are also some additional species, like chimpanzees, orangutan, African penguins and giraffes, that are supported by a high number of EAZA Members. These species are supported through several different or separate projects or activities instead of one overarching project or NGO. It may be interesting for the EAZA community to explore whether there is a need for more focus from our side to have more impact, or if the support is actually covering different aspects of conservation of the species and is therefore reaching the same goal.

THE FUTURE OF THE DATABASE

The focus has been on getting Members to provide data, but in the meantime,

information is used and presented in EAZA reports and communications, much as it is presented here. This will continue, but it is also time to let the public have a closer look. Currently an interactive World Map is being developed for the EAZA public website, to allow the public to see what specific EAZA Members are doing for conservation. We would also like to make it possible to link directly with conservation projects that are in need of support. Stay tuned!

Next summer, the IUCN World Conservation Congress will take place in Marseille in France and EAZA will be representing *ex situ* conservation and using your data. There is strength in numbers, so make sure you are represented as an EAZA Member by adding your contributions to conservation in the EAZA Conservation Database!

Bear necessities

WHEN IT COMES TO POLAR BEARS, IT PAYS TO THINK LARGE, WILD AND SIMPLE!

Dorothee Ordonneau, vet and curator, CERZA Lisieux Zoo

In 2016, in the context of global warming, it became clear to CERZA Lisieux Zoo, France that the polar bear would be the perfect ambassador to spread awareness about the real and pressing threat of climate change.

To achieve this, the current enclosure for Arctic wolves (*Canis lupus tundrarum*), formerly a large and hilly bison's pasture, was completely transformed to welcome polar bears (*Ursus maritimus*) and Arctic foxes (*Vulpes lagopus*).

Like all the CERZA's exhibits, we knew that the future polar bears' enclosure would have to be large and wild. After a tour of the Netherlands and the UK and a number of polar bear workshops and meetings, plans were submitted to the EEP coordinator and his husbandry advisory group. The building work began in summer 2017, and in March 2018, two young female polar bears were introduced to their new enclosure.

MEETING THEIR NEEDS

Our polar bear area is arranged in three parts: two main enclosures of 1ha each, and a third one, backstage, of 2000m². These are all connected to each other with gates, corridors or through the main building, to allow plenty of flexibility.

The old bison's pasture has been completely remodelled to incorporate many natural features, in order to create as many enrichment opportunities as possible. Two large ponds 3m deep have been dug, close to the visitor area, but with no underwater vision. While one remains natural, surrounded by large and strong slate blocks, the second one has been concreted to receive water from a long waterfall. Wooded areas planted with spruce, pine, birch and willow also feature large trunks, rocks and four shaded shelters, and a nice diversity of substrates on the ground – grass, bark, large rocks, gravel and sand – have been also added. In addition, many

of the rocks and trunks are equipped with hooks to allow anything necessary to be hung in the enclosure. Finally, 80 per cent of the polar bear area is covered by an amazing prairie flora that we allow to grow wild, for several reasons: it helps to increase humidity and decrease the temperature around the bears, it creates many opportunities for us to hide enrichments and food, and it improves the local biodiversity.

The main polar bears' house is divided into four boxes with concrete floors, and two larger holding pens, which have wood bark on the ground. For loading and unloading, a crate can easily be brought into the keeper area and connected to a trap door.

The smaller and quite well isolated third enclosure is specifically for maternity purposes, and is equipped with a small building sheltering a den. Located away from any potential public disturbance, and from the keeper pathway, this den can be equipped with a camera and microphone when births are expected.

As the biggest Arctic predators, polar bears need to control their environment by being able to see what is happening around them. In the new CERZA's exhibit, all of the fences, external as well as internal, are as transparent as possible. Outside, a combination of wire mesh, electricity cables and windows allow the bears to monitor their neighbourhood and interact with the visitors. Even inside, in an enclosure that is made only with wire mesh, they feel very confident as they have a nice overview of their surroundings and can interact with their keepers.

It has been very interesting to see how the two sub-adult bears use such an enclosure; while some of their time is spent in and around the ponds, mainly fishing and playing, most of the times the bears enjoy lying down on the grass, rolling in the bark or the



soil, resting in the shelters or walking around looking for food.

Alongside the polar bear enclosure, visitors can still see the discreet but nonetheless intriguing Arctic fox. Just below the scientific station, a pair of Arctic foxes has colonised a very natural enclosure, creating the illusion for our visitors that one of the smallest Arctic carnivores shares the same space as the biggest one.

COMBINING SECURITY AND WELFARE

In creating this new facility, our aim was to allow the bears to have free access to both inside and outside enclosures at any time of the day and night. So to safely manage this large and dangerous carnivore, all the large trees around the enclosure were pruned, and alarms were attached to the electric fences.

Thanks to these measures, our polar bears are kept inside only during the keepers' morning check, which is required for inspecting the fences, cleaning the windows and supplying food and enrichments.



EAZA is supported in this work by the European Union LIFE NGO funding programme. The European Union is not responsible for the views displayed in publications and/or in conjunction with the activities for which the grant is used.

A final note on security matters is that, thanks to the transparency offered by the wire-mesh building, keepers passing nearby know immediately where the bears are. In addition, there is an outside light to indicate to the keepers that all the doors are firmly closed.

MEDICAL TOOLKIT

Today, medical training is becoming a major asset for animals in human care, but caring for big carnivores requires maybe a little bit more imagination. Inspired by other zoos, two main tools have been created within boxes: a blood port for taking blood from the forelimb, and a 'head-pass' for taking X-rays of the head. In addition, a scale, an essential tool for preparing females for wintering, has been placed in a corridor between two boxes.

IMPROVING THE VISITOR EXPERIENCE

The transparent fences of this exhibit are suitable not only for bears, but also for our visitors. Full-height windows and wire mesh enable visitors to fully appreciate the splendour of this species, and it turns out that our two

young bears also enjoy interacting with spectators through the large windows.

To transport our visitors to the ice floe, three education areas have been established. First, the public find themselves in an Arctic scientific station, where they can see how scientists study ice floes and how they catch and track polar bears with the use of radio collars. Next, visitors can follow a female polar bear through four years of development in the Arctic, thanks to different panels and a skull modelling exhibit. After that, a small Inuit village invites adults and children to have a break and enjoy observing the bears playing in the water through large windows. Within this village, a final building offers the chance to learn more about climate change and the activities of Polar Bears International. To ensure that visitors are more than mere spectators, we ask them to observe our bears and tell us, via an electronic tablet, where the bears are and what they are doing. In this way, our visitors discover how zoos are involved in animal behaviour research. Welcoming schools was also essential, and we have a dedicated classroom for school visits in the Inuit village. The

final attraction before visitors leave the polar bear area is a display of full-scale panels of the eight Ursidae species, of which three are kept at CERZA Zoo.

ECO-FRIENDLY EXHIBIT

In order to be in step with keeping polar bears and talking about climate change, we have designed this exhibit to be as eco-friendly as possible. To achieve this, we chose not to have an underwater spectator area for two reasons: it allowed us to make the pond as large as possible for the bears, and avoided the energy cost linked to a high-quality filtration system, which would have been needed. As described above, one of the ponds receives water from a huge waterfall. The water pump used for this waterfall is designed to use electricity generated by solar panels fixed on the roof of the polar bears' house. The water-pump house located in the Inuit village is the perfect way to discuss and demonstrate sustainable energy.

BECOMING AN ARCTIC AMBASSADOR

Keeping polar bears at our zoo has also given us the chance to work with the fantastic NGO that is Polar Bears International (PBI). Since we became an Arctic Ambassador, PBI has enabled us to create a link between us, our bears, our visitors and the wild polar bears. PBI provides us with information, contacts and materials (videos, photos and a false polar bear skull) with which to promote their work to our visitors, including schoolchildren with special educational programmes. In return, CERZA Zoo participates in the PBI campaigns to promote conservation and research on polar bears, so everyone benefits from the partnership.

To conclude, with regard to the demography of the polar bear in zoos, and in light of the current and alarming melting of the Arctic sea ice, our goal is to promote the best way of keeping polar bears in human care, mixing animal welfare and visitor education at a moderate construction cost.

For any further information concerning this exhibit, please contact Dorothee Ordonneau at vet.cerza@yahoo.fr. If you are interested in becoming an Arctic Ambassador, please get in touch with PBI.

Primate rescue

ZOOQUARIA TALKS TO GREGG TULLY, EXECUTIVE DIRECTOR OF THE PAN AFRICAN SANCTUARY ALLIANCE (PASA), WHICH WORKS TO SECURE A FUTURE FOR AFRICA'S PRIMATES



David Williams-Mitchell, EAZA Director of Communications and Membership

DWM: Gregg, could you introduce PASA, and give us a bit of background about what you do?

GT: The Pan African Sanctuary Alliance came about at a meeting in Uganda in 2000. In the 1990s there was an increase in the number of primate sanctuaries across the continent, and these NGOs weren't really talking to each other. At the meeting in Uganda, they decided to form PASA so that they could share their resources, knowledge and experiences.

The charity is based in the US and has 23 members in 13 countries. We have four staff and a Board of Directors, backed by 30 volunteers – so I guess you could say we are a small organisation but also a big one! In the last few years, PASA members have been expanding their focus from rescue and rehabilitation to include more conservation and education work, both at grass roots and government policy scales.

DWM: It's interesting to hear you talk about government relations, as you've just come back from attending the CITES Conference of the Parties in Geneva. Can you tell us more about what you were doing there, and how you see government relations developing for PASA?

GT: PASA was at the CoP to build more relations with NGOs who were present, and also with the Parties themselves. It's true to say that our members have closer relationships to the national governments of the countries they work in, but that doesn't mean that PASA itself shouldn't also develop contacts to support our members in rescue and rehabilitation. This is partly to show that it's worth investing in law enforcement – we notice a direct link between the presence of a sanctuary and the likelihood of there being effective wildlife enforcement in a country.

To give you an example, I was recently in Guinea Bissau, where there

is currently no PASA member, and no recognised sanctuary for primates. The police are unable to confiscate chimps because there is nowhere to house them, so the animals just stay where they are, even though it's clear that they are being held illegally and in poor welfare.

We recognise that it's not easy to set up a primate sanctuary, and that some of our existing members already have difficulties; electricity, water and the internet are sometimes not available or only intermittent, and it can take a full day for a sanctuary's staff to get to the nearest town to pick up essential supplies. Having said that, there are material benefits from housing a sanctuary, such as in public education and local development, and a route into species conservation, too.

DWM: So how would you characterise the current situation for primates in Africa? Do you anticipate an improvement or continued decline?

GT: I think we need to prepare for continued decline. If we look at great ape species, they are all in crisis and it's still getting worse. The problem is that the challenges are very great, and both very diverse and very diffuse; we're talking about a huge geographical range, and while we are getting good results at a small scale, we recognise that there is a need for more resources to tackle each local issue across a wider area. We'll need to combine the individual approaches of sanctuaries and other small NGOs with more general policy work and look for ways to make wildlife more valuable to people than killing the animals. Ecotourism is a developing part of this, in that it can make people feel proud of the wildlife in their area. For example, our member in Sierra Leone, Tacugama, lobbied the local government about chimpanzees, and they were adopted as the country's national animal.

DWM: You are here in Amsterdam for the Old World Monkey Regional Collection Planning meeting. Can you tell us about that?

GT: I am here to talk about Hamlyn's owl-faced monkey as part of the EAZA planning. There is a potential opportunity for us to collaborate on a study of the species *in* and *ex situ* to gather information on the biology of Hamlyn's monkeys, and we are starting the process of discussion to assess whether or not this is possible. The idea may be, if the study shows that it is feasible, that in the long term, the *ex situ* population could act as a source population for reintroductions into the wild. It could help some of our members to build capacity for work such as this and help them become more actively engaged in conservation work. It is early days, though - we need to hold the discussions, do the research if possible, and then get buy-in from the holders for such a project.

DWM: What can zoos do to help PASA's work?

GT: A lot of PASA's work is about increasing exchange both between our members and between our members and other organisations. Internally, we need to raise funds to allow staff members from our sanctuaries to attend the PASA annual conference – which is a key part of building succession-planning into our work. We see zoo staff also coming to PASA members to share knowledge, and it's great to see not only sanctuary staff learning about zoo techniques for population management, but also zoo staff learning from sanctuary staff – this kind of two-way street is very important for us and also for zoos. Having said that, the main pressure on sanctuaries will always be funding, so in real terms, one of the most valuable things zoos can do is to support the work of our members financially.



Breaking point

FINDING A NEW APPROACH TO WILDLIFE RESCUE IN EUROPE

Dave Eastham, Executive Director, European Alliance of Rescue Centres and Sanctuaries

In 2016 the European Commission adopted the EU Action Plan against Wildlife Trafficking, an ambitious plan for joined-up efforts to fight wildlife crime inside the EU. It is hoped that the action plan will result in an increase in the number of successful prosecutions and confiscations of illegally traded wildlife.

At the same time across Europe there has been increasing opposition to the use of animals in entertainment, particularly to wild animals in circuses. This is reflected in the national legislation of 24 EU Member States who have already adopted restrictions or bans on the use of wild animals in circuses. When you consider alongside this the introduction of the EU Invasive Species Regulation and the potential to close substandard zoos as a result of the EU Zoos Directive, it becomes clear that there is a significant potential for seized, confiscated and surrendered exotic animals in need of housing in Europe.

What to do with these animals is a constant challenge and one that is not getting any easier; it is widely recognised by the authorities and the rescue community that the demand for housing

of exotic animals is not being met.

To gauge the extent of the problem, the European Alliance of Rescue Centres and Sanctuaries (EARS) and Animal Advocacy and Protection (AAP) undertook an online survey of 112 rescue facilities in 24 countries including rescue centres, sanctuaries and zoos. The survey was conducted with the help of the EAZA Executive Office who distributed the survey to all EAZA Members, of which 66 responded – a significant proportion of the total membership.

The results have given us a clearer picture of the pressures being faced by rescue facilities in Europe:

- The facilities reported receiving requests involving 22,216 animals in 2017.
- When comparing EAZA Members with rescue centres and sanctuaries, the number of animal requests received per facility was roughly the same, demonstrating the important role many zoos already play.
- When they were asked what the primary reason was for having to refuse animals, 41 per cent of facilities cited lack of space.

- When facilities were asked what taxa of animals they were able to house, zoos were more able to house a wider range of taxa – particularly birds and reptiles, for which there is a serious shortage of dedicated rescue capacity in Europe.

The survey has been illuminating and helped us shape our future work. The results will be included in a White Paper being presented at the European Parliament in November where we will be calling on the EU and its Member States to do more to support and work with facilities who take on rescue animals across Europe.

Another unexpected benefit of the survey has been the opportunity to work with EAZA on the issue of animal rescue, and to open a dialogue with those zoos that see wildlife rescue as an important part of their work. It is clear from the survey that zoos play a significant role in supporting the authorities in the housing of seized and confiscated wildlife and EARS looks forward to closer collaboration in the future to ensure as many animals as possible are found appropriate housing and long-term care.

Building firm foundations

TO RUN A SUCCESSFUL CONSERVATION EDUCATION SESSION, IT IS ESSENTIAL TO KNOW NOT JUST WHAT YOU'RE DOING, BUT WHY

Suzanne Scott, Head of Discovery and Learning, RZSS Edinburgh Zoo

We often refer to 'learning outcomes' (sometimes known as aims and objectives) in conservation education, and they're an important part of the 2016 EAZA Conservation Education Standards; but what are they and how should we apply them to our work?

In the words of the famous song – 'When you read you begin with A, B, C...' – and when you plan conservation education, you begin with learning outcomes. Or at least you should.

If you think about your session (and session plan) as the house, and the learning outcomes as the foundations on which the house is built, it may be easier to understand. The house is made up of a number of components (your bricks):

What: this is the content you will cover in your session. What themes or topics do you want to include: sustainability, wildlife crime?

Where: will the session be indoors, outdoors or virtual?

Who: is the session aimed at young children, specialists, students or a wider family audience?

How: what resources will you include in your session? Will it include fur, feathers, a tour?

When: when will the session take place? Will the season affect your delivery and how long will the session last?

Each of these 'bricks' in the house is essential, as they each impact on the others. For example, if you're preparing a session for young children, you'll probably need more interaction than talking, more resources and a shorter timescale. As with houses, however, if the foundation is not in place then the whole thing will fall down. The learning outcome that you want is the foundation on which you build your plan – it is the 'why?'

Why are you delivering the session? What are you aiming to achieve? Do you want attendees to remember facts, convert them to the value of conservation work or act for wildlife?



You may have multiple learning outcomes for each session; some may be smaller (for example, to learn two key facts about chimps) and some may be more substantial (for example, to reflect on the relationship between farmers and chimps in the wild).

Whatever the learning outcome is, it is essential that you start your planning with an outcome. If you can't define a learning outcome, then you don't know why you are developing or delivering a session and therefore you shouldn't do it!

Other advantages to embedding learning outcomes in all your sessions include evaluation, and a means of talking to teachers in a language they understand.

If you have a learning outcome, then you instantly have something to evaluate. For example, if you want to ensure that attendees have learned two new facts about chimps, then you can include some form of formative assessment in your delivery. This may be as simple as asking the attendees at the beginning what they know about chimps and asking the same question at the end. Obviously, some outcomes are harder to measure and this poses an ongoing challenge for conservation educators. If your desired learning outcome is to establish the impact of

your session on long-term behaviour, then you would need to consider a longer-term study of your attendees. Bear this in mind when developing your learning outcomes, but don't shy away from including them just because they are harder to measure. Equally this applies to the simpler outcomes, which also shouldn't be forgotten.

Similarly, most teachers will plan their sessions around specific learning outcomes. These may come from local, national or international requirements for their delivery. If you can show that you are complementing or matching these outcomes in your session, then you are more likely to encourage teachers to book a session, as it means that you are sharing the workload with them. Teachers always welcome support for achieving learning outcomes, so by using the same language as them, it's easier for them to identify this.

Finally, it is important to remember that learning outcomes should be set for all learning sessions, not just formal education. By setting learning outcomes for public engagement activities, volunteer-led discussions, signage and even events, you are ensuring a more rewarding experience for visitors and maximising your opportunity for engagement in important conservation messaging.



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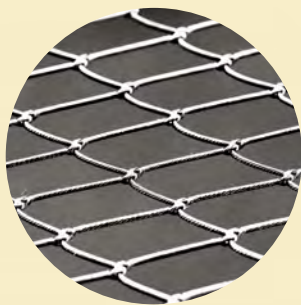
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WORKING WITH ZOO PARKS
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PRICE – CONTACT US
JOHANNA & FRANÇOIS GAY
INGENIEURS PAYSAGISTES

- johanna@bioparc-zoo.fr
- +33 (0)6 79 43 99 52

BUREAU
D'ÉTUDES
BiOPARC

BIOPARC'S DESIGN OFFICE

103 RUE DE CHOLET • DOUÉ LA FONTAINE
49700 DOUÉ-EN-ANJOU • FRANCE

