

Zoos Working Together To Save AZE Species Working Group Report 2012 Conservation Breeding Specialist Group Annual Meeting Melbourne, Australia

Participants: Paul Andrew, Chris Banks, Yara Barros, Onnie Byers, Bryan Carroll, Peter Clark, Mark Craig, Gerald Dick, Lesley Dickie, Annilea Everaardt, John Fa, Karen Fifield, Jenny Gray, Markus Gusset, Bengt Holst, Kevin Johnson, Michael Johnson, Androo Kelly, Bjarne Klausen, Eric Miller, Al Mucci, Jackie Ogden, Laurence Perry, Hugh Possingham, Karin Schwartz, Eric Tsao.

Background

How do we enable zoos to lead a 'surge' against biodiversity loss? Like any other organization involved in conservation, zoos should aim for the most favorable cost-to-benefit ratio, i.e. "the greatest conservation bang for your buck". The Alliance for Zero Extinction (AZE), a consortium of biodiversity conservation organizations, identifies "trigger" species sites. AZE focuses first on species that face extinction either because their last remaining habitat is being degraded at a local level, or because their tiny global ranges make them especially vulnerable to external threats. With small populations, extreme vulnerability to habitat destruction, and limited conservation options, the trigger species at these sites face imminent extinction if no appropriate conservation action is taken. The value of the AZE list of sites and species to assist global biodiversity conservation has been recognized by the Convention on Biological Diversity (CBD). A memorandum of cooperation between AZE and CBD, signed in 2010 enables AZE to assist the Parties to the Convention in integrating the zero-extinction target into national biodiversity strategies and action plans (Fa, 2012).

Alliance for Zero Extinction (AZE) was formed in 2000 and launched globally in 2005. AZE engages 83 non-governmental biodiversity conservation organizations working to prevent species extinctions by identifying and safeguarding the places where species evaluated to be Endangered or Critically Endangered under IUCN-Red List criteria are restricted to single remaining sites. There are 587 sites worldwide for 920 species of mammals, birds, amphibians, reptiles, conifers, and reef-building corals that have been identified so far, providing a tool to defend against many of the most predictable species losses (www.zeroextinction.org).

Stated in the AZE Memorandum of Understanding (<http://www.zeroextinction.org/pdf/AZEMOU.pdf>):

GENERAL GOALS OF COLLABORATION

The Alliance is an initiative to prevent any further species extinctions by identifying sites necessary to protect critical populations of site-restricted endangered species, identifying conservation needs at such sites, and developing and funding programmes to protect such species and sites. The Alliance is open to any conservation group that subscribes to the principles of collaboration (below) to conserve highly threatened habitats and to protect and restore healthy populations of their endangered species. The initial focus will be on vertebrate species as comprehensive data to cover other life form groups is not yet available.

Collaboration between AZE and the International Zoo Community

The following zoos/zoo associations/zoo related organizations are currently AZE members:

- Association of Zoos and Aquariums (USA)

- IUCN/SSC Conservation Breeding Specialist Group
- Durrell Wildlife Conservation Trust (UK)
- North of England Zoological Society – Chester Zoo (UK)
- Saint Louis Zoo’s WildCare Institute (USA)
- Wildlife Conservation Society (USA)
- Zoo Outreach Organization (India)
- Zoological Society of San Diego (USA)
- Zoological Society of London (UK)

What are the possibilities for collaboration between AZE and the zoological community (and among members of the zoo community) to initiate conservation action for those AZE sites whose species are in imminent danger? What are the pros and cons? Would it be feasible for zoological institutions to incorporate the use of the AZE list into their prioritization process for collection planning, identifying conservation action to support through participation or funding? Is there a role for CBSG in facilitating this connection between the zoological community and AZE?

Discussion

What do we think about AZE as a platform for zoo conservation action?

It is inherent that zoos and aquariums are involved in conservation action. The zoo community needs to realize that for many species, time is short to get our act together to protect species from extinction. The large NGOs are now concentrating on ecosystem conservation and species conservation is left up to the zoological community. The CBD’s Strategic Plan 2011-2020, Strategic Goal C (To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity), contains three Aichi Biodiversity Targets, including Target 12:

By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

It was agreed that it is not necessary, or worthwhile for us to produce a new method of prioritization to identify hotspots of conservation concern. This has been done in countless ways by other conservation organizations. Much more effective would be for us to identify an existing prioritization platform and filter it on the basis of how the international zoo community can add particular value. We want to focus our attention and resources on the best possible way to work towards conservation of critically endangered species?

There are many prioritization schemes that are considered when zoological institutions are looking to participate in conservation action. Some zoos consider IUCN Red List status, some might look at Evolutionarily Distinct and Globally Endangered (EDGE) species (threatened species that have few or no close relatives on the tree of life { <http://www.edgeofexistence.org>}), others are involved in species conservation in the field through regional zoo association species management programs (AZA - Species Survival Programs; ZAA – Australasian Species Management Programmes, etc.), prioritization through director/administrative staff preferences, or a combination of such processes. Yet AZE may be better (there is a lot of overlap between AZE and EDGE species) because there is a spatial component. The neatness of spatial definition allows us to be clearer on what we are doing. It is difficult to get regional zoo associations to agree on a set approach for prioritization. This is a more flexible approach for zoos which can integrate it into their conservation programs (does NOT have to be the sole approach used).

In any case, there is a need to stop the endless prioritization and go forward with action, as time is short for many species that are in imminent danger of extinction.

Prioritization through use of the AZE list can be viewed as a process similar to a Regional Collection Plan and be considered as part of an institution's conservation plan. Incorporation of the AZE site list into the plan would be as a reference point, not necessarily make up the total prioritization option. This could be a tool to use, not a demand but rather an approach to use as part of an overall prioritizing process for participation in *in situ* species conservation.

There are two kinds of zoo money – (i) funds locked into specific projects and (ii) funds available for other projects. An opportunity to make a difference for a species at imminent risk of extinction could allow some of the locked funds to be transferred for conservation of an AZE site, which would offer much greater bang for the buck. Participation in conservation for AZE sites could be a “sexy” process with direct benefits through engagement by the public for support, perhaps identify “flagship” species out of the AZE list, or make an “unsexy” species “sexy”. We can explore the motivation needed for zoos to consider joining this collaborative effort, which will have important consequences for threatened species.

There may already be some overlap in current conservation programs. These might include WAZA branded projects working at AZE sites, zoos that are working on trigger species at AZE sites, or zoos already contributing at AZE sites but on different species with similar threats. A necessary initial action would be to determine the magnitude of the overlap, but since overlap already occurs, it may not be too difficult to incorporate inclusion of AZE sites into the conservation planning process for zoological institutions. It is unclear how many AZE sites already have programs and it would be critical to gather this information to encourage support and confirm that effort is not duplicated. Additionally, what AZE trigger species are currently represented in captive breeding programs or might benefit from a captive breeding program? We don't yet know this answer but will need to gather this data immediately. AZE trigger species are all Red Listed, but in the Red List, one cannot yet search for ‘captive breeding’ under Conservation Action to see what is being done. We need to find out for which AZE species captive breeding has been recommended. Some species are unlikely to be trigger species due to Red Listing methodology relying on global assessments, but it is a place to start.

What are the concerns or barriers?

Questions were raised about the use of more than one prioritization scheme, prioritization for funding, the overlap of regional zoo association species management programs and AZE trigger species, and about the ability to integrate the AZE approach into the One Plan Approach. There is the need to more clearly explain the benefits and opportunities of using the AZE approach. This is a pragmatic approach with “no regrets” – can't be done wrong. If you find that the trigger species' status is not as dire as first thought, that's not a bad thing. Since many AZE trigger species are from alpine regions, would we be missing opportunities for saving species in other biomes if we focus on alpine species? It is important to remember that we need to think about action for AZE trigger species as part of a conservation action plan, not necessarily the only thing that is done in the plan. How do we integrate another approach into the One Plan Approach (integration of *ex situ* and *in situ* holistic conservation action planning)? This could be a mechanism for conservation implementation within a One Plan Approach.

One major concern was that there is a paucity of data on the AZE website. Right now, there seems to be only a list of species and their Red List designation with little supporting data. In order to justify support

for AZE projects, zoo administrators would want to know more about the trigger species, the sites, threats, etc. AZE needs to make available their criteria and the data to support their prioritization. More information about the species would help zoo administrators make a decision on what projects to fund.

How can the zoological community work together with AZE for endangered species conservation?

The AZE is an evolving project with more species always being added. The list encompasses a wide range of conservation interventions with some being very challenging (rough terrain, remote sites, etc.). Thus, there are many opportunities for the zoological community to become involved. Zoos involved in conservation at AZE sites could publicize their contributions to N (number) of AZE sites to help N species in critical need of conservation action. Zoos can be influential as communicators and look at the threat processes at the AZE sites to determine which ones have a human behavior component that we as zoos can influence (e.g. palm oil), especially for those that may impact more than one species. They could then help to encourage behavior change in their visitors. In return, zoos would have a role in feeding stories back to AZE to illustrate the collaborative effort. Question to AZE: how can you help motivate zoos as partners? Motivate zoo staff and public to be engaged with a species by making it “sexy”. Example: Saint Louis Zoo’s WildCare Institute has been very successful in engaging the public to be concerned about an insect with the habit of feeding on carrion (American Burying Beetle Reintroduction Program) and a rather unlovely-looking stream-dwelling salamander commonly called a “snot otter” (Hellbender Recovery Program), with both species listed as Critically Endangered.

Accounting rules would be required, e.g. how much and what kind of participation “counts” as contributing to safe guarding a species/site? Including AZE trigger species that are of critical extinction concern in our institution collection plans would not be extra work – common species that are taking up space could be phased out and attention focused on those species that are in critical need. Zoos can (and do) support conservation programs *in situ* without having the target species in their collections. Sometimes zoos exhibit common species as analogues for more threatened species that they are protecting through *in situ* programs. Zoos could tell the stories of the AZE species they are aiding by linking them to species found in their collections that are of the same taxonomic group or from the same region.

What action needs to be taken?

CBSG could make recommendations for the zoological community – link species in zoos to the AZE sites, encourage some giving, make it more palatable. We could start with low-hanging fruit – highlight programs that already exist (overlap with other conservation efforts). Also identify where programs do not exist, but where Population and Habitat Viability Assessments (PHVAs) have been done. To facilitate the connection between AZE and the zoological community, geographic overlays from PHVA, AZE sites, and other existing programs in that area could be done to develop an overview roadmap for action. CBSG could facilitate links between regional zoo association’s population management programs and AZE, identifying AZE sites with trigger species that are currently managed in zoos and aquariums.

Action Steps

Action: Prioritize what species on AZE sites need to be addressed first.

Who: John Fa, Durrell Wildlife Conservation Trust

Initially, background information must be gathered to determine where, within the zoo and aquarium world, there are current programs (*ex situ* population management or *in situ* field conservation

programs) for AZE species. Information on preliminary numbers (after quick review) of *ex situ* population management programs will be presented to AZE at a meeting in Washington, D.C. on 25.October.2012 as part of a proposal for a connection with the zoological community.

1. Determine the number of AZE trigger species that are currently under human care and managed under regional zoo association population management programs.

Time frame: need preliminary numbers by 25 October 2012

Who: Onnie Byers

More complete data to be collected from regions:

- EAZA/EEPs - Danny DeMan and Lesley Dickie
- AZA/SSPs - Paul Boyle and Candice Dorsey – Jackie Ogden will contact them.
- ZAA/ASMPs - Paul Andrew
- WAZA International Studbooks - Markus Gusset

2. Determine the number of field conservation programs in which zoos are involved for AZE trigger species or for other flagship species within an AZE site.

Time frame: 10 January 2013

- WAZA branded programs – Markus Gusset
- AZA Annual Report on Conservation Science – Paul Boyle/Candice Dorsey
- World Zoo and Aquarium Conservation Database – Emily Wick (CBSG)

3. Develop bullet points to justify use by the zoo community of this prioritization process and participation in conservation efforts for AZE sites and trigger species. To include:

Time frame: Prior to 25 October 2012

Who: John Fa, Onnie Byers

- Clear description of AZE
- Much impact for small species living in single site
- Recognition given to those that participate
- This is what zoos are good at – have special skill set and excel at impacting endangered species conservation. Already may be overlap in programs.
- Philosophy of zoos is to look after species – AZE makes this simpler

4. Identify a working group that will work on further action

Who: John Fa, Onnie Byers

Future actions after concept has been accepted by AZE and zoo community:

How do we sell this to the larger zoo community?

- Zoos need to be convinced that this is a valid tool – suggestion that AZE give awards for participation.
- Zoo community has special skills – species focused, smaller species on single sites make this possible for limited cost.
- Illustrate how zoos can link to AZE site conservation.

Further Actions:

- Submit articles in WAZA/regional zoo association newsletters/magazines
- Identify case studies of current programs on AZE sites – success stories to exhibit to the zoo community. Full description of programs that speak to the emotions of people.
- Develop a matrix of various levels/types of contributions to AZE programs.

- Self-assessment tool – for possible audit in the future.
- Develop a web-based tool limited to AZE website.

References

Fa, J. (2012) How to Save More Species: 'Zero Tolerance' Conservation for Zoos.
WAZA News.2/2012:2-4

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AZE Board Meeting

25 October 2012

Report by Onnie Byers

John Fa and I joined the AZE Board Meeting via Skype to share our thinking and the results of the CBSG Annual meeting working group on the potential collaboration between AZE and the international zoo community.

We described why we believe AZE is an excellent platform for zoos:

- Specific, discreet sites and trigger species
- Sexy message (we are helping to protect a site without which this species will become extinct)
- Many zoos are already engaged (35+ AZE species already in managed programs)
- Scientifically sound approach
- AZE gives zoos an easy, effective avenue to tell the world of their work

John shared his idea for prioritizing within the AZE list. I presented the preliminary table of AZE species currently in managed programs. This table will be made available to working group members as soon as it has been reviewed and added to by regional zoo associations.

Carly Waterman (EDGE) noted that the link with the zoo community is valuable due in part to their 700 million visitors per year.

Shelly Grow (AZA) told the group that impact, not just programs, is important to AZA.

After a good discussion and several questions, it was enthusiastically concluded that we should all work together to further this idea and a number of actions were identified (many duplicate those of the working group in Melbourne).

Actions:

- Conduct a systematic cross referenced inventory to determine the number (and names) of:
 - AZE species held in zoos
 - AZE species in managed regional and/or global programs
 - AZE species for which there are field conservation projects
 - AZE species on climate change vulnerability list
 - AZE species on EDGE list (Carly already doing this; amphibians completed, on EDGE web site)
 - AZE species evaluated in a PHVA
 - AZE species recommended for captive breeding in Red List assessment
- Write articles defining AZE, promoting the collaboration of AZE with the zoo community, and proposing a way forward for publication in zoo association magazines, CBSG publications, Journal of Threatened Taxa, etc. (Onnie, John, Sanjay, others)
- Explore the possibility of an AZE label for AZE species zoo exhibits (perhaps a temporary label so zoos don't have to create entirely new signage)