

Committing to Conservation - The World Zoo and Aquarium Conservation Strategy

Saving species in the Wild

Vision: Zoos and aquariums are redefined by society as organisations that save populations of species in the wild, while delivering the highest standards of care and welfare for their resident animals, and providing exceptional, behaviour-changing, guest experiences.

Editors' Note

Zoos and Aquarium have tremendous potential to engage the general public in wildlife conservation. These facilities also contribute for conservation research which is fundamental for conservation of threatened species. Since the extinction rate has been accelerated many folds due to anthropogenic activities, modern zoos are contributing for species conservation in the wild as well. This document by WAZA - Committing to Conservation: The World Zoo and Aquarium Conservation Strategy, outlines the key role zoos and aquariums can play in supporting conservation in the wild. We have permission from WAZA to serialize this publication. This is much needed and timely milepost. Happy reading!

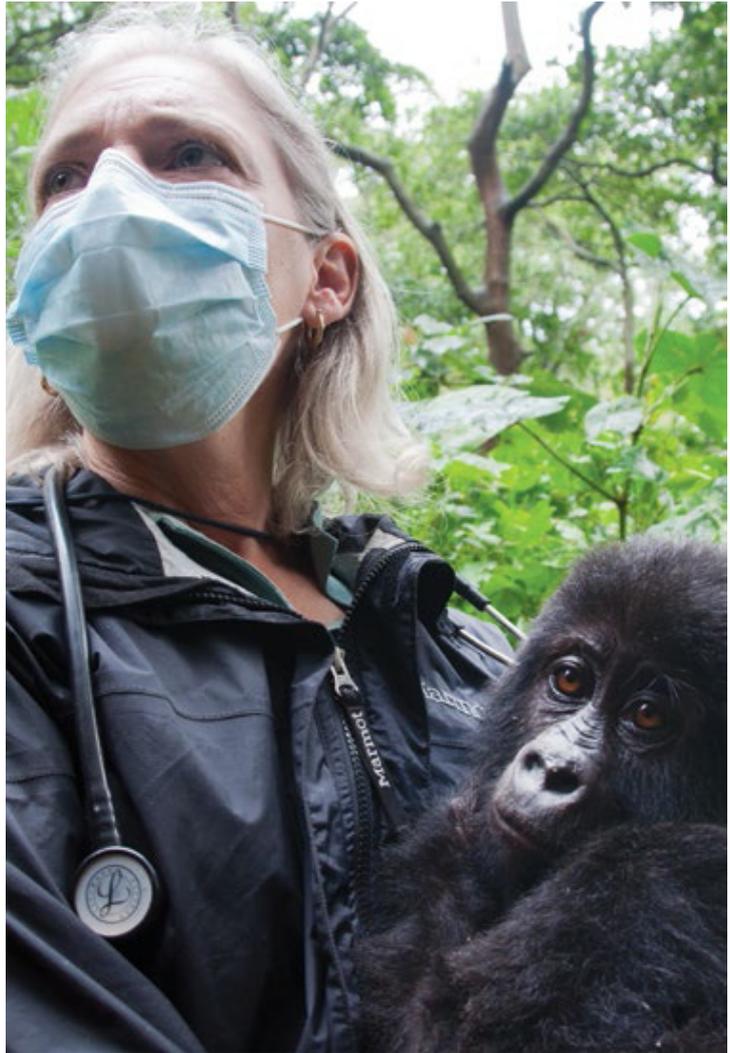
Many modern, accredited zoos and aquariums are working to make sure that the range of species they care for is supported by meaningful conservation actions linked to the survival of species in the wild. While resources may not extend to providing support for every species, conservation actions taken for the most threatened populations will have a positive impact on all species within that habitat. The proactive strategy would be to deliver crystal-clear examples of the essential role that zoological institutions play in protecting species in nature. Connecting animal experiences in zoological facilities to conservation in the wild is now being effectively confirmed with a One Plan Approach to species conservation.

Gathering the information that is necessary to measure the impact of the collective power of zoological organisations to save animals is critical. The way in which zoos and aquariums collect information to quantify the impact of their conservation activities is an emerging discipline. Being recognised as results-driven conservation organisations will attract a wider membership and donor base, providing the business rationale for supporting field-conservation programmes. However, mission-driven institutions have additional responsibilities.

Zoos and aquariums are conservation resource centres that recruit, train and endorse staff to support conservation efforts outside their facilities (see *Appeal to Zoo and Aquarium Directors*). Collectively, WAZA-member zoos and aquariums employ more wildlife-husbandry experts, veterinarians and scientists than any other conservation organisation. The small-population management skills and techniques (e.g. baseline physiological data collection, application of technology to field research needs, conservation medicine) acquired in zoological facilities could be critical for assisting IUCN Red List species assessments and strategic plans, local governments, national parks and reserves to formulate long-term management plans and strategies to protect depleted and fragmented populations

in nature. The most effective response to the extinction crisis will be a coherent international conservation entity (zoos and aquariums working with other conservation organisations) that supports and expands existing protected areas, and secures additional protected areas for the future.

Wildlife health (including research and veterinary expertise) is an important issue in the conservation of wild populations (see *Science and Research*). New and emerging diseases and pathogens are becoming an urgent concern, epitomized by the catastrophic declines in amphibians (chytridiomycosis), and the pandemic diseases that threaten both humans and animals (e.g. Ebola virus disease, avian influenza, severe acute respiratory syndrome). Individuals selected for reintroductions or translocations require testing, treatment and evaluation to make certain that animals can be safely moved between habitats and countries without spreading or introducing disease.



GORILLA DOCTORS

Veterinary staff at Gorilla Doctors care for wild gorillas in Rwanda, Uganda and the Democratic Republic of the Congo.

As environmental threats become ever greater, zoos and aquariums are ideally positioned to be species champions. With over 13,000 species in the care of zoological facilities, a concerted effort to enhance and study these populations will have significant consequences for the future survival of wild populations. Animals in zoos and aquariums act as ambassadors that, if leveraged effectively, can provide impact and reach to the support accredited zoo and aquarium communities give to wildlife conservation. It is essential to provide visitors with clear explanations about the conservation impact their everyday behaviour is having on wild populations, both locally and globally, and to focus behavioural-change campaigns on the behaviour changes that will be most positive for biodiversity conservation.

Zoological institutions are already playing a major role in the global conservation of species and this will grow as their conservation missions are integrated into every aspect of operations. The One Plan Approach builds on the strengths and motivations to synergistically

link all the skill sets and experience of zoo and aquarium staff to individuals and organisations working in the field. Advances in animal care and research with intensively managed small populations in zoological facilities are being applied to larger global issues.

Acting as 'Arks' or reservoirs to facilitate replacing extinct wild populations is a means by which zoos and aquariums achieve species conservation rather than a goal in itself. However, populations of species in the wild, even in protected areas, are in decline, and it takes time to establish reliable protocols for managing and breeding wild animals. Zoos and aquariums have acted as 'lifeboats' for the survival and subsequent reintroduction of zoo- and aquarium-bred individuals, preventing the extinction of some species. However, zoological facilities can play an even greater role by protecting wild species in their natural habitats. For many reasons, it is preferable to manage populations proactively before their numbers decline precipitously or they disappear completely from the wild, and to support healthy species so they remain resilient in the face of threats.

The ability to predict species conservation problems may well diminish as time passes and ecology in the human-dominated world becomes more complex. However, conservation is something zoos and aquariums are equipped to achieve, and this skill should be expanded to make sure that it can be used in the future if the situation in nature becomes critical. The IUCN SSC *Guidelines on the Use of Ex Situ Management for Species Conservation* outline a wide range of ways in which zoo and aquarium programmes can contribute to conservation.

The zoological community is a perfect venue for implementing and achieving some of the Aichi Biodiversity Targets in order to achieve a healthier planet for all people and animals. To align our conservation activities with Aichi Biodiversity Target 12, a recent horizon scan led by WAZA identified emerging issues with potential impact upon threatened-species conservation by 2020, in a manner important to policy makers and practitioners in zoos and aquariums. Some global scientists and conservationists are already convinced there are no real wild areas remaining, as every ecosystem is impacted by human activities. This makes an even stronger case for the importance of the participation of zoos and aquariums in influencing governments at all levels and in sustainable-management activities for natural habitats, including providing habitat for wild native species within and around the grounds of institutions, and citizen-science initiatives. Habitat management should be carried out by cooperative teams from zoos and aquariums with complementary expertise in water, vegetation, invasive species and community development. Restoring, expanding, creating and protecting habitat are fundamental to our ability to save species in the wild for the long term.

Wildlife conservation is not only about saving animals but also is concurrently directed at improving the lives and health of local communities that share the same resources and ecosystems. Educating and empowering front-line people to identify growing threats and mitigate human-wildlife conflicts must be a priority in every long-term conservation strategy. Holistic programmes of sustainable development with economic incentives that focus on

quality-of-life issues are crucial to the success of any conservation initiative.

To assure that the collective efforts of zoological facilities are having a significant effect on saving animals and habitats, zoo and aquarium biologists have developed impact-assessment methodologies; for example, the Project Conservation Impact Tool, designed to provide an easy standardised format to summarise project achievements and progress. WAZA has used such criteria to evaluate the efficacy of WAZA-branded conservation projects, showing that the evaluated projects are helping to improve the conservation status of high-profile threatened species and habitats in biodiversity-rich regions of the world.

The WAZA project branding scheme, with more than 250 branded projects,

serves to showcase what zoos and aquariums do for wildlife conservation. Tapping into the adaptive management and decision-making frameworks adopted by other conservation organisations is also appropriate. It is important that we measure the individual and collective impacts of saving animals in the wild, to demonstrate that zoos and aquariums are the conservation force that they claim in their mission or vision statements, and to facilitate their communication efforts to foster greater support for conservation.

Tackling such enormously complex environmental and political challenges will require a united effort and effective collaboration with many other organisations, including governmental agencies and non-governmental organisations. In addition to scientific collaborations, the

zoological community has a wealth of experience in communicating messages and stories. These interpretive assets can be applied to advocating support with the public and governmental agencies. Zoos and aquariums can become more effective behaviour-change agents by delivering success stories to a broader and better-informed audience (see *Creating a Culture of Conservation*). A group of zoological key



CONSERVATION FUSION, MADAGASCAR
Local communities participate in reforestation efforts in Madagascar to preserve lemur habitat.

AICHI BIODIVERSITY TARGET 12

Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.

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.

performance indicators for conservation can be developed and incorporated into institutional annual reports to give a measurable indication of achievements. Saving species in the wild requires planning at the landscape level, whether the recovery programmes are regional or international.

Conservation success requires long-term commitments and the establishment of trusting relationships with the people living alongside threatened species. Many zoos and aquariums are unable to make multi-year or multi-decade commitments, or do not have the resources to employ staff to develop such deeply personal relationships. However, zoological institutions are well suited for attracting donors and raising the funds necessary to support wildlife-conservation organisations that are able to maintain a presence in range-country communities and work towards saving wildlife.

As the zoo and aquarium community takes on more responsibilities for threatened species across a wide variety of locations and with an increasing range of partners, there will be a concomitant need for funding conservation outcomes. While money and donations do not always translate into quality conservation efforts, funds are still an essential requirement for the implementation of conservation action. It is estimated that US\$350 million are raised annually for direct support of wildlife conservation by zoos and aquariums in organized associations around the world. The opportunity to attract new donors and supporters for conservation is enhanced by clearly defining the conservation work carried out by zoos and aquariums. The Association of Zoos and Aquariums (AZA) provides another good toolkit, which outlines simple ways to raise more conservation funds for an institution and determine how that facility compares with other similar-sized organisations.

If the zoological community can align some of its conservation objectives with human-development goals, its work will resonate more strongly with political and philanthropic ambitions and the perceived relevance of support required for species conservation, and the protection of biodiversity and ecosystem services. However, this is a delicate balance between aligning the work of zoos and aquariums with human-development goals, and occasions where biodiversity responsibilities have to be supported.

CONCLUSION

It is imperative that all zoos and aquariums increase their contribution to and impact on saving species in the wild, including provision of skills, and technical and financial resources. Creating a clear connection between a live animal in a zoological facility and a conservation project in the field should be integrated into every master-planning process to make certain that adequate support is generated for saving species in the wild.

RECOMMENDATIONS

- Develop an institution-wide conservation strategy that integrates conservation actions into every aspect of operations, including protection and preservation of natural habitat

for native species around the grounds of the institution.

- Develop an operational budget that supports conservation over the long term (e.g. at least 3% of annual operating budget) and is not solely dependent on external donations (soft money).
- Partner with other biodiversity institutions in order to implement proven best practices and with conservation organisations to maximise efforts outside of the facility, especially identifying trusted conservation organisations that will be responsible for implementing conservation action on the ground to which multi-year support can be provided.
- Liaise with and make use of the existing formalised WAZA partnerships with international conservation bodies, liaise with government agencies to bring about transformations that rely on legislative change, and utilise individual staff skills to support conservation programmes.
- Use a rigorous selection procedure to make sure that the best conservation effort is being made for the money available and reassess each project to report the impact on biodiversity that has been gained.



ASSOCIATION OF ZOOS AND AQUARIUMS (AZA), USA
The mission of SAFE: Savings Animals From Extinction is to combine the power of zoo and aquarium visitors with the resources and collective expertise of AZA members and partners to save animals from extinction. This mission is achievable because accredited zoos and aquariums are uniquely positioned to become a force for global conservation-with more scientists, more animals, and more ability to activate the public than any other non-governmental institution. SAFE is built on aquarium and zoo's 100-year track record of success saving endangered species from extinction

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