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!

Excellent animal welfare is fundamental to achieving a shared wildlife-conservation goal. Demonstrating that the welfare of animals is of the highest possible standard is crucial and must be conspicuous in all zoos and aquariums. While conservation of wildlife is the core purpose of zoological facilities, positive animal welfare is their core activity. A more detailed summary of zoo and aquarium animal welfare is outlined in Caring for Wildlife: The World Zoo and Aquarium Animal Welfare Strategy. Modern zoological facilities strive to provide for the complex needs of animals and aim, as far as possible, to allow species in their care to express as wide an array of natural behaviours as possible.

The human perception of and emotional responses to the welfare of zoo and aquarium animals is distinct from other animal-management industries, such as for domestic or farm animals for which traditional animal-welfare paradigms were developed. In zoos and aquariums, staff form close bonds with the animals, often caring for them for many years. Modern zoological facilities typically house small numbers of individual animals of high conservation value. The animals themselves have high intrinsic value and, additionally, are often loved by visitors — and can become a focus of intense public interest and emotional engagement.

**ACHIEVING POSITIVE ANIMAL-WELFARE STATES**

Animal welfare refers to the state of an animal, including the subjective feelings and sensations it experiences within itself as a result of its physical, psychological and behavioural health, and surrounding influences. Advances in knowledge in animal welfare have confirmed not only physical states but also the importance of considering the psychological states of
Animals when assessing welfare over time. Therefore, it is this integration that aims to meet the behavioural needs of animals.

Positive animal welfare describes the general state experienced by an animal when its physical and psychological needs are met, and when the environment provides it with rewarding challenges and choices over time. Zoos and aquariums must actively manage and promote ‘positive welfare states’ for animals in a measurable and transparent manner, using rigour, research, staff expertise, veterinary care and monitoring skills.

**Communicating about animals**

It is widely held that animals in zoos and aquariums are ‘ambassadors’ for animals in the wild and assist in communicating key messages to society on the conservation of biodiversity. By presenting wildlife in simulated natural settings, visitors are encouraged to learn about conserving wildlife and be inspired to take actions to conserve the natural world. The trend for immersive exhibits, where visitors share the same environment as the animals, affords a multi-sensory experience and perceived intimacy with the natural world. This promotes emotional learning and by creating an emotional connection to wildlife research has found that visitors are more likely to support and donate to wildlife conservation, to change their behaviour and, perhaps, even become stewards and champions of conservation. (See Appeal to Zoo and Aquarium Directors and Engagement—Influencing Behaviour Change for Conservation.)

That zoos and aquariums care positively for all animals

**Commitment Statement**

World Zoo and Aquarium Animal Welfare Strategy

"Zoos and aquariums have a responsibility to achieve high standards of animal welfare in support of their goals as modern conservation organisations."

Houston Zoo, TX, USA

Meerkats are provided with enrichment opportunities to encourage natural behaviours that they would exhibit in the wild.
in their facilities affirms the connection between animals and visitors, and strengthens and confirms the vital message about wildlife conservation (see Creating a Culture of Conservation). In communicating conservation messages, zoological facilities must always communicate respect for the animals. As such, where zoo and aquarium animals are used in animal demonstrations or interactions with the public, strong conservation messages should also be communicated and the process must always be undertaken in such a way that the welfare of individual animals is not compromised. Such activities must be overseen by a veterinarian or trained staff who closely monitor the ongoing welfare of the animals. If negative welfare states are detected at any point, animals must be withdrawn from such interactions.

CONSERVATION WELFARE AND MODERN ZOOS

‘Conservation welfare’, a term that has been developed within the zoological world over the past ten years, applies to ensuring positive animal-welfare states at the same time as aiming to achieve conservation objectives, such as wildlife-research activities or release-to-the-wild programmes. Excellent animal welfare supports effective conservation through, for example, improved husbandry practices and reintroduction success, and greater visitor engagement. This ‘compassionate conservation’ approach highlights a core principle of considering the welfare of individual animals while working to save species.

The commitment of zoos and aquariums to animal welfare should go beyond internal institutional responsibility. This commitment should be widely disseminated to the public through education, interpretation, social media and all forms of communication. Vigorous research and evaluation into the public perception of animal welfare is essential to make certain that visitors understand what animal welfare and population management entail.

Because of the conservation urgency and the requirements of intensive species management, while one welfare priority may be to minimize ‘stress’ in animals, this may not always be applicable in a context of conservation welfare. For example, breeding programmes for release to the wild must necessarily foster wild behaviours that may be considered by some as ‘stressful’ for individual animals and/or against their positive welfare. Yet this is central to the survival of individuals in a wild environment—and linked to the conservation of a species more broadly. Many breed-for-release programmes undertake pre-release conditioning, which may include pre-release predator training that instigates flight responses; the manipulation of diet to replicate food availability in the wild; or introducing live prey items.
For the individual animals involved in intensive management and associated conservation actions, this strategic and higher-level conservation outlook must be acknowledged and managed. Controversial practices should be subjected to ethical review or a critical-evaluation process to make sure that the end justifies the means. As positive welfare represents a net accumulation of positive over negative experiences in the life of an animal, the transient nature of these strategies are acceptable in that they meet the broader strategic objectives of conservation welfare.

TOOLS TO BUILD POSITIVE ANIMAL WELFARE

In all aspects of animal care, zoos and aquariums must apply the latest validated approaches to managing wild animals to maximise their welfare. This includes ensuring training methodologies such as positive reinforcement, welfare-focused exhibit design, employing highly skilled and trained staff, providing the highest possible levels of veterinary care, using environmental enrichment, continually reviewing diet, ongoing and informed management, a research focus and ongoing monitoring of animal-welfare states. The conservation-welfare implications of acquiring individual animals that have experienced negative capture, transport or social disruption need to be considered. Partnering with other zoos and aquariums, universities, and animal-welfare and scientific organisations are important tools for building and improving animal welfare, increasing internal knowledge and practice, and continually updating staff skills.

There should be a move towards quantifiable animal-based outputs, such as assessments of hormones, behavioural diversity or
heart rate, that produce quantifiable and replicable results, to provide a more comparative and analytical level to animal welfare.

Accreditation programmes of regional or national zoo and aquarium associations are an effective way to demonstrate good welfare standards, and zoos and aquariums should seek to achieve accreditation when it is available. Where accreditation is not available, zoos and aquariums should demonstrate welfare achievement through other methods by partnering and benchmarking with others. A primary goal is to meet all local legislated and/or regulated animal-welfare and animal-holding requirements. The desired approach is to exceed them.

Additionally, animal ethics and welfare committees within zoos and aquariums provide useful and objective points of reference for decision-making about animal welfare and conservation welfare. Such committees may include key staff members, such as veterinarians and animal-management staff, as well as external members from the scientific and general community. Zoos and aquariums that use such committees report that they help to assure transparency in decision-making processes on animal welfare; and enable the incorporation of the community perspective on specific welfare issues and conservation welfare.

Another fundamental aspect of ensuring positive animal welfare is to establish a strong welfare and planning-orientated organisational culture. Thorough and informed planning that considers the welfare of animals for breeding events, transfers and movements, design of exhibits and holding areas, environmental enrichment and related standard operating procedures help build confidence and expertise in animal welfare.

CONCLUSION

An animal-welfare charter or commitment statement can be a powerful mechanism for zoo and aquarium staff to understand and appreciate the management’s commitment to animal welfare, and also be a clear commitment to visitors and the wider community. A commitment statement has been adopted by WAZA as a part of Caring for Wildlife: The World Zoo and Aquarium Animal Welfare Strategy.

RECOMMENDATIONS

• Commitment and success in animal care and welfare are central to the credibility of zoos and aquariums, and should be at the centre of all operations in zoological facilities.

• Positive animal welfare must be delivered to the animals in human care as described in Caring for Wildlife: The World Zoo and Aquarium Animal Welfare Strategy, this being fundamental to the modern zoo and aquarium.
• All animal interactions or animal presentations should be linked to conservation messages and information about natural behaviours, and should be overseen and managed by trained professional staff to make certain that positive animal-welfare states are achieved.

• Assure the balance of welfare and conservation activities, and build understanding of the importance of integrated species-conservation frameworks to include and acknowledge animal welfare and conservation welfare.

• Zoological institutions should build an organisational culture that is committed to continual review of animal-welfare standards and includes a high level of planning for all aspects of the life of an animal.

WORLD ZOO AND AQUARIUM ANIMAL WELFARE STRATEGY COMMITMENT

OUR COMMITMENT IS TO:
• Strive to achieve high welfare standards for the animals in our care;
• Be animal-welfare leaders, advocates and authoritative advisers; and
• Provide environments that focus on the animals’ physical and behavioural needs.

IN DOING THIS, WE COMMIT TO:
• Treat all animals in our zoos and aquariums with respect;
• Make high animal-welfare standards a major focus of our husbandry activities;
• Ensure that all husbandry decisions are underpinned by up-to-date animal welfare science and veterinary sciences;
• Build and share with colleagues animal-care and welfare knowledge, skills and best-practice advice;
• Comply with specific animal-welfare standards set out by regional zoo and aquarium associations and WAZA; and
• Comply with jurisdictional and national codes of practice, regulations and legislation as well as international treaties relating to animal care and welfare.
