

BLACK MAMBA ALLIANCE 2023



UNITED AGAINST POACHING

Policy Statement by The Black Mamba Alliance on Zoo Participation

It is resolved by the parties to the Transfrontier Africa NPC Stakeholders (The Black Mamba Alliance) MOU that the global zoo ecosystem has a long history of being highly beneficial to conservation outreach initiatives.

The global zoo community are pre-eminent providers of animal welfare, preservation, and research, which is demonstrated by their support of the Black Mamba Anti-Poaching Unit whose survival would not have been possible without their assistance. Simply stated, the Black Mamba APU would no longer exist without the support provided by the global community of accredited zoos.

To that end, the undersigned stakeholders, whom are not exclusively representing zoos, acknowledge that without such support from the zoo community that conservation, preservation, and education projects and programs would indeed suffer. The Black Mambas, The Bush Babies, and The Bush Grannies prosper in their collective and separate missions to preserve wild spaces for the benefit of both flora and fauna preserving them for future generations.

Further on, The Black Mamba Alliance would like to back up our statement on zoos by referring all the supporters of Transfrontier Africa NPC that runs The Black Mambas APU and The Bush Babies Environmental Education Projects to the IUCN SSC Position Statement on the Role of Botanic Gardens, Aquariums and Zoos in Conservation.

The Statement can be found on Pages 2-11.



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IUCN SPECIES SURVIVAL COMMISSION POSITION STATEMENT ON THE ROLE OF BOTANIC GARDENS, AQUARIUMS, AND ZOOS IN CONSERVATION

- 1 What do Kihansi spray toad (*Nectophrynoides asperginis*), Okinawa rail (*Hypotaenidia okinawae*), golden lion tamarin (*Leontopithecus rosalia*), tequila splitfin (*Zoogoneticus tequila*), café marron (*Ramosmania rodriguesii*) and the *Karomia gigas* tree have in common? These species were all on the brink of extinction but are now on the road to recovery in the wild through the expertise and conservation efforts of botanic gardens, aquariums and zoos. To achieve these outcomes, many botanic gardens, aquariums and zoos observe high standards of care, conservation, education and research. They are professionally organized, responsible, and are members of, and active in, regional and/or national professional associations. They work cooperatively with other stakeholders contributing their expertise in *ex situ* management, education, research, community engagement, fundraising and *in situ* conservation to avoid the extinction of these and other species and to recover them to a favorable conservation status.
- 2 Botanic gardens, aquariums and zoos can, and do, contribute to species conservation, but this role is often under-valued, misunderstood or unfulfilled. The purpose of this document is 1) to outline IUCN SSC's position on the roles played by these institutions in the conservation of species and their genetic diversity, 2) to urge all of these institutions to achieve their potential in ensuring that all animals, plants and fungi thrive in the wild and 3) to encourage the global community to work in a collaborative and integrated fashion. This SSC position statement directly contributes to the implementation of [WCC-2020-Res-079](#) on linking *in situ* and *ex situ* efforts to save threatened species.

3

The IUCN Species Survival Commission (SSC) recognises the significant value that botanic gardens, aquariums and zoos can bring to conserving the world's wild fauna, flora, and fungi.

SSC believes that botanic gardens, aquariums and zoos can play key roles in *ex situ* management, *in situ* conservation actions, genetic and veterinary science and management, husbandry, research, education and community engagement, policy development, equitable access to nature and conservation fundraising and believes that there is opportunity to increase these contributions.

SSC encourages all botanic gardens, aquariums and zoos to fulfill their conservation roles and to work as valued members of a well-integrated global conservation community to collaboratively ensure the survival of healthy wild populations.

Additionally, SSC invites all its conservation partners to collaborate across and within conservation-focused botanic gardens, aquariums and zoos in the work of saving species.

4 Rationale:

Many botanic gardens, aquariums, and zoos do not currently contribute to *in situ* conservation. Some of these institutions contribute to negative practices such as inappropriate population management, unsuitable wild releases or wild collection of threatened species outside of managed and approved conservation efforts. However, professionally-organised and accredited botanic gardens, aquariums, and zoos lead and champion best practices in population management, actively fulfill diverse roles in saving species, are IUCN Members and are highly valued expert institutions within the global conservation community.

5 Historically, species planning and action often involved two siloed approaches to conservation – *in situ* conservation and *ex situ* management, with limited integration of the strengths, knowledge, data, challenges and efforts of each approach. Species collection and management plans for *ex situ* populations were too often developed in isolation, missing opportunities for collaborating with the field conservation community to address priority conservation needs of the species *in situ*. As a result, *ex situ* programs were often not structured to the best conservation advantage (Traylor-Holzer *et al.* 2018). As wild populations

become increasingly small, fragmented, and in need of intensive management, the distinction between *in situ* and *ex situ* management and conservation is blurred and is better viewed as a continuum of management practices and expertise that can be applied to meet species conservation challenges (Conde *et al.* 2013).

6 The IUCN advocates an integrated approach to species conservation that involves the active participation of diverse stakeholders and consideration of all potential conservation options in the development of species conservation plans. This *One Plan Approach* recognizes the conservation benefits of involving both *in situ* and *ex situ* expertise in species conservation prioritisation, planning and practice, for wild or *ex situ* populations, resulting in more holistic, unified strategies for saving species (Traylor-Holzer *et al.* 2018). Where this practice is observed, the likelihood of reversing declines has been shown to improve (Lees *et al.* 2021). [OB1]

7 SSC encourages all nature conservation partners to make optimal use of the tools, expertise and capacity available in conservation-focused botanic gardens, aquariums and zoos, and to build or strengthen links within and across these institutions in the work of saving species. The 2020 World Conservation Congress in Marseille (September 2021) adopted [Resolution 079](#) urging the IUCN Secretariat and Members to promote integration of *in situ* and *ex situ* conservation interventions by applying the One Plan Approach, to ensure effective use of all available conservation tools, and recommending closer collaboration between SSC and conservation advisory groups of botanic gardens, aquariums, zoos, and biobanks through integrated membership, aligned goals and shared conservation prioritization, planning and practice. During the same World Conservation Congress (September 2021) another Resolution was adopted ([Resolution 119](#)) which urges the conservation community to develop collaborative and ambitious strategies, action plans and targets for the re-establishment of ‘Extinct in the Wild’ species in the wild and for zoos, aquariums, botanical gardens and others to serve as custodians for ‘Extinct in the Wild’ species.

- 8 To help guide integration with botanic gardens, aquariums and zoos, the *Guidelines on the Use of Ex situ Management for Species Conservation* (IUCN/SSC 2014) provide a five-step decision-making process to assess whether or not *ex situ* options are a beneficial and appropriate component of a species' conservation strategy. This process can be applied to all taxa, regardless of their current *ex situ* status, must be jointly conducted by *in situ* and *ex situ* experts, and can be incorporated into overall species conservation planning for wild populations. *Ex situ* management can help address threats (e.g., through research and targeted behavior change), offset the impact of threats and restore wild populations (e.g., through population reinforcement and reintroduction), and buy time and provide future conservation options (e.g., through population rescue and assurance populations) (IUCN 2014). Further, in a world of increasing human populations and decreasing wild spaces, botanic gardens, aquariums and zoos can provide equitable access to nature and educate millions of people about the conservation of species.
- 9 In 2004, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) adopted [Resolution Conf. 13.9](#) Encouraging Cooperation between Parties with *Ex situ* Breeding Operations and those with *In situ* Conservation Programmes. [Article 9 of The Convention on Biological Diversity](#) likewise recognizes *ex situ* conservation components as complementary of *in situ* measures ({CBD, 1992 #4249}). Furthermore the [Global Strategy for Plant Conservation](#) (GSPC) was adopted by the parties to the Convention on Biological Diversity in 2001, and has been being implemented by the botanical community for the past 20 years.
- 10 Botanic gardens, aquariums, and zoos have increasingly evolved in their conservation roles, for example leading on the development and implementation of global and national conservation policy (e.g., GSPC), mobilizing data for conservation prioritization (e.g., red listing), conservation planning (e.g., protected area designation) and leading species recovery efforts (CBSG 2017, Mittermeier *et al.* 2017). Conservation-focused botanic gardens, aquariums, and zoos consider conservation to be their mission and increasingly are playing pivotal roles in the global conservation effort through data mobilization, research, education, advocacy, monitoring of wildlife trade, equitable access to nature and species management *in situ* as well as *ex situ*.

11 Botanic gardens, aquariums, and zoos have the ability to expand equity in access to nature, connecting their visitors with nature and increasing their understanding and appreciation of the intrinsic value of animals, fungi and plants, inspiring and persuading their visitors to change their practices and behavior to the benefit of conservation (Gusset and Dick 2010). Botanic gardens, aquariums, and zoos can play a central role in their local communities – socially, politically and financially – and through their outreach have access to large, diverse audiences of potential conservation activists. Moreover, they have additional funding sources and highly trained specialists to bring to conservation.

12 As with other sectors involved in nature conservation, many zoos, aquariums and botanic gardens are working hard to reverse negative trends in species loss, while others could do more to meaningfully achieve their potential in supporting the survival of plants, animals and fungi around the world. With the increased rate of species loss, now is the time for all conservation partners to use all the tools, capacity and expertise available by working together to save species.

13 The list below outlines some of the areas where botanic gardens, aquariums, and zoos currently contribute, and can be further called on, to fulfill their conservation roles and aid in the important work of saving species in the wild.

**POTENTIAL ROLES BOTANIC GARDENS, AQUARIUMS, AND
ZOOS
CAN, AND COULD, FULFILL IN CONSERVATION OF WILD
SPECIES**

(The below is a non-exhaustive list of examples)

- 14 1) **Exemplary care, knowledge, and management of *ex situ* populations of fauna, flora and fungi**
- Knowledge of and expertise in species that can be applied to wild counterparts (e.g., *ex situ* propagation, identification, handling, care, needs and behavior); not limited to threatened species but for related species that may serve as models for threatened counterparts in the wild.
 - Ability to hold, rear, propagate/breed a wide range of species in *ex situ* conditions as part of highly diverse roles of *ex situ* management for species conservation – including providing samples for and/or managing and coordinating biobanks.
 - Ability and capacity to hold the only surviving individuals of particular species (which are by definition Extinct in the Wild).
 - Ability and capacity to expand and share demographic, genetic, taxonomic, physiological, environmental, and other aggregated data on thousands of species to support conservation initiatives, inform wildlife trade policy, support species status assessments, etc.
 - Ability and capacity to assist in species rescues and rehabilitation (e.g., logistical expertise, holding, transport).
 - Ability and capacity to assist in animal, fungi and plant law enforcement (e.g., identification to the species/subspecies level, care of confiscated live specimens, and marking and tracing to identify illegal trafficking of species).
 - Provide a sustainable *ex situ* stock that decreases the need for sourcing from in situ.
 - Support in managing and preventing the risk of invasive species including biological approaches, awareness raising, outreach and planning.

15

2) Medical and pathology

- Ability to use *ex situ* species medical data and expertise and capacity to translate knowledge learned and experience from treating diseases in *ex situ* individuals to the species in the wild.
- Opportunities for applied research on *ex situ* populations and biobanks for conservation-based diseases and wildlife health.
- Possibility to monitor and research diseases in *ex situ* individuals that are not observable in wild populations.
- Expertise in the One Health Approach – assistance in understanding the connection between health of people, animals, and environment.
- Ability and capacity to translate knowledge learned from zoonotic diseases to humans.
- Potential to evaluate disease presence and impact in wild populations through evaluation of individuals of wild origin (e.g., rescues, confiscations).

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3) Population reinforcement, reintroduction and other conservation translocations

- Source of individuals for conservation reinforcement, reintroduction and other conservation translocation in line with the [IUCN SSC Guidelines](#).
- Pedigree or molecular genetic information to assure genetically appropriate individuals are considered.
- Expertise and resources important to conservation reintroductions and translocations (e.g., access to and testing of equipment, logistical expertise, holding and transport advice, expertise in handling, training and enrichment).
- Knowledge of consequences of reintroducing and translocating species and post translocation monitoring.
- Relationships with in-country conservationists.

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4) Research and science

- Taxonomic expertise to support identification to species/subspecies level.
- Understanding and expertise to translate knowledge learned from the *ex situ* populations of fauna, flora and fungi to species in the wild.
- Source of individuals for research benefiting conservation of many species in the wild.
- Expertise in scientific research about the ecology of many fauna, flora and fungi.
- Broad partnerships in and relationships with local communities, universities, and civil society at large.
- Availability of samples and biobanks as a resource for a wide variety of conservation relevant research fields
- Availability of samples and molecular genetic expertise to aid with identifying and clarifying taxonomic identity, and with monitoring and managing gene diversity of *in situ* and *ex situ* populations/individuals.
- Development of methods and tools for genetic and demographic management of small populations, relevant to the conservation management of both *ex situ* and *in situ* populations.
- Ability to identify potential genetic issues that might impact species (e.g., diseases, inbreeding depression).
- Open sharing and publication of conservation science data, analysis and papers to maximize the accessibility, impact and potential for success of each project.

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5) Social science and advocacy

- Expertise, capacity and relationships at the global, regional, national, and local level.
- Expertise and capacity in working on and implementing conservation policy changes, laws, regulations and standards, and treaties to conserve fauna, flora and fungi (e.g., CITES, CBD, and Convention on Migratory Species)
- Expertise in connecting visitors to nature and educating them about the importance of biodiversity and the intrinsic value of fauna, flora and fungi.
- Broad access to educational materials and up-to-date education philosophies and techniques.
- Expertise in offering informal educational opportunities (e.g., signage, webinars, family nature days) and formal educational opportunities

- (e.g., classes, summer camps, school programs and field trips, lectures, intern programs, virtual programs).
- Expertise in messaging complex conservation topics to diverse audience groups in person and virtually.
 - Ability and capacity to plan exhibits/displays to support conservation goals and encourage change in behaviors.
 - Expertise in conducting advocacy campaigns, access to large venues for events and to diverse audiences (e.g., visitors, the wider public at large, governing boards, donors, elected officials, local businesses and docents/volunteers) and ability and capacity to collaborate with new local partners.

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6) Capacity building and resources

- Ability and capacity to work in the field on conservation of fauna, flora and fungi.
- Ability to raise the profile, engagement with, and support for lesser-known species often overlooked in conservation efforts - such as fungi, invertebrates, rodents etc.
- Delivery of in-country training and capacity building for veterinary professionals, rangers, customs officials, and many other conservation professionals in skills such as wildlife population monitoring (e.g., use of technology such as SMART), health and disease investigation, wildlife crime investigations, animal restraint procedures, legislation and its implementing regulations and permits (including, e.g., CITES enforcement and permitting), and welfare and safety (e.g., first aid).
- Ability and experience in funding *in situ* conservation work (e.g., population assessments, anti-poaching efforts, and educational materials), and *ex situ* conservation efforts, through engagement with conservation donors (e.g., individuals, government agencies, local business partners, docents/volunteers).
- Ability and capacity to host an SSC Center for Species Survival, or SSC Groups, working as catalysts for strategic species assessments, conservation planning or mobilising action in partnership with the volunteer SSC network.
- Ability and capacity to undertake key assessment, planning and/or acting efforts and provide training in these processes (e.g., red list assessments, species conservation plans).
- Support for early-career capacity building programmes that equip, train and mentor young professionals from low capacity regions.

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