



ACTION INDONESIA

GLOBAL SPECIES MANAGEMENT PLAN

Global Species Management Plan for Anoa (*Bubalus sp.*), Banteng (*Bos javanicus*), Babirusa (*Babyrousa sp.*) and Sumatran tiger (*Panthera tigris sumatrae*) 2023-2025



Executive Summary

The goal of the Action Indonesia Global Species Management Plans (GSMPs) is to achieve a stable and secure global *ex situ* populations of anoa (*Bubalus depressicornis* and *B. quarlesi*), banteng (*Bos javanicus javanicus*), babirusa (*Babyrousa* sp.) and Sumatran tiger (*Panthera tigris sumatrae*), and contribute to stable and secure *in situ* populations for each species. Anoa, banteng, babirusa and Sumatran tiger are all threatened taxa found in Indonesia. In the wild, these taxa are threatened primarily by habitat loss and illegal hunting. Due to the banteng being closely related to domestic cattle, they are particularly at risk from disease transmission and hybridisation.

This 2023-2025 Masterplan for the Action Indonesia Global Species Management Plans (GSMPs) is a three-year summary of work. This is complemented by a set of Action tables that will be used to track progress of successful implementation of activities.

Anoa, banteng, babirusa and Sumatran tiger are currently present in the zoos of four regional zoo associations. All regions are participating in the Action Indonesia GSMPs; two regional associations are signatories of the MOU for this partnership, the European Association of Zoos & Aquaria (EAZA) and the Association of Zoos & Aquariums (AZA) in North America, as well as the national Indonesian Zoo & Aquarium Association (PKBSI) on behalf of the South East Asian Zoo Association. Currently, there are approximately 270 anoa, 226 banteng, 194 babirusa and 329 Sumatran tiger held in institutions across these regions. Outside of PKBSI, the genetic diversity for all four taxa is less than 92% of that found in the wild population from which the founders were taken.

Target population sizes for each region were set for the ungulate species in 2016. For the Indonesian populations these were 75 anoa, 100 banteng and 100 babirusa. This is combined with maintaining at least 90% genetic diversity of each species for 100 years. Similar targets were set for EAZA and AZA regions. Sumatran tiger regional and global targets were set in 2012 and revised in 2022. Current PKBSI target population size is at least 100 tigers, with other regional targets between 50-130 tigers each and a global target of 400 tigers. Each program has a regional goal to maintain at least 90% gene diversity for 100 years.

From 2018-2022 there have been successful births in Indonesia, following the recommendations of 6 anoa, 23 banteng, 6 babirusa and 7 tiger births. This is a major success because this is the first time this many births have been achieved following recommendations. We acknowledge all the hard work of the zoos involved. This equates to successful implementation of between 17% and 31% of recommendations per species.

The populations in September 2022 were 35 anoa, 71 banteng, 70 babirusa and 86 tigers. Looking ahead, to maintain a stable or increasing population size an increasing number of births per year for at least the next two to three years for each species are needed. During this phase it is planned for two cycles of recommendations to be implemented, each for 18 months.

By the start of the next planning phase in 2026 it is proposed that the targets set for all regional populations are reviewed, to determine the cost-benefit for strengthening the global population with international transfers in the coming years or future phases of the GSMP programme.

For effective implementation of the 3rd set of recommendations, and future cycles of this process it is essential that there is further strengthening of expertise and knowledge in population management in Indonesia. This can be in the form of brainstorm workshops, additional expertise in PKBSI in population management (to allow for more data analysis to occur in Indonesia), and a greater awareness by the zoo community and Directorate of Biodiversity Conservation of Species and Genetic (KKHSG), Directorate General of Conservation Nature Resource and Ecosystem (KSDAE) is needed of the benefits of implementing recommendations for the conservation of the species and sustainability of zoos.

Genetic data will be included in the 4th set of recommendations for the ungulate species for the first time, and sampling of the Sumatran tiger Indonesian *ex situ* population will be conducted.

From 2018-2022, the Husbandry working group succeeded in developing and publishing husbandry recommendations for banteng and anoa and building capacity through training of 200 zoo staff. From 2023-2025, the working group will support the implementation of the current and future cycles of breeding and transfer recommendations through tailored advice and workshops to Indonesian zoos with a focus on successfully breeding and transferring animals. In addition, guidelines for tiger husbandry will be developed and disseminated.

Following the success of the global awareness raising day, Action Indonesia Day, awareness raising and engagement activities will continue to grow in the next period, alongside capacity building for PKBSI zoo and National Park education staff in Indonesia, and researching and addressing drivers of threats to the species *in situ*.

In support of banteng *in situ* conservation the next three years target is to collect data that will inform a plan for metapopulation management of banteng across Java. This involves analysis of estimates of population size of banteng in four national parks in Java. This will be combined with genetic data from 20 banteng from each of the parks, which is being led by KKHSG. These datasets will provide the necessary information for a Population Viability Analysis model (PVA) to give decision-makers options to maximise the likelihood of successfully achieving a viable population.

For anoa and babirusa *in situ* conservation, park wide population monitoring for Cagar Alam Faruhumpenai, South Sulawesi will be conducted. The GSMP with KKHSG will support the setup of a network and activities of interested stakeholders across the range of these two taxa. This will include holding information sharing calls and capacity building as requested.

We very much appreciated the strengthening relationships with PKBSI and KKHSG. We support greater *ex situ* support for *in situ* conservation efforts, and vice-versa. There have been very significant achievements made by these and all partners across all areas of work since 2016. This new phase for 2023-2025 has ambitious targets that can be delivered building on this strong collaborative team.