



Ministry of Environment and Forestry (Republic of Indonesia)



ASSOCIATION OF ZOOS & AQUARIUMS



ACTION INDONESIA Newsletter

Issue 7
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GLOBAL SPECIES MANAGEMENT PLAN

ANOA BANTENG BABIRUSA

IN THIS ISSUE

Editor's note

By Corinne Bailey, Programme Officer, IUCN SSC AWCSG

& Lottie Siddle, Field Programmes Intern, Chester Zoo

Welcome to the seventh issue of the Action Indonesia GSMP newsletter! This issue follows a successful zoo visit by some of the GSMP team to 12 Indonesian zoos in March. Though the trip was unfortunately cut slightly short by the oncoming pandemic, the visits were incredibly useful in connecting with zoos, providing input, reviewing progress and planning next steps in cooperative breeding and training. You can read more about some of our activities and highlights in this issue of the newsletter. Thanks to all the zoos visited for your warm welcome and openness!

Last year's Action Indonesia Day was a huge success, with over 40 institutions across Europe, North America, Australia and Indonesia taking part,

as well as a lot of engagement on social media. This year, join us for Action Indonesia Day 2020 on the 16th August! Please get in touch or visit the Action Indonesia website <https://www.actionindonesia-gsmp.org/> to find out how you can get involved!

The work and continued capacity building in Indonesia is not possible without your support. Please get in touch to find out how you can help and get involved. If you would like more information about the Action Indonesia GSMP partnership, including joining and contributing, please contact Corinne Bailey (c.bailey@chesterzoo.org). We hope you enjoy this issue and look forward to hearing from you!

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ACTION INDONESIA
GLOBAL SPECIES MANAGEMENT PLAN

Coronavirus: Coming together in these challenging times

By James Burton, Chair, IUCN SSC AWGSG & Yonathan, GSMP Programme Officer, PKBSI

Many of us are working and living in very challenging conditions right now as zoos around the world are being hugely impacted by the pandemic. We have been really impressed by the commitment people are

showing to manage as best they can. The impact of COVID-19 will no doubt mean we have to make changes in our future activities as the Action Indonesia GSMP partnership.

In April and May we have been holding calls with the leaders of the population management, husbandry and education working groups to discuss new ways of working together. I'm looking forward to see the exciting ways

that we develop virtual education activities, the next set of breeding and transfer recommendations, and webinars for husbandry training.

As we continue to work on certain activities, I would like to thank those of you that are continuing to provide your help and support. So, let's continue to work together as effectively as we have done over the past four years, and become even more innovative in how we collaborate.

New Staff!

By Corinne Bailey, Programme Officer, IUCN SSC AWCSG



I'm Corinne Bailey, the new Programme Officer for the IUCN SSC Asian Wild Cattle Specialist Group.

Having previously worked on a number of *in situ* research and conservation projects, and recently working as a Project Coordinator for a conservation NGO

in Sulawesi, I am excited to be able to help the GSMPs develop even further and to contribute to the success of Action Indonesia. I look forward to working closely with you all towards the conservation of anoa, banteng, babirusa and Sumatran tiger.

GSMP team visits Indonesian zoos

By Corinne Bailey, Programme Officer, IUCN SSC AWCSG & Yonathan, GSMP Programme Officer, PKBSI

In March 2020, the Action Indonesia Global Species Management Plans (GSMP) and Indonesian Zoo and Aquarium Association (PKSBI) team visited 12 zoos in Indonesia that hold 4 GSMP

species: anoa (*Bubalus depressicornis* and *B. quarlesi*), banteng (*Bos javanicus*), babirusa (*Babyrousa sp.*) and the Sumatran tiger (*Panthera tigris sumatrae*). The GSMP team included Tony Sumampau, Gono Semiadi, Michael Sampampau, Latifah Dwi Susilowati, and Yonathan (PKBSI), James



Burton (AWCSG), Joe Forsy (Audubon Zoo), Corinne Bailey (AWCSG) and BKSDA representatives. A main purpose of the visits was to find out how the



zoos are progressing with the second set of PKBSI-GSMP breeding and transfer recommendations that were made during the Action Indonesia Planning workshop in 2018.

They were also excellent opportunities for PKBSI-GSMP experts to provide input and advice on animal husbandry and enclosure design, and to identify areas that

the GSMP team can contribute to in the future, including workshops, collection planning and capacity building. Find out about the zoo visits and what we found in more detail in this issue.

The visits were overall very positive and well received by all involved. Hopefully the productive discussions and the suggestions

that were made during this visit will help to facilitate the cooperative breeding of these GSMP species into the future. Thank you very much to PKBSI for organising the visit and to all the zoos that hosted us!



PKBSI-GSMP visited Maharani Zoo & Goa during the zoo visits in March

PKBSI-GSMP Breeding recommendation success in Indonesian zoos!

By James Burton, Chair, IUCN SSC AWCSG; Corinne Bailey, Programme Officer, IUCN SSC AWCSG & Yonathan, GSMP Programme Officer, PKBSI

GSMP population management working groups have been working with studbook keepers and zoos since 2016 to produce cooperative breeding and transfer recommendations in Indonesia.

The recommendations support one of the main goals of the Action Indonesia GSMP: reaching

“demographically and genetically healthy ex situ populations”. So far, two sets of breeding and transfer recommendations have been produced, with the second set produced in 2018.

A key activity during the zoo visits in March was to receive updates on the progress of zoos in cooperative breeding through





1-month-old male babirusa piglet with mum Kirana, born on 26 February 2020 at Surabaya Zoo. Copyright Joe Forys.

implementing the second set of breeding and transfer recommendations published in 2018.

We are happy to report that there have been many successful recommended births! During the second set of breeding recommendations, 3 anoa, 4 babirusa, 2 Sumatran tiger and 11 banteng have been born so far, including one babirusa piglet born in 2020 (Figure 1). New recommended births are important steps forward in our goal of maintaining healthy global ex situ populations, which is critical to the long term conservation of the species. Since the recommendations process began in 2016, there have now been a total of 30 recommended births, including 2 Sumatran tigers, 4 babirusa, 7 anoa, and 17 banteng!

This is great news, as it indicates a commitment by zoos to utilise and follow breeding recommendations. Congratulations to all

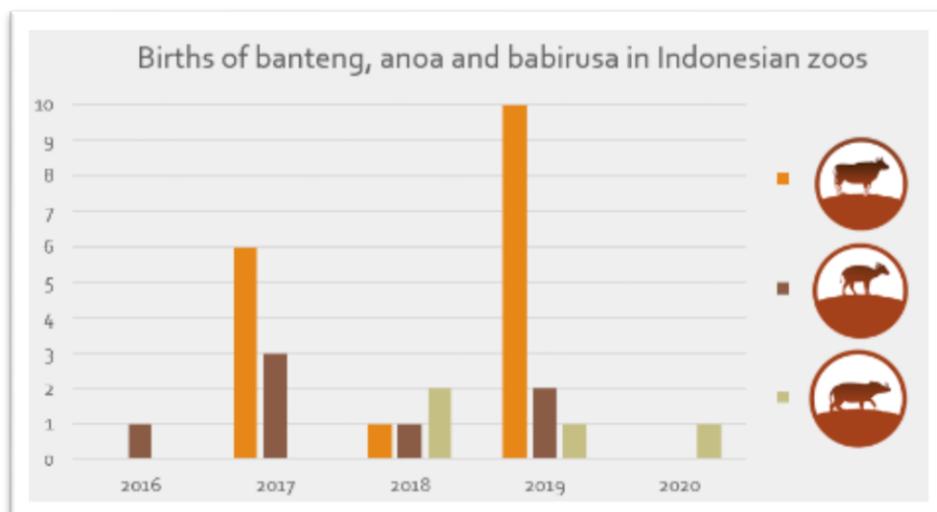
those institutions that have had successful recommended births so far: Taman Safari Indonesia (TSI) Bogor, Surabaya Zoo, TSI Prigen, Anoa Breeding Center Manado, Ragunan Zoo and Banteng Breeding Centre, Baluran National Park!

Continued progress in transfer recommendations...

Cooperative breeding is the transfer of animals between institutions in

order to allow the best pairings to maintain the genetic diversity, whilst also trying to meet the needs of participating institutions. Cooperative breeding is particularly important for Indonesian zoos, as they have a number of “founder” animals. Founder animals are animals from wild populations, whose genetics are underrepresented in the global ex situ population. They can therefore increase the genetic diversity and stability of the *ex situ* population through recommended breeding.

In July 2018, two years of planning, negotiating and relationship-building resulted in the successful transfers of three banteng bulls following recommendations. This was a major milestone for Action Indonesia; as well as being the first implementation of cooperative transfer recommendations of the GSMPs, they also involved the movement of animals between zoos (TSI Bogor, TSI Prigen and Bali Safari & Marine Park) and



Banteng Breeding Centre, Baluran National Park. In 2019, this successful transfer actually led to 3 banteng calves born in Baluran National Park following breeding recommendations. Well done to everyone involved in this significant cooperative breeding effort!

During the second breeding and transfer recommendation period, there have been successful transfers of Sumatran tigers between TSI Bogor and TSI Prigen in 2019, and a successful transfer of an male anoa between TSI Bogor and Bali Safari & Marine Park. More transfers are still in development as the transfer process continues to be refined and streamlined. Some transfers have also been delayed due to swine flu and coronavirus implications.

According to population management working group mem-

ber John Andrews (Anoa Population Management Working Group Leader), who helps to develop the breeding recommendations for anoa, the breeding success and transfers so far have been positive steps in cooperative breeding:

"One good thing for Anoa births is that several potential founders were recruited, representing increases in gene diversity in anoa ex situ populations. To capitalize on this further, transfers need to happen more. Without them, we will have increased inbreeding".

On the importance of following breeding and transfer recommendations, Sri Pentawati, the Indonesian studbook keeper for babirusa said:

"To prevent the species extinction, zoos are responsible to carry out breeding programmes, which we can follow from GSMP recommendations to achieve a target

captive population that is genetically healthy. Animal transfers between institutions is an important way to reach our target"

Drh. Yohana Tri Hastuti, the Indonesian studbook keeper for anoa, also stressed the importance of continued transfers:

"Animal transfers are very important to provide fresh blood to support genetically healthy populations. This can only be successful if all zoos are supportive and committed toward sustainable anoa population growth"

Continued support from PKBSI, the KSDAE, Ministry of Environment and Forestry of Indonesia and the GSMP will contribute to facilitating more animal transfers for cooperative breeding in the future. Please get in touch with PKBSI-GSMP Officer Yonathan with any questions or for more information by email: yonathano30892@gmail.com.

Genetic assessment of Indonesian zoo populations to benefit breeding

By James Burton, Chair, IUCN SSC AWCSG & Christina Hvilsum, Copenhagen Zoo and Genetics Working Group leader

In order that the greatest genetic diversity can be maintained in the ex situ populations, genetic assessment is required to verify the studbook data. This will improve the effectiveness of the breeding and transfer recommendations to retain as much genetic diversity as possible.

PKBSI is developing a collaboration with the Indonesian Institute of Science (LIPI) to sample

the founder animals of the Indonesian zoo populations. This involves working with many of the Indonesian zoos to collect DNA samples. The first steps in beginning this project have taken place in early 2020. During a PKBSI-GSMP zoo visit discussions were held with zoo staff about their involvement with the study. They were asked to participate and informed that once permissions have been secured



they will be asked to collect samples of selected founder individuals on anoa, banteng and babirusa. Blood sampling kits have been produced and will be distributed in due course. PKBSI,

LIPI and the GSMP supporting partners (Copenhagen Zoo and Queen Mary's University) are finalizing paperwork for the permissions process. We hope that much of the technical skills

needed for these assessments will be transferred to Indonesian scientists for future use on other species managed in zoos.

Husbandry Insights

By Joe Forys, Curator of Large Mammals, Audobon Zoo, Babirusa SSP Coordinator

From a husbandry perspective, our zoo visits in March were immensely rewarding and provided valuable feedback for the zoos visited and insight into zoo operations and planning for the GSMP team.

There were many firsts on the trip...several first visits to some zoos, new cities, new foods (including the delicious pisang molen), an amazing old tiger in Bandung Zoo that didn't look her age, and many new friends. We found everyone at the zoos to be welcoming, motivated and open to the feedback and new ideas. We found several good avenues for training in the future, including enrichment, operant conditioning and animal training, collection planning, and husbandry. It was great to see operant conditioning training being implemented in TSI Prigen, TSI Bogor, Ragunan Zoo and Surabaya Zoo, good enrichment from Batu Secret Zoo and Bandung Zoo, and much more.

Covid-19 was definitely a topic of discussion as well and none of us knew at the time just how far reaching and devastating it would be to zoos worldwide. As such, the GSMP will need to be creative and resourceful to continue to deliver on our mission to assist the PKBSI zoos in providing the best possible care and welfare for the animals. We have already held discussions on ways we can continue GSMP activities and training in our new post Covid world. We have new offspring in our populations that

will grow to have breeding recommendations of their own. Zoos will be looking at ways to increase capacity for GSMP species and we all will work to increase the skills and knowledge needing by zoo staff to care for their collections.

A huge thank you is in order for all the individuals and facilities that participate in or fund Action Indonesia and the GSMP programs. We look forward to many more years of collaboration and success for these species.



Discussing babirusa husbandry at Ragunan Zoo



Anoa, banteng, and babirusa husbandry at Ragunan zoo

By Yuliyati Nurmaya, Animal Welfare, Education and Research staff, Ragunan Zoo

Find out how Action Indonesia species are cared for in Ragunan Zoo:

Anoa Husbandry:

We have 3 anoa at Ragunan Zoo, Wesi (female), Demar (male), and Tangguh (male). Demar and Tangguh were born at Ragunan Zoo. They live in 3 separated enclosures. Wesi lives in 10 x 36m enclosures, while Demar and Tangguh both live in 10 x 18m enclosures. A one-meter high fence surrounds their enclosures. We also have partitions between enclosures for pairing and weaning. Their substrates are dirt, soil and some grass.



wallowing and hanging browse for enrichment.

We feed our anoa 3 times a day. At 7.30am we feed them with 5 kg of cassava, corn, water spinach, banana, and carrot. We feed them grass at 10am and browse at 3pm.

Babirusa Husbandry:

We have 6 babirusa at Ragunan Zoo: Adul (male), Jessica, Lena, Garet, Rana, and Gina (female).

We have 2 large enclosures for babirusa. One is 39 x 45m, occupied by a pair, Adul and Garet. The other is 39 x 24m, holding Jessica, Lena, Rana, and Gina. The second enclosure includes 3 separated spaces. Both enclosures have natural substrates

We clean the exhibit regularly, spreading their food to encourage



Our zookeepers clean the food debris daily, clean the wallow monthly, and clean the dried leaves off once a week. We keep the enclosure clean to look like their natural habitat.

To provide visual barrier, we planted some shrubs at the back of the enclosure for hiding and some shelter. We also provide a pool for



them to different parts of the enclosure every day. We clean and fill their water pool daily.

Their enrichment includes a hiding area of bushes and chute, a pool for wallowing, and shelter. We feed them at 7.30am and 1pm with corn, cassava, banana, and water spinach.

Banteng Husbandry:

We have 3 male banteng and 5 female banteng at Ragunan Zoo. We separate them into three social groups occupying three enclosures. The groups are: Raju (male), Jania (female), and Desi (female); Bara (male) and Julia (female); and Ringgo (male), Amy (female), and Mey (female).

We have 8 x 950m² enclosures for banteng. We also have a 50m² holding enclosure. The exhibits have a grass substrate and holding enclosure has a concrete substrate.



We clean and disinfect the enclosure once a day at 7am. The banteng are fed at around 8am with pellet, brans, and grass. For food enrichment, we also feed jackfruit leaves, leucaena, and palm leaves.

For preventive medical care, our vet gives anthelmintic every 3 months and multivitamins.



Date announced for Action Indonesia Day 2020

By Julia Klumb, Zoo Graphics and Exhibitory Manager, Zoo Miami

The Action Indonesia Education Working Group consists of individuals representing institutions in Europe, United States and Indonesia. The goal of the working group is to 1) Increase awareness and support for conservation 2) Increase the capacity of zoo educators to deliver conservation education. 3) Work towards expanding in-situ education activities.

Our first initiative was to develop and coordinate the first annual Action Indonesia Day, which took place August 18, 2019 and garnered participation from over 40 institutions on 4 continents and raised a total of \$1,420 (£1,140 /€1,310/Rp. 21,000,000). Institutions across the world participated in raising awareness in-park and on social media with activity tables, special zookeeper talks and contests. Bali Safari and Marine Park had face painting

activities and a selfie-welfie photo contest on Instagram, Chester Zoo created giant forest board games for guests to learn about Indonesian habitat and Zoo Miami created animal personality tests and games at each of the 4 Action Indonesia species to win a chance to meet the animals.

This year Action Indonesia Day will take place August 16, 2020 and will look slightly different within the constraints of the current COVID-19 pandemic, but we hope to take Action Indonesia Virtual and have smaller in-

park activities and awareness campaigns, if possible. We are excited to be creative with virtual activities to raise awareness for these amazing and underappreciated species.

We need your help to get as many participants as possible raising awareness for Babirusa, Anoa and Banteng! Find out more about how you can join in on the GSMP website <http://www.actionindonesia.org> and look out for our Action Indonesia social media pages coming soon!



Action Indonesia Day 2019 at Surabaya Zoo. Picture: © Surabaya Zoo



IUCN Guidelines translated into Indonesian

By Lottie Siddle, Field Programmes Intern, Chester Zoo

In March this year the IUCN SSC 'Guidelines on the Use of Ex situ Management for Species Conservation' were published in In-

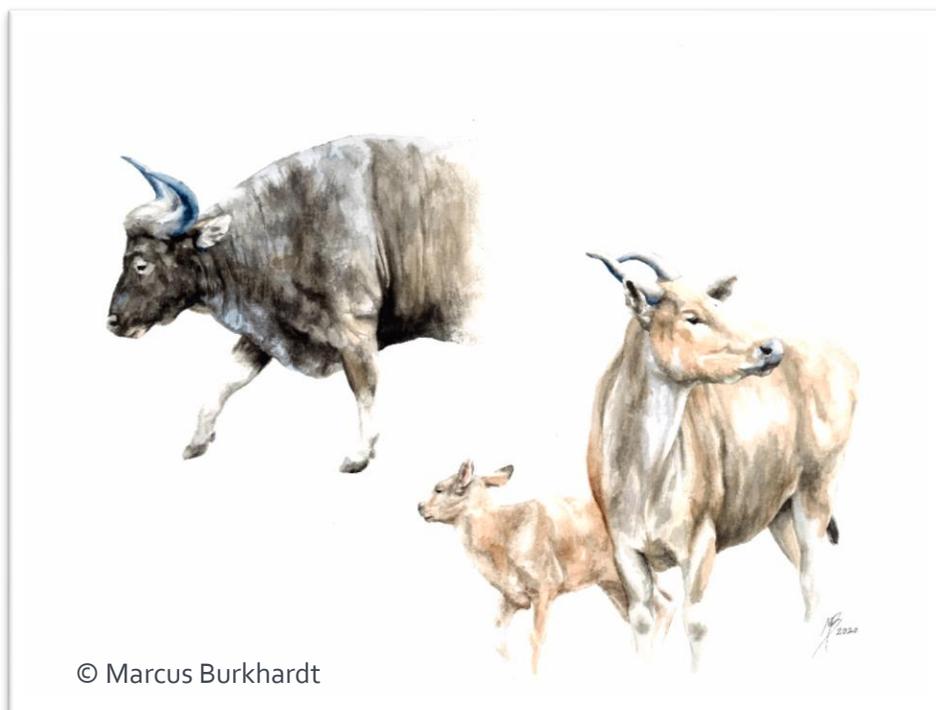
donesian, thanks to Vanda Tirtayani (Conservation Manager, Gembira Loka Zoo, Yogyakarta). These guidelines, now available in 5 languages, provide practical guidance on *ex situ* conservation, current or future, of all taxa. This is vital for the success of species conservation, including that of the Action Indonesia GSMP species - banteng, anoa, and babirusa. It is hoped that the new

translation will enable even more effective programmes and activities to be carried out in the fight to save and protect the wildlife of Indonesia. The guidelines, in all 5 languages (English, Portuguese, Spanish, Japanese and Indonesian) can be found here:

<https://www.cpsg.org/iucn-ssc-ex-situ-guidelines>

Art for Asian Wild Cattle

This year, artist Marcus Burkhardt offered to use his talents to support the *in situ* work of the Action Indonesia GSMP. He created a gallery of bovid images, and will generously donate 50% of the profits from every sale to support our work in the field. Check out Marcus' gallery and pick your favourite piece, or commission your own on his website: <http://natural-and-history-art.de/en/asianwildcattle/>. Many thanks to Marcus for his contribution.



© Marcus Burkhardt



Fundraising by PKBSI to help Indonesian Zoos during pandemic closures

By Yonathan, GSMP Programme Officer, PKBSI

This Covid-19 pandemic has deeply affected Zoos, Safari Parks, Zoological Parks, and Aquariums around the world. In Indonesia, zoos have closed their operations since the middle of March, but they still need to provide food and medicine for animals, as well as pay their zookeepers and vets who are still working. If this happens for a much longer, we're sure it will affect the conditions for the animals.

At the beginning of May, PKBSI started a donation page to help the animals in Indonesian zoos, by inviting people to contribute any donations to distribute to our members to help provide food and animal care based on their priority list.

By May 26th, they had raised over £120,000 (US \$ 155,000/ 135,000 Euro) from generous donations! They have already distributed

around £49,000 (US \$ 61,000/55,000 Euro) between 17 zoos.

During this time of need, PKBSI will continue this programme and keep distributing supplies to zoos, with the hope that this pandemic will end and all zoos can be reopened to the public.

All zoos are trying to do their best for their animals, and we want to keep all our animals healthy during these challenging times. We really appreciate any help you can give! Please share @PKBSI's #FoodForAnimals campaign on Instagram! Thanks very much to everyone that has contributed and donated to the campaign so far.

How to donate

There are two ways to donate to help support Indonesian zoos during this time.

Donations can be made to the following crowdfunding pages: kitabisa.com/campaign/selamatkansatwa or

kitabisa.com/campaign/kop-kenuntukbonbin; or transferred directly to the PKBSI bank using the following details:

Bank : BNI
Branch : Pasar Mayestik
Account Name : Perhimpunan Kb. Binatang Se Indonesia
Account number : 955955206
Swift Code : BNINIDJAPMK



R Zoo & Park, Lembang Zoo & Park and Siantar Zoo receiving donated supplies



Contacts

For more information about the Action Indonesia GSMP partnership, please contact:

- James Burton (Chair, IUCN SSC AWCSG) jamesaburton@yahoo.co.uk
- Corinne Bailey (Programme Officer, IUCN SSC AWCSG) c.bailey@chesterzoo.org
- Yonathan (GSMP Programme Officer, PKBSI) yonathan030892@gmail.com

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We look forward to hearing from you!

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We would like to thank all of the organisations, trainers and staff who support Action Indonesia and make our work possible.

